Work Order: 19110801

Project Name:

Joliet Chemical Fire PRP Clean UP

Tetra Tech EM Inc.

Andre Baker
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

04-Dec-2019

Certificate No: IL: 200076

Contents

Section I: Case Narrative

Section II: Sample Receipt

Section III: Analytical Data

Section IV: Attachments

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com
RIGHT SOLUTIONS

Section I

CASE NARRATIVE

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

ALS Group, USA

Date: 04-Dec-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: 19110801

Case Narrative

Samples for the above noted Work Order were received on 11/09/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.Batch 145531, Method DRO_8015_S_CLN, Sample 19110801-01A MS: 1
Batch 145531, Method DRO_8015_S_CLN, Sample 19110801-01A MSD: 1

Section II

SAMPLE RECEIPT

-Sample Summary

-Shipping Documents*

-Chain of Custody

-Receipt Checklist

(* = As applicable)

ALS Group, USA

Date: 04-Dec-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: **19110801**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19110801-01	MPGI-I80-Soil-01-110819	Soil		11/8/2019 13:10	11/9/2019 11:30	☐
19110801-02	MPGI-I80-Soil-02-110819	Soil		11/8/2019 13:12	11/9/2019 11:30	☐
19110801-03	MPGI-I80-Soil-03-110819	Soil		11/8/2019 13:14	11/9/2019 11:30	☐
19110801-04	MPGI-I80-Soil-04-110819	Soil		11/8/2019 13:16	11/9/2019 11:30	☐
19110801-05	MPGI-I80-Soil-05-110819	Soil		11/8/2019 13:18	11/9/2019 11:30	☐
19110801-06	MPGI-RB-01-110819	Water		11/8/2019 13:20	11/9/2019 11:30	☐

19110801

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date): ☒ Non Standard or urgent TAT (List due date): 24 hour
OFFICE:	ALS QUOTE NO.:	
PROJECT: 103x903100690002aj001	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	FOR LABORATORY USE ONLY (Circle) Custody Seal Intact? Yes No N/A
ORDER NUMBER:		Free ice / frozen ice bricks present upon receipt? Yes No N/A
PROJECT MANAGER: Andre Baker CONTACT PH: 8353793749		Random Sample Temperature on Receipt: °C
SAMPLER: Brendan Martin SAMPLER MOBILE:	RELINQUISHED BY: Brendan Martin DATE/TIME: 11/08/19 1400	RECEIVED BY: FED EX DATE/TIME:
COC emailed to ALS? (~~YES~~) NO EDD FORMAT (or default):	RELINQUISHED BY: FED EX DATE/TIME:	RECEIVED BY: DATE/TIME: 11/9/19 1130
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com		Other comment:
Email Invoice to (will default to PM if no other addresses are listed):		

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SDG 4.4 °C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DROSW869 8015	Percent Solids							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MPGI-I80-Soil-01-110819	110819 1310	Soil	None	1	X	X							
2	MPGI-I80-Soil-02-110819	110819 1312	Soil		1	X	X							
3	MPGI-I80-Soil-03-110819	110819 1314	Soil		1	X	X							
4	MPGI-I80-Soil-04-110819	110819 1316	Soil		1	X	X							
5	MPGI-I80-Soil-05-110819	110819 1318	Soil		1	X	X							Dup of Sample "02"
	~~MPGI-I80-Soil-06-110819~~	~~110819~~	~~Soil~~		~~1~~	~~X~~	~~X~~	BR						
6	MPGI-RB-01-110819	110819 1320	Water		1	X	X							Rinsate Blank
				TOTAL	6	BR								

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Group, USA

Sample Receipt Checklist

Client Name: ***TETRATECH-EM-CHI*** Date/Time Received: ***09-Nov-19 11:30***

Work Order: ***19110801*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 11-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 12-Nov-19 (Date)

Matrices: Soil, Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4/4.4 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/11/2019 1:14:46 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Section III

Analytical Data

-Analysis Data Sheet

-QC Summary

-QC Batch Report

-Summary Forms (if applicable)

-Raw Data

Raw Data Format

Organic Ordering

-Field Sample Data

-Calibration Data

-Initial

-Continuing

-Instrument QC Data (BFB, DFTPP, etc. as applicable)

-QC Data

-Sequence Logs

-Extraction Logs

Inorganic Ordering

-Instrument Data

-Digestion/Preparation Data

-Calculation Data (if applicable)

Organic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

GC
Semi-Volatile Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Diesel Range Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-RB-01-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19110801

Matrix: Water Lab Sample ID: 19110801-06A

Sample wt/vol: 120.00 (g/mL) mL Lab File ID:

% Moisture: not dec. 0 Date Received: 11/9/2019

Extraction Type: Date Extracted 11/11/2019

Concentrated Extract Volume: 2000 (uL) Date Analyzed: 11/12/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/L

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	0.080	J

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-I80-Soil-01-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-01A

Sample wt/vol: 15.16 (g/mL) g Lab File ID:

% Moisture: not dec. 22 Date Received: 11/9/2019

Extraction Type: Date Extracted 11/12/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/12/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	9.2	

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-I80-Soil-02-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-02A

Sample wt/vol: 15.02 (g/mL) g Lab File ID:

% Moisture: not dec. 21 Date Received: 11/9/2019

Extraction Type: Date Extracted 11/12/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	12	

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-I80-Soil-03-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-03A

Sample wt/vol: 15.14 (g/mL) g Lab File ID:

% Moisture: not dec. 25 Date Received: 11/9/2019

Extraction Type: Date Extracted 11/12/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	6.3	J

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-I80-Soil-04-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-04A

Sample wt/vol: 15.36 (g/mL) g Lab File ID:

% Moisture: not dec. 25 Date Received: 11/9/2019

Extraction Type: Date Extracted 11/12/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	7.3	

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-I80-Soil-05-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-05A

Sample wt/vol: 15.26 (g/mL) g Lab File ID:

% Moisture: not dec. 22 Date Received: 11/9/2019

Extraction Type: Date Extracted 11/12/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	18	

Client: Tetra Tech EM Inc.
Work Order: 19110801
Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **145430** Instrument ID **GC8** Method: **SW8015C**

MBLK Sample ID: **DBLKW1-145430-145430** Units: **mg/L** Analysis Date: **11/12/2019 06:36 A**
Client ID: Run ID: **GC8_191111D** SeqNo: **6052425** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	0.10								
Surr: 4-Terphenyl-d14	*0.03033*	0	*0.0417*	0	*72.7*	*35-161*	0			

LCS Sample ID: **DLCSW1-145430-145430** Units: **mg/L** Analysis Date: **11/12/2019 07:34 A**
Client ID: Run ID: **GC8_191111D** SeqNo: **6052427** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.328	0.10	4.17	0	104	60-150	0			
Surr: 4-Terphenyl-d14	*0.033*	0	*0.0417*	0	*79.1*	*35-161*	0			

MS Sample ID: **19110801-06A MS** Units: **mg/L** Analysis Date: **11/12/2019 08:03 A**
Client ID: **MPGI-RB-01-110819** Run ID: **GC8_191111D** SeqNo: **6052428** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.458	0.10	4.17	0.08	105	60-150	0			
Surr: 4-Terphenyl-d14	*0.0345*	0	*0.0417*	0	*82.7*	*35-161*	0			

MSD Sample ID: **19110801-06A MSD** Units: **mg/L** Analysis Date: **11/12/2019 08:32 A**
Client ID: **MPGI-RB-01-110819** Run ID: **GC8_191111D** SeqNo: **6052429** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.633	0.10	4.17	0.08	109	60-150	4.458	3.84	30	
Surr: 4-Terphenyl-d14	*0.03483*	0	*0.0417*	0	*83.5*	*35-161*	0.0345	*0.962*	*30*	

The following samples were analyzed in this batch: 19110801-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Group, USA

Date: 04-Dec-19

Client: Tetra Tech EM Inc.

Work Order: 19110801

Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **145429** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **dblks1-145429-145429** Units: **mg/Kg** Analysis Date: **11/12/2019 06:58 P**

Client ID: Run ID: **GC8_191112A** SeqNo: **6053407** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.167*	0	*3.33*	0	*65.1*	*33-111*	0			

LCS Sample ID: **DLCSS1-145429-145429** Units: **mg/Kg** Analysis Date: **11/12/2019 07:27 P**

Client ID: Run ID: **GC8_191112A** SeqNo: **6053408** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	355.2	5.0	333	0	107	58-111	0			
Surr: 4-Terphenyl-d14	*2.087*	0	*3.33*	0	*62.7*	*33-111*	0			

MS Sample ID: **19110801-01A MS** Units: **mg/Kg** Analysis Date: **11/12/2019 07:57 P**

Client ID: **MPGI-I80-Soil-01-110819** Run ID: **GC8_191112A** SeqNo: **6053409** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	352.2	5.0	329.8	7.202	105	58-111	0			
Surr: 4-Terphenyl-d14	*2.005*	0	*3.298*	0	*60.8*	*33-111*	0			

MSD Sample ID: **19110801-01A MSD** Units: **mg/Kg** Analysis Date: **11/12/2019 08:26 P**

Client ID: **MPGI-I80-Soil-01-110819** Run ID: **GC8_191112A** SeqNo: **6053410** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	343.3	5.0	331.5	7.202	101	58-111	343.3	0	30	
Surr: 4-Terphenyl-d14	*1.903*	0	*3.315*	0	*57.4*	*33-111*	1.903	*0*	*30*	

The following samples were analyzed in this batch:

19110801-01A	19110801-02A	19110801-03A
19110801-04A	19110801-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV79.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 9:01 am
Operator : KJB
Sample : 19110801-06A
Misc :
ALS Vial : 85 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:40:03 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

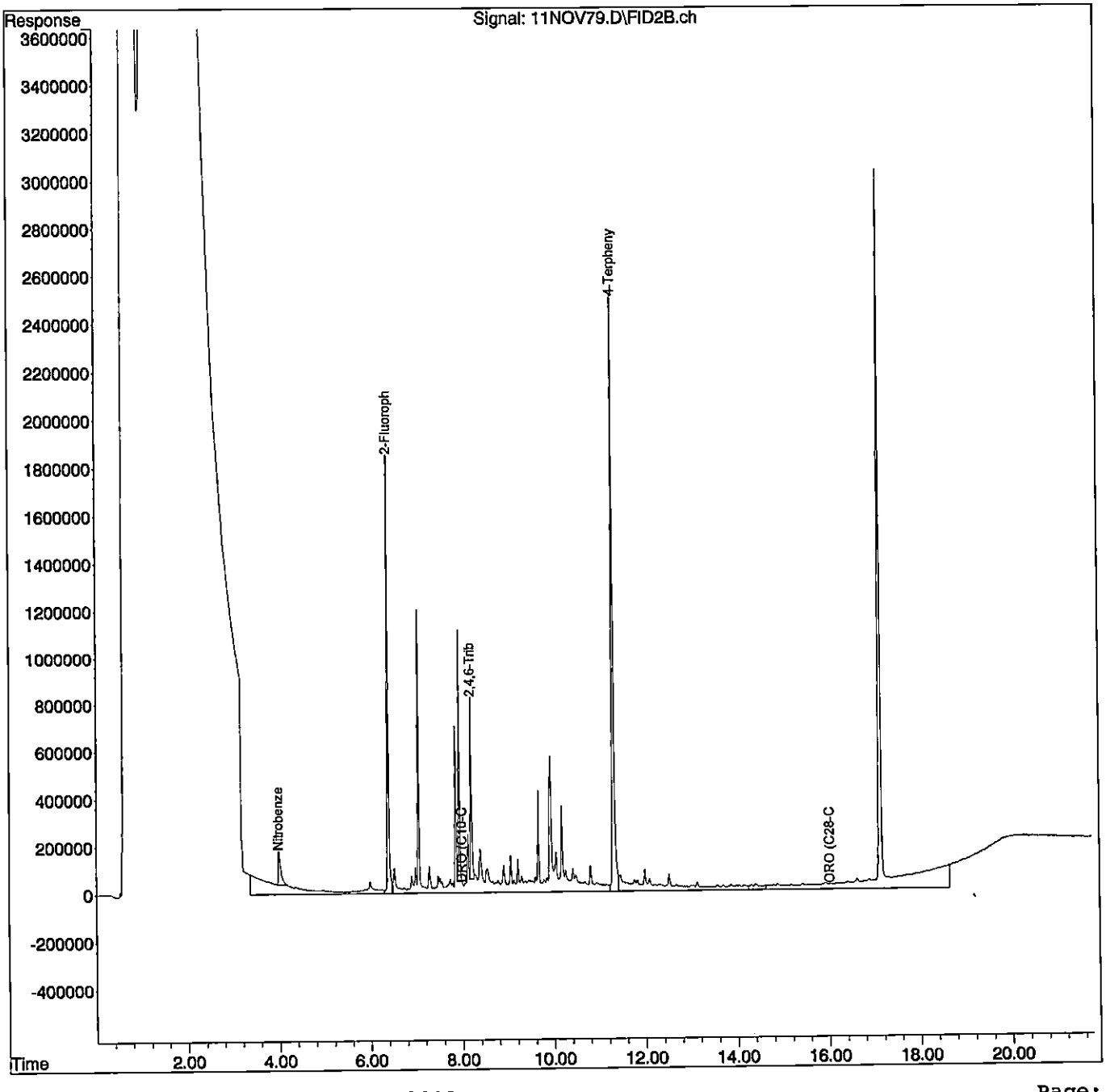
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.980	5635393	1.039	ug/mLm
2) S	2-Fluorophenol	6.375	37253917	1.027	ug/mLm
3) S	2,4,6-Tribromophenol	8.181	15574378	0.064	ug/mLm
4) S	4-Terphenyl-d14	11.293	66921717	2.080	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	325680392	4.799	ug/mL
6) H	ORO (C28-C40)	16.000	183882835	2.237	ug/mL
7) H	DRO (C10-C20)	7.000	-58463688	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-66921717	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-66921717	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-125385405	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-125385405	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV79.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 9:01 am
Operator : KJB
Sample : 19110801-06A
Misc :
ALS Vial : 85 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:40:03 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Response Factor Report GC 8

Method Path : C:\msdchem\1\methods\
Method File : DRLVI191111.M
Title :
Last Update : Tue Nov 12 11:07:19 2019
Response Via : Initial Calibration

Calibration Files
1 =11NOV09.D 2 =11NOV11.D 5 =11NOV13.D
10 =11NOV15.D 20 =11NOV17.D 50 =11NOV19.D

		Compound	1	2	5	10	20	50	Avg		%RSD
1)	S	Nitrobenzene-d5					5.463	3.774	4.913	E6	14.05
2)	S	2-Fluorophenol	5.159	3.706	3.569	2.396	2.668	2.411	3.229	E7	28.44
3)	S	2,4,6-Tribrom...	5.051	3.435	2.485	2.248	2.307	2.062	2.735	E8	35.14
4)	S	4-Terphenyl-d14	4.816	2.151	1.488	2.883	2.456	2.693	2.870	E7	32.23
5)	H	DRO (C10-C28)	1.925	0.987	0.621	0.513	0.473	0.388	0.680	E8	74.05
6)	H	ORO (C28-C40)	1.766	0.807	0.436	0.348	0.212	0.198	0.482	E8	108.40
7)	H	DRO (C10-C20)	1.018	0.580	0.352	0.200	0.203	0.175	0.345	E8	82.31
8)	H	ORO (C20-C34)	1.291	0.922	0.571	0.482	0.399	0.358	0.562	E8	58.85
9)	H	ORO (C20-C40)	2.398	1.356	0.773	0.637	0.417	0.397	0.791	E8	86.29
10)	H	ORO (C28-C35)		5.641	2.980	2.792	2.122	1.774	2.579	E7	51.57
11)	H	ERO (C10-C36)	1.549	0.849	0.478	0.387	0.339	0.284	0.525	E8	80.96
12)	H	ERO (C10-C40)	1.747	0.956	0.516	0.429	0.336	0.288	0.534	E8	89.15

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method Path : C:\msdchem\1\methods\
Method File : DRLVI191111.M
Title :
Last Update : Tue Nov 12 11:07:19 2019
Response Via : Initial Calibration

Calibration Files
1 =11NOV09 2 =11NOV11 5 =11NOV13 10 =11NOV15 20 =11NOV17
50 =11NOV19 100 =11NOV21 200 =11NOV23 500 =11NOV25 1000=11NOV27

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	Nitrobenzene-d5	Lin	-1.2295 e5	5.5402 e6	-----	0.9984
2)	S	2-Fluorophenol	Lin	-7.7214 e5	3.7044 e7	-----	0.9904
3)	S	2,4,6-Tribromophenol	Lin	3.2863 e5	2.3903 e8	-----	0.9941
4)	S	4-Terphenyl-d14	Lin	-3.3220 e4	3.2187 e7	-----	0.9909
5)	H	DRO (C10-C28)	Lin	1.3305 e8	4.0142 e7	-----	0.9984
6)	H	ORO (C28-C40)	Lin	1.4330 e8	1.8145 e7	-----	0.9960
7)	H	DRO (C10-C20)	Lin	7.1971 e7	1.9460 e7	-----	0.9925
8)	H	ORO (C20-C34)	Lin	1.0574 e8	3.4073 e7	-----	0.9997
9)	H	ORO (C20-C40)	Lin	2.0169 e8	3.6800 e7	-----	0.9989
10)	H	ORO (C28-C35)	Lin	7.5792 e7	1.7387 e7	-----	0.9990
11)	H	ERO (C10-C36)	Lin	1.6783 e8	2.7920 e7	-----	0.9999
12)	H	ERO (C10-C40)	Lin	3.0069 e8	2.5064 e7	-----	0.9916

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV01.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 1:44 pm
Operator : KJB
Sample : DRLVI DIST
Misc : 3081-97-7
ALS Vial : 1 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 09:44:45 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

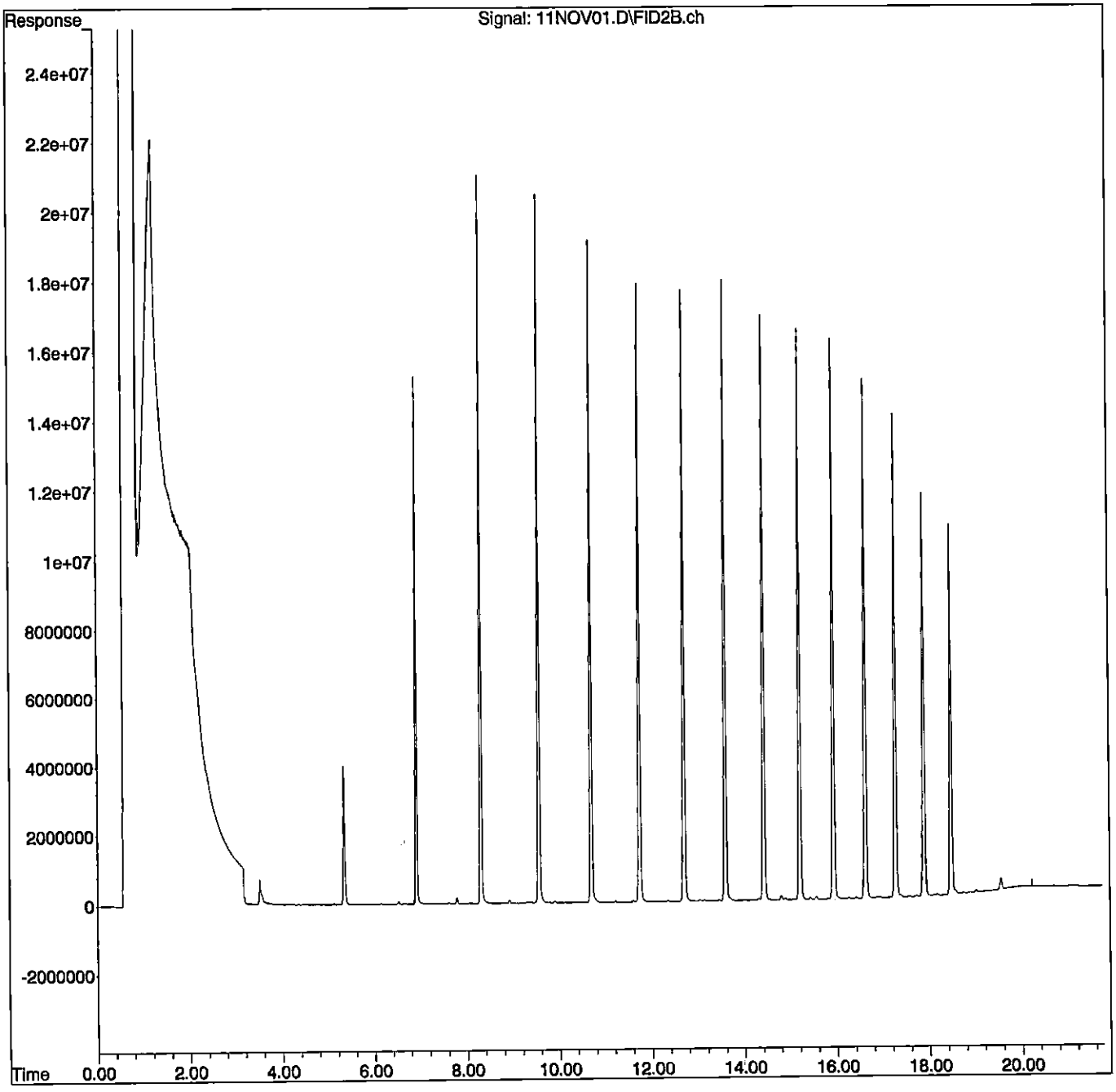
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorophenol	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
Target Compounds					
5) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
6) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
8) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	0.000	0	N.D.	ug/mL
12) H	ERO (C10-C40)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV01.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 1:44 pm
Operator : KJB
Sample : DRLVI DIST
Misc : 3081-97-7
ALS Vial : 1 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 09:44:45 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV07.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 3:32 pm
Operator : KJB
Sample : BNA SURR
Misc :
ALS Vial : 51 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 09:56:39 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

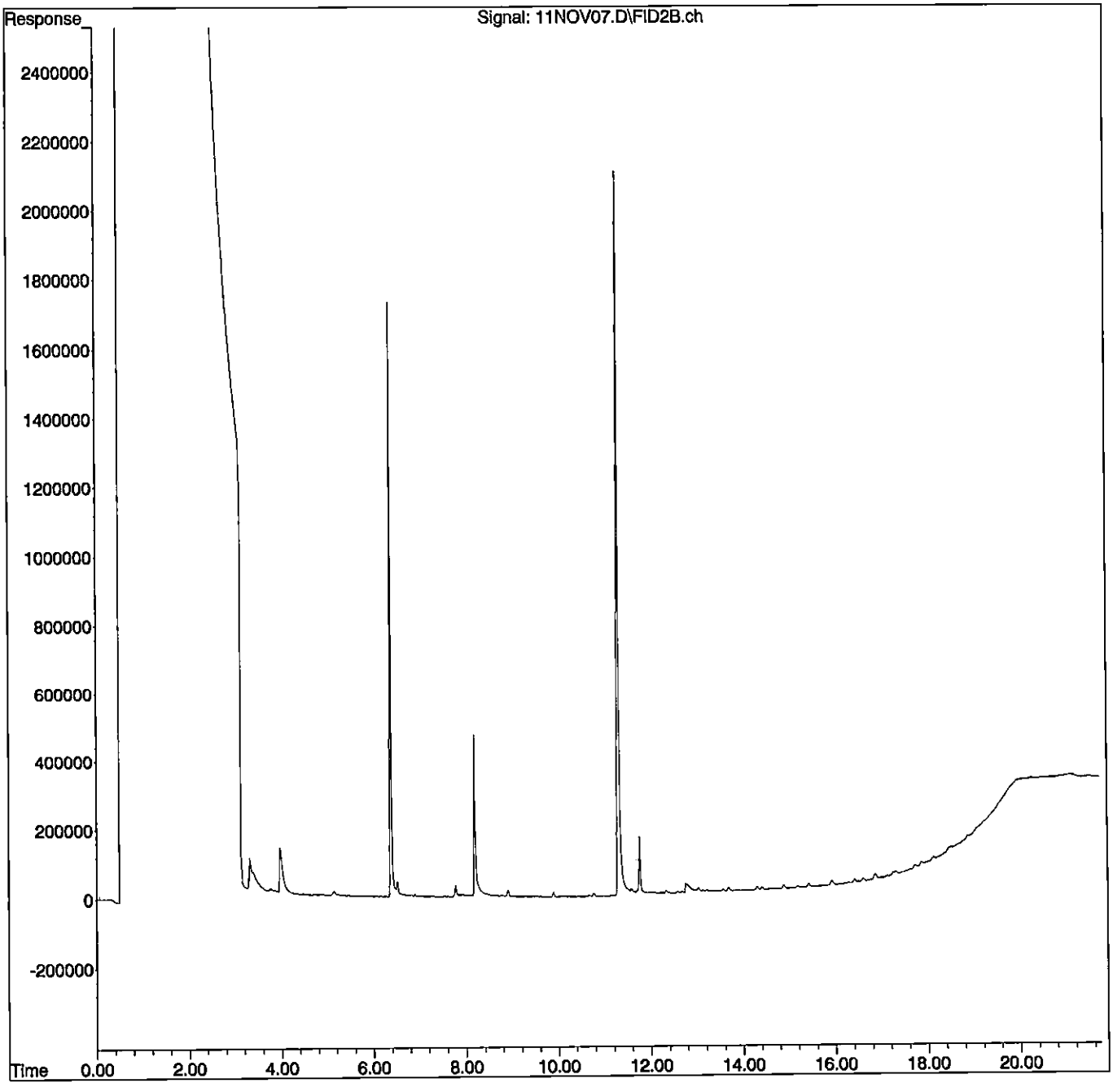
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorophenol	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
Target Compounds					
5) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
6) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
8) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	0.000	0	N.D.	ug/mL
12) H	ERO (C10-C40)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV07.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 3:32 pm
Operator : KJB
Sample : BNA SURR
Misc :
ALS Vial : 51 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 09:56:39 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV09.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 4:01 pm
Operator : KJB
Sample : DRLVI ICAL 1 UG/ML
Misc : 100-10235A
ALS Vial : 52 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 09:57:23 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

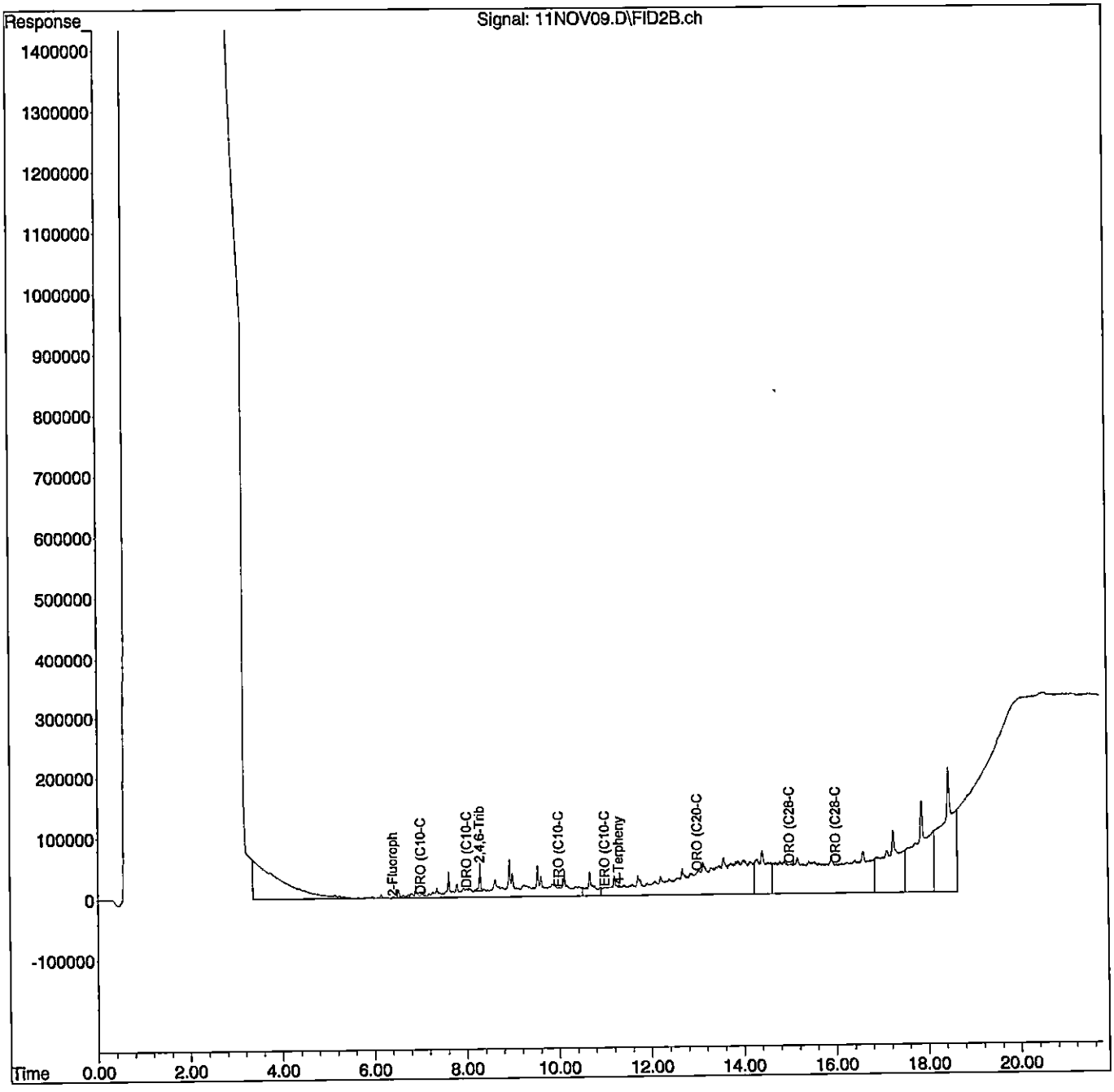
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorophenol	6.404	103173	0.005	ug/mLm
3) S	2,4,6-Tribromophenol	8.285	1010108	0.005	ug/mLm
4) S	4-Terphenyl-d14	11.300	96320	0.001	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	192536666	4.143	ug/mL
6) H	ORO (C28-C40)	16.000	176588404	5.247	ug/mL
7) H	DRO (C10-C20)	7.000	101781239	3.929	ug/mL
8) H	ORO (C20-C34)	13.000	129134081	2.227	ug/mL
9) H	ORO (C20-C40)	15.000	239776382	3.592	ug/mL
10) H	ORO (C28-C35)	15.000	117001494	4.902	ug/mL
11) H	ERO (C10-C36)	10.000	309808685	8.661	ug/mL
12) H	ERO (C10-C40)	11.000	349309528	8.827	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV09.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 4:01 pm
Operator : KJB
Sample : DRLVI ICAL 1 UG/ML
Misc : 100-10235A
ALS Vial : 52 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 09:57:23 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV11.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 4:30 pm
Operator : KJB
Sample : DRLVI ICAL 2 UG/ML
Misc : 100-10235B
ALS Vial : 53 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:05:50 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

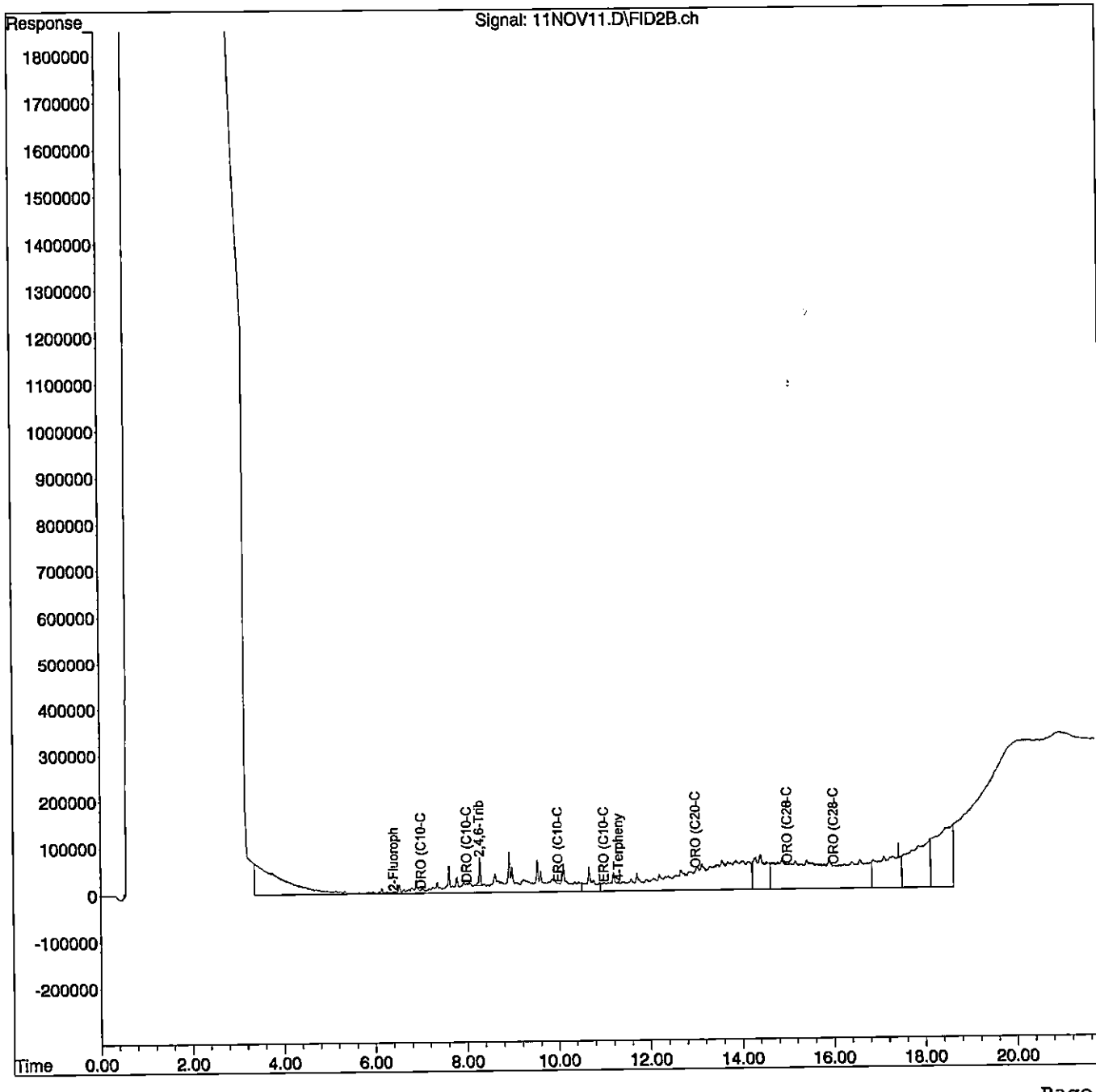
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorophenol	6.405	148227	0.006	ug/mLm
3) S	2,4,6-Tribromophenol	8.280	1373998	0.006	ug/mLm
4) S	4-Terphenyl-d14	11.320	86058	0.000	ug/mLm
	Target Compounds				
5) H	DRO (C10-C28)	8.000	197375487	4.246	ug/mL
6) H	ORO (C28-C40)	16.000	161377179	4.408	ug/mL
7) H	DRO (C10-C20)	7.000	116006384	4.478	ug/mL
8) H	ORO (C20-C34)	13.000	184442193	3.776	ug/mL
9) H	ORO (C20-C40)	15.000	271113479	4.412	ug/mL
10) H	ORO (C28-C35)	15.000	112817059	4.637	ug/mL
11) H	ERO (C10-C36)	10.000	339754216	9.644	ug/mL
12) H	ERO (C10-C40)	11.000	382426016	9.891	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV11.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 4:30 pm
Operator : KJB
Sample : DRLVI ICAL 2 UG/ML
Misc : 100-10235B
ALS Vial : 53 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:05:50 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV13.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 5:00 pm
Operator : KJB
Sample : DRLVI ICAL 5 UG/ML
Misc : 100-10235C
ALS Vial : 54 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:10:40 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

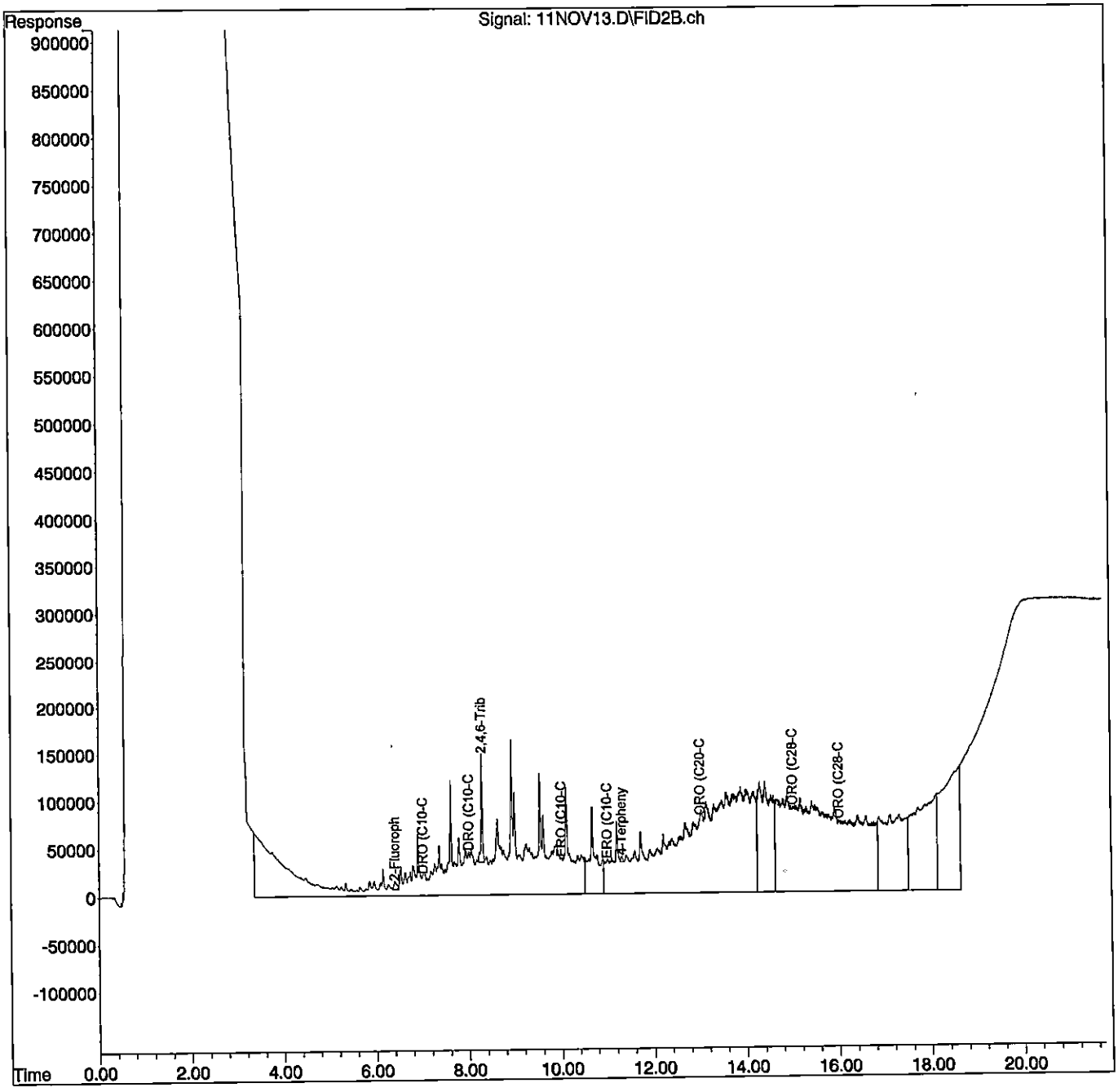
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorophenol	6.404	356873	0.011	ug/mLm
3) S	2,4,6-Tribromophenol	8.287	2485084	0.011	ug/mLm
4) S	4-Terphenyl-d14	11.308	148820	0.002	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	310497086	6.644	ug/mL
6) H	ORO (C28-C40)	16.000	217773905	7.519	ug/mL
7) H	DRO (C10-C20)	7.000	176006303	6.795	ug/mL
8) H	ORO (C20-C34)	13.000	285743957	6.613	ug/mL
9) H	ORO (C20-C40)	15.000	386353625	7.426	ug/mL
10) H	ORO (C28-C35)	15.000	148980884	6.924	ug/mL
11) H	ERO (C10-C36)	10.000	478433428	14.196	ug/mL
12) H	ERO (C10-C40)	11.000	516007282	14.184	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV13.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 5:00 pm
Operator : KJB
Sample : DRLVI ICAL 5 UG/ML
Misc : 100-10235C
ALS Vial : 54 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:10:40 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV15.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 5:29 pm
Operator : KJB
Sample : DRLVI ICAL 10 UG/ML
Misc : 100-10235D
ALS Vial : 55 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:22:42 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

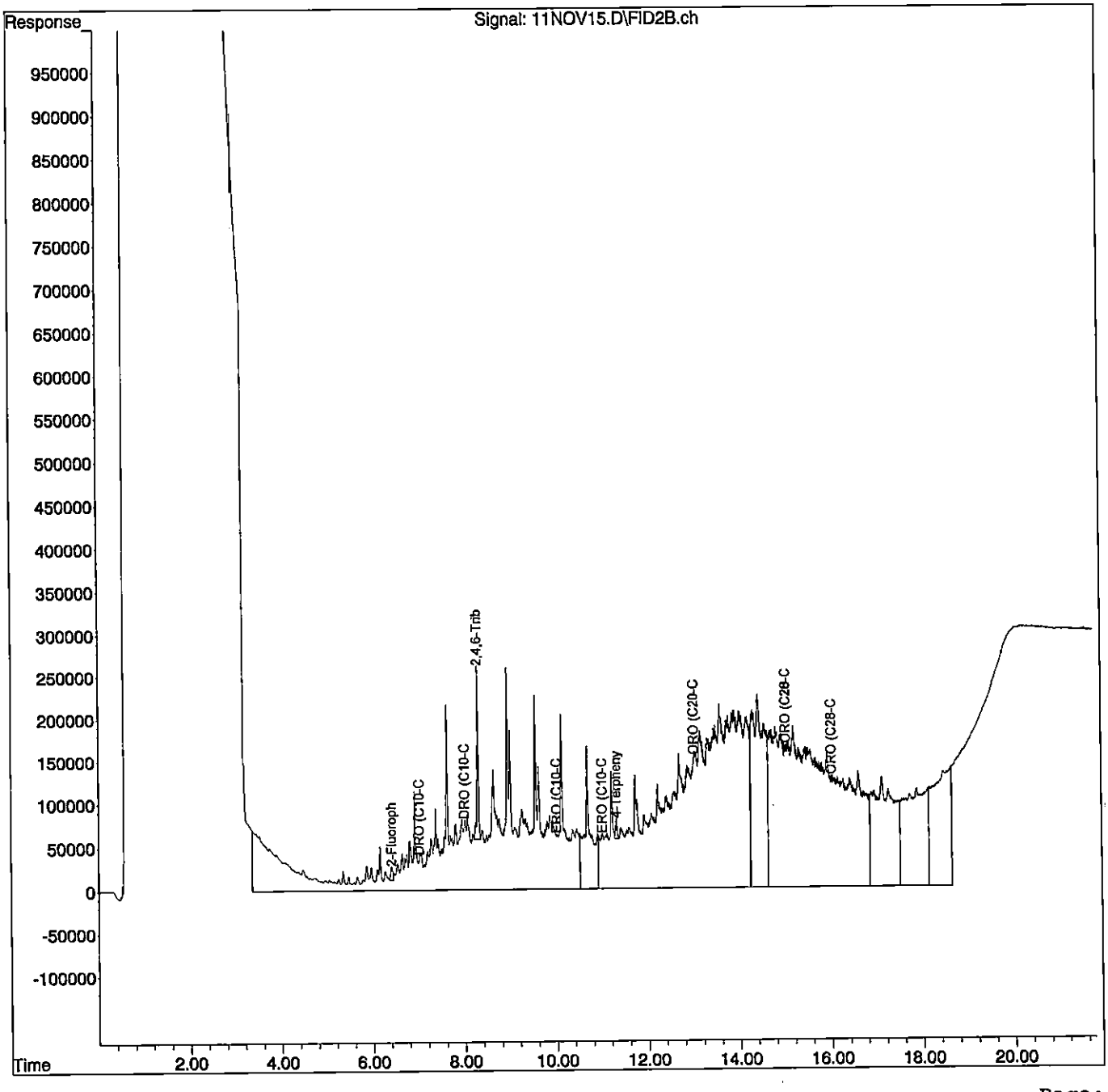
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mLd
2) S	2-Fluorophenol	6.402	479214	0.014	ug/mLm
3) S	2,4,6-Tribromophenol	8.284	4496091	0.019	ug/mLm
4) S	4-Terphenyl-d14	11.310	576599	0.015	ug/mLm
	Target Compounds				
5) H	DRO (C10-C28)	8.000	512842422	10.934	ug/mL
6) H	ORO (C28-C40)	16.000	348021836	14.703	ug/mL
7) H	DRO (C10-C20)	7.000	200104114	7.725	ug/mL
8) H	ORO (C20-C34)	13.000	481585745	12.098	ug/mL
9) H	ORO (C20-C40)	15.000	636651776	13.972	ug/mL
10) H	ORO (C28-C35)	15.000	279243918	15.161	ug/mL
11) H	ERO (C10-C36)	10.000	774609485	23.918	ug/mL
12) H	ERO (C10-C40)	11.000	857964362	25.172	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV15.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 5:29 pm
Operator : KJB
Sample : DRLVI ICAL 10 UG/ML
Misc : 100-10235D
ALS Vial : 55 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:22:42 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV17.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 5:58 pm
Operator : KJB
Sample : DRLVI ICAL 20 UG/ML
Misc : 100-10235E
ALS Vial : 56 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:27:05 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

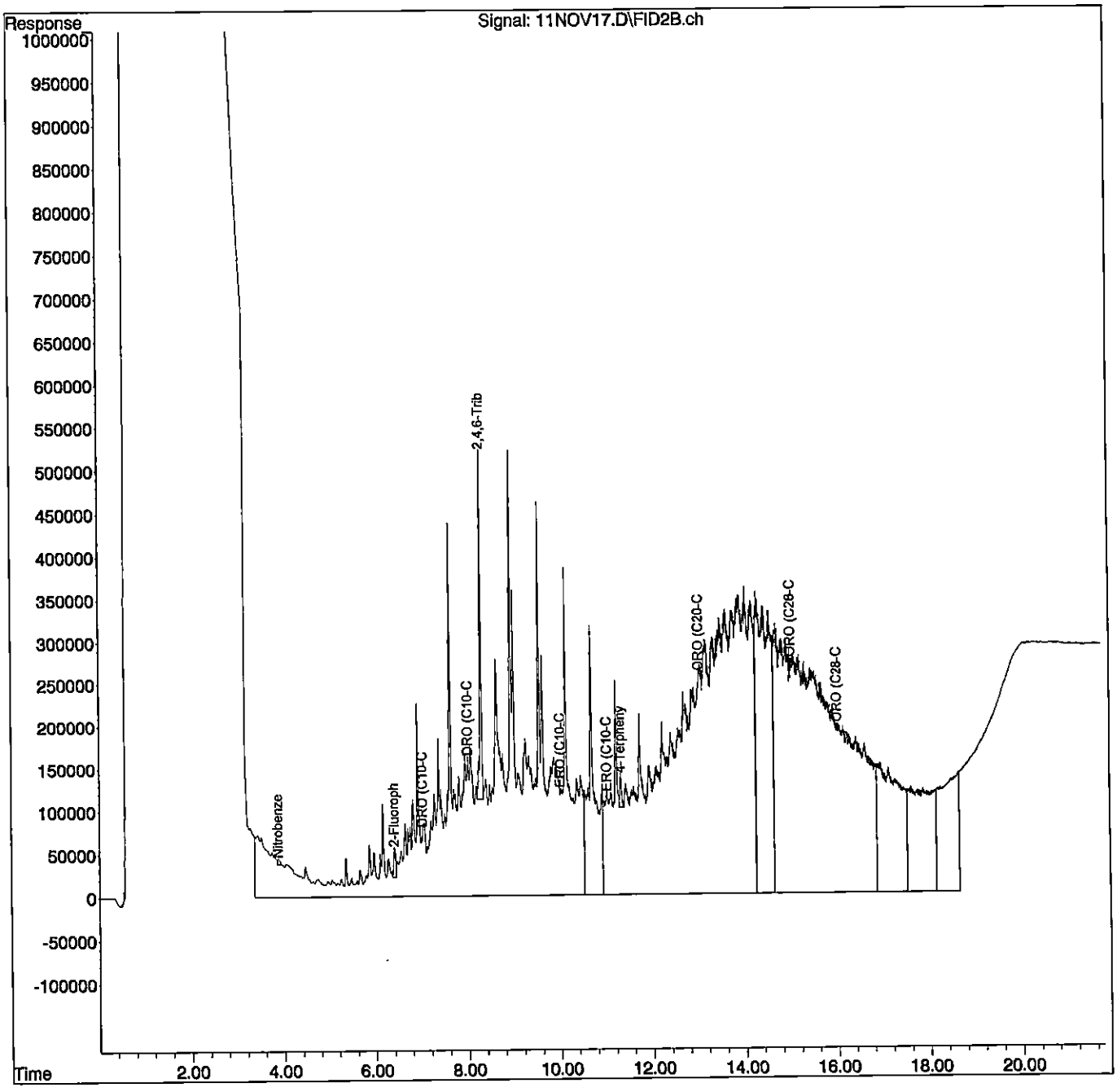
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.874	218517	0.012	ug/mLm
2) S	2-Fluorophenol	6.389	1067120	0.028	ug/mLm
3) S	2,4,6-Tribromophenol	8.286	9229811	0.038	ug/mLm
4) S	4-Terphenyl-d14	11.305	982371	0.027	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	945482314	20.105	ug/mL
6) H	ORO (C28-C40)	16.000	423750477	18.880	ug/mL
7) H	DRO (C10-C20)	7.000	405310848	15.647	ug/mL
8) H	ORO (C20-C34)	13.000	798711401	20.979	ug/mL
9) H	ORO (C20-C40)	15.000	834958380	19.159	ug/mL
10) H	ORO (C28-C35)	15.000	424364719	24.337	ug/mL
11) H	ERO (C10-C36)	10.000	1354699118	42.959	ug/mL
12) H	ERO (C10-C40)	11.000	1343144734	40.762	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV17.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 5:58 pm
Operator : KJB
Sample : DRLVI ICAL 20 UG/ML
Misc : 100-10235E
ALS Vial : 56 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:27:05 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV19.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 6:27 pm
Operator : KJB
Sample : DRLVI ICAL 50 UG/ML
Misc : 100-10235F
ALS Vial : 57 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:30:45 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

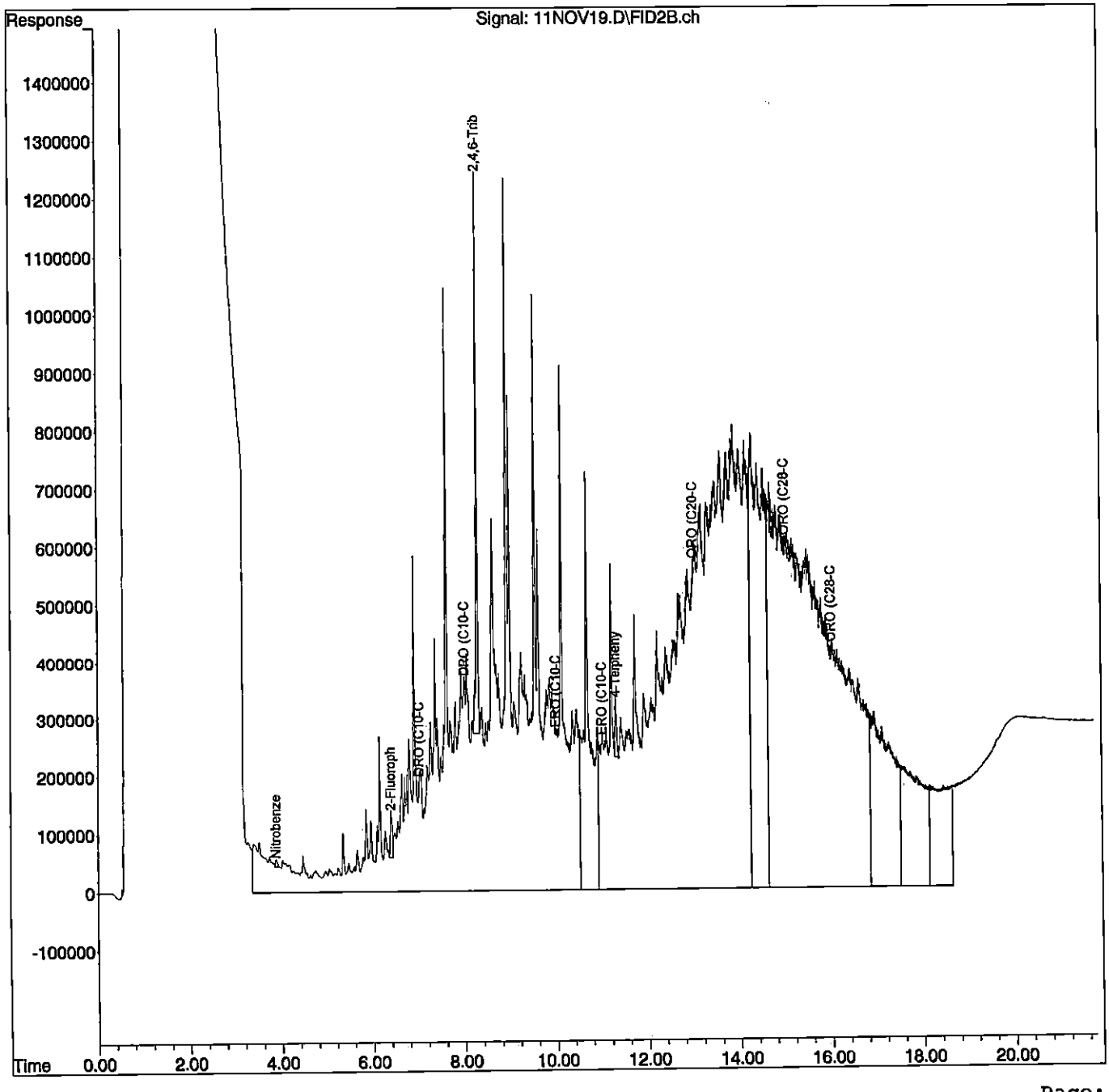
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.875	377374	0.037	ug/mLm
2) S	2-Fluorophenol	6.387	2410946	0.060	ug/mLm
3) S	2,4,6-Tribromophenol	8.286	20622792	0.084	ug/mLm
4) S	4-Terphenyl-d14	11.298	2692720	0.077	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	1938219766	41.151	ug/mL
6) H	ORO (C28-C40)	16.000	992174916	50.234	ug/mL
7) H	DRO (C10-C20)	7.000	872981488	33.701	ug/mL
8) H	ORO (C20-C34)	13.000	1790236542	48.747	ug/mL
9) H	ORO (C20-C40)	15.000	1984088305	49.214	ug/mL
10) H	ORO (C28-C35)	15.000	886815385	53.579	ug/mL
11) H	ERO (C10-C36)	10.000	2840463270	91.729	ug/mL
12) H	ERO (C10-C40)	11.000	2881333310	90.189	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV19.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 6:27 pm
Operator : KJB
Sample : DRLVI ICAL 50 UG/ML
Misc : 100-10235F
ALS Vial : 57 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:30:45 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV21.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 6:56 pm
Operator : KJB
Sample : DRLVI ICAL 100 UG/ML
Misc : 100-10235G
ALS Vial : 58 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:39:54 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

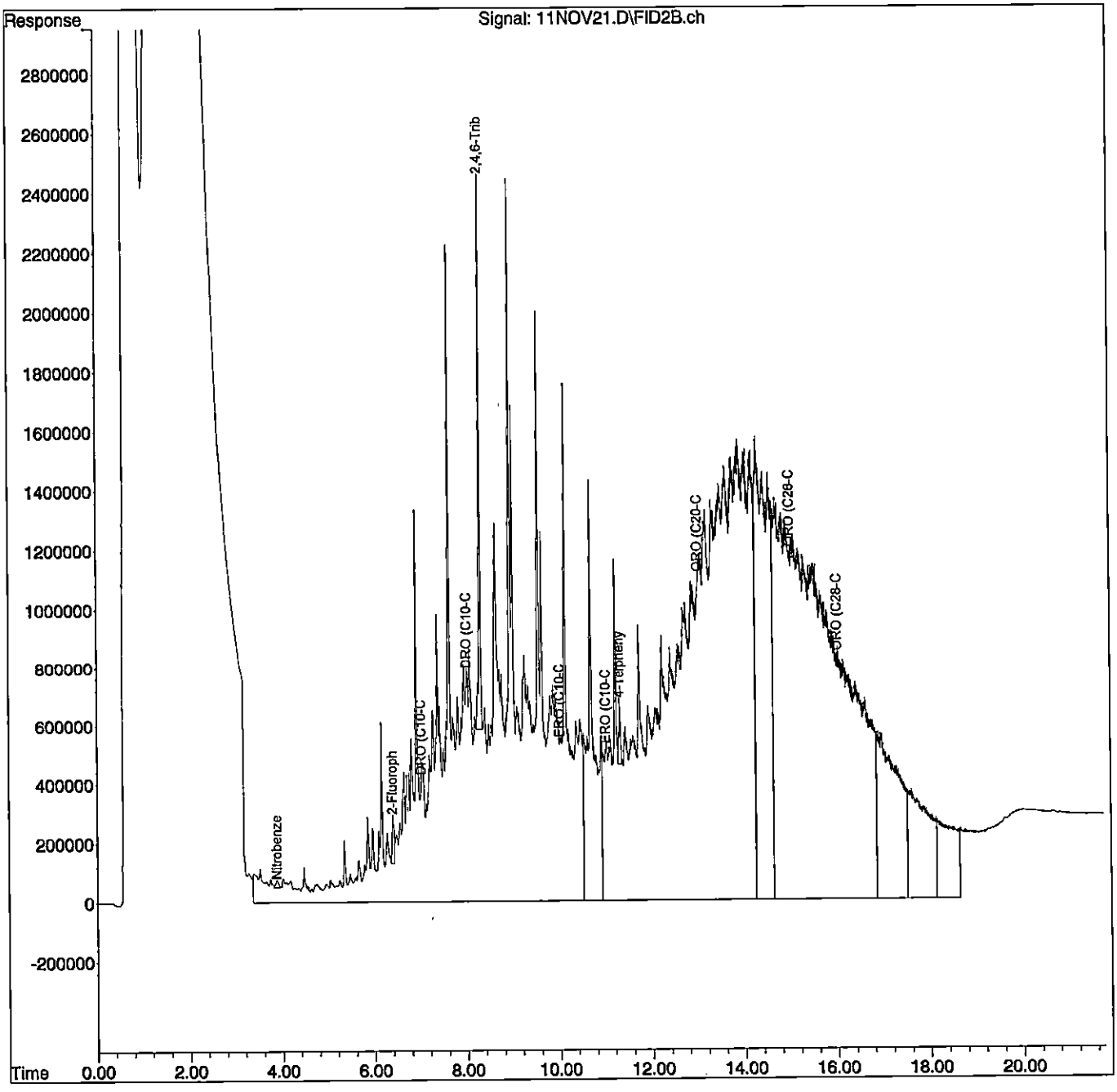
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.875	976896	0.131	ug/mLm
2) S	2-Fluorophenol	6.383	4812166	0.118	ug/mLm
3) S	2,4,6-Tribromophenol	8.292	40765020	0.164	ug/mLm
4) S	4-Terphenyl-d14	11.298	5434509	0.158	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	4000406496	84.869	ug/mL
6) H	ORO (C28-C40)	16.000	1883143150	99.380	ug/mL
7) H	DRO (C10-C20)	7.000	1795688327	69.322	ug/mL
8) H	ORO (C20-C34)	13.000	3507254520	96.833	ug/mL
9) H	ORO (C20-C40)	15.000	3813228737	97.055	ug/mL
10) H	ORO (C28-C35)	15.000	1761055327	108.859	ug/mL
11) H	ERO (C10-C36)	10.000	5536076511	180.213	ug/mL
12) H	ERO (C10-C40)	11.000	5636810726	178.732	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV21.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 6:56 pm
Operator : KJB
Sample : DRLVI ICAL 100 UG/ML
Misc : 100-10235G
ALS Vial : 58 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:39:54 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV23.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 7:25 pm
Operator : KJB
Sample : DRLVI ICAL 200 UG/ML
Misc : 100-10235H
ALS Vial : 59 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:45:39 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

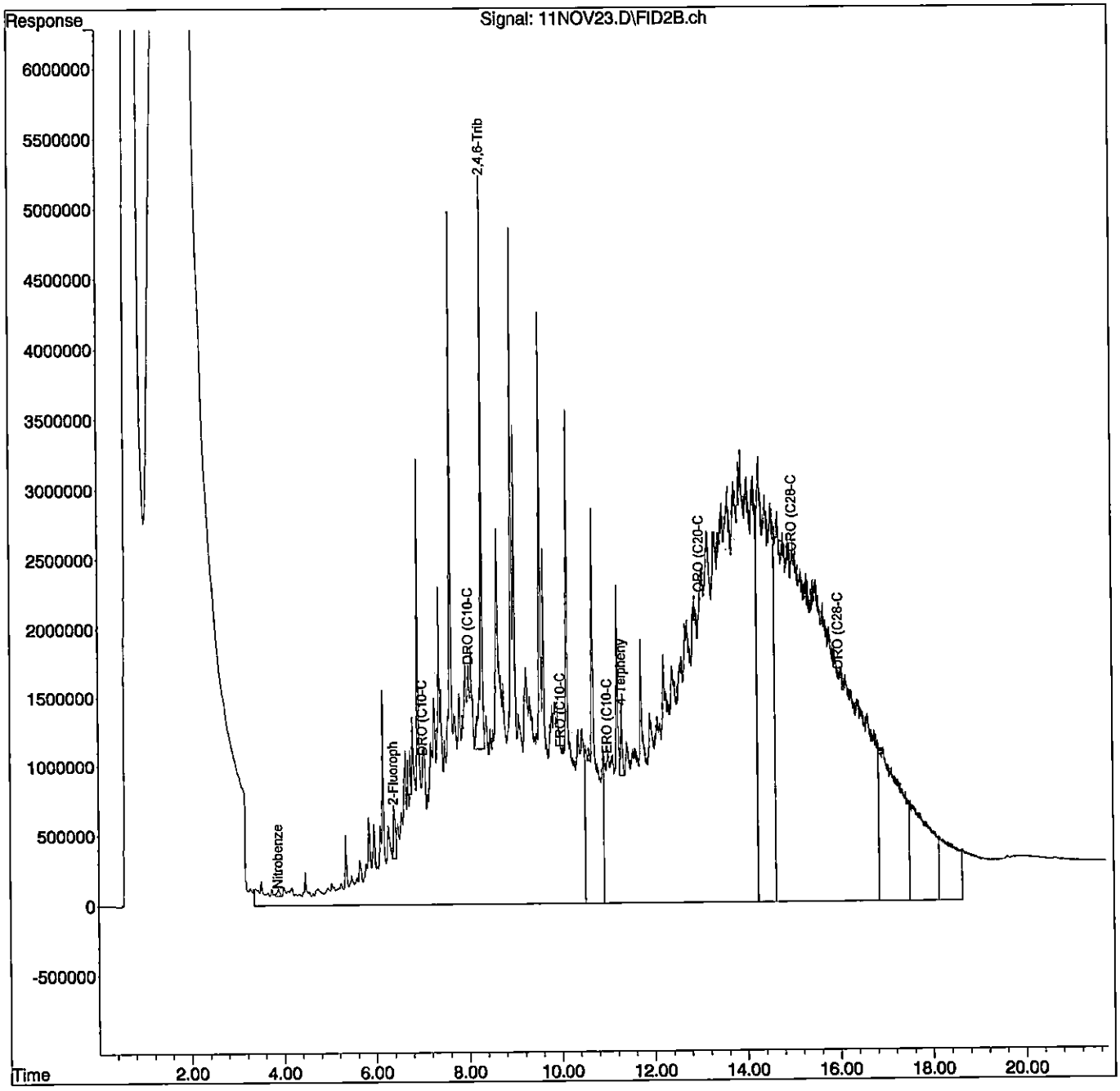
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.874	1992815	0.292	ug/mLm
2) S	2-Fluorophenol	6.376	11988021	0.292	ug/mLm
3) S	2,4,6-Tribromophenol	8.295	100802660	0.405	ug/mLm
4) S	4-Terphenyl-d14	11.305	12966332	0.381	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	8065716105	171.053	ug/mL
6) H	ORO (C28-C40)	16.000	3935885882	212.608	ug/mL
7) H	DRO (C10-C20)	7.000	3916316015	151.187	ug/mL
8) H	ORO (C20-C34)	13.000	6882456626	191.357	ug/mL
9) H	ORO (C20-C40)	15.000	7765703104	200.431	ug/mL
10) H	ORO (C28-C35)	15.000	3599784310	225.125	ug/mL
11) H	ERO (C10-C36)	10.000	11316622695	369.959	ug/mL
12) H	ERO (C10-C40)	11.000	11080588011	353.658	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV23.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 7:25 pm
Operator : KJB
Sample : DRLVI ICAL 200 UG/ML
Misc : 100-10235H
ALS Vial : 59 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:45:39 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV25.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 7:54 pm
Operator : KJB
Sample : DRLVI ICAL 500 UG/ML
Misc : 100-10235I
ALS Vial : 60 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:49:23 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

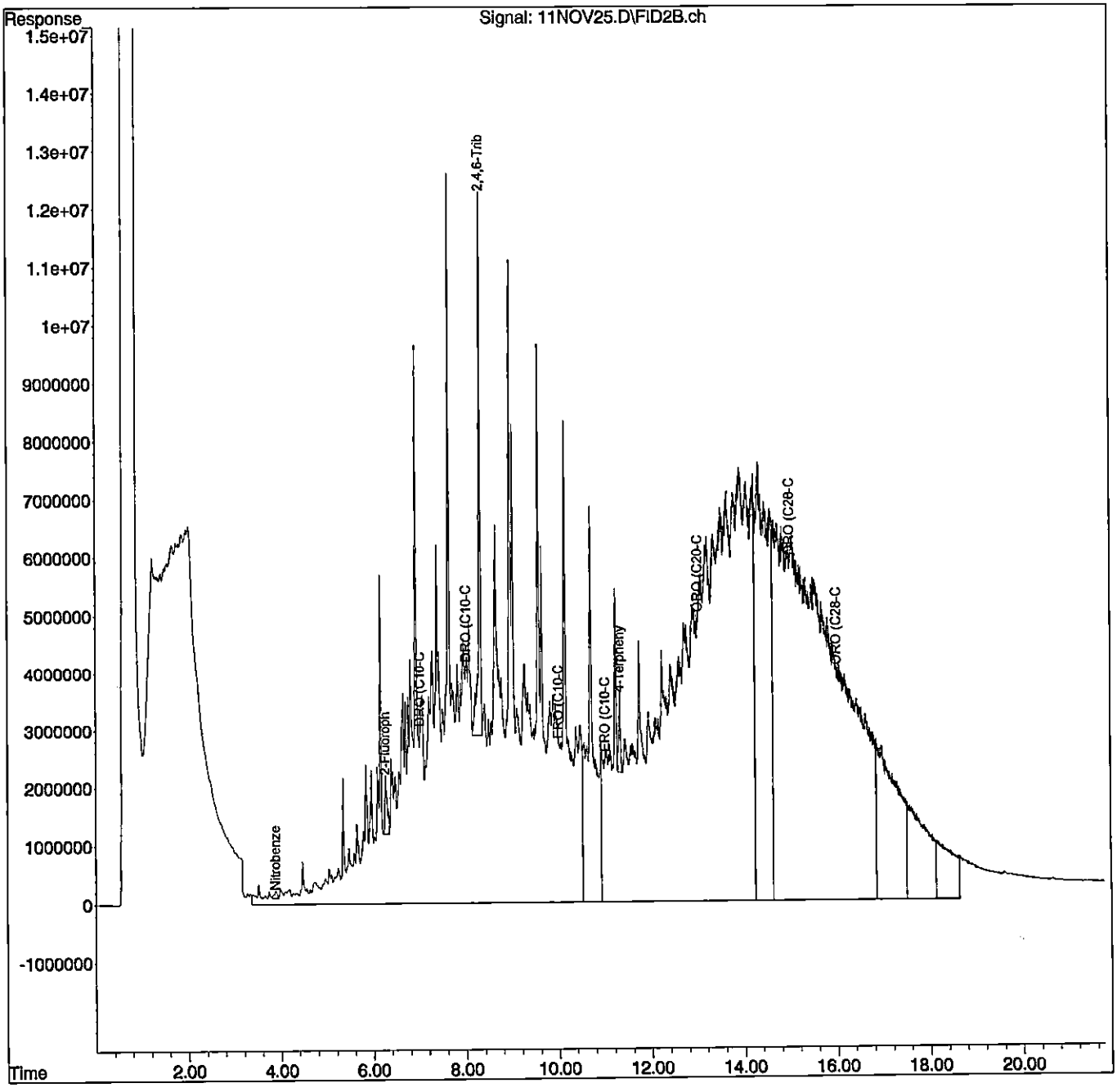
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.878	5459558	0.838	ug/mLm
2) S	2-Fluorophenol	6.259	37474892	0.907	ug/mLm
3) S	2,4,6-Tribromophenol	8.311	246695520	0.990	ug/mLm
4) S	4-Terphenyl-d14	11.317	33882045	0.999	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	20680636669	438.487	ug/mL
6) H	ORO (C28-C40)	16.000	9263346918	506.468	ug/mL
7) H	DRO (C10-C20)	7.000	10343869008	399.320	ug/mL
8) H	ORO (C20-C34)	13.000	17148956646	478.875	ug/mL
9) H	ORO (C20-C40)	15.000	18561373428	482.790	ug/mL
10) H	ORO (C28-C35)	15.000	8815637959	554.934	ug/mL
11) H	ERO (C10-C36)	10.000	28146488842	922.400	ug/mL
12) H	ERO (C10-C40)	11.000	28298936748	906.940	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV25.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 7:54 pm
Operator : KJB
Sample : DRLVI ICAL 500 UG/ML
Misc : 100-10235I
ALS Vial : 60 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:49:23 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV27.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 8:23 pm
Operator : KJB
Sample : DRLVI ICAL 1000 UG/ML
Misc : 100-10235J
ALS Vial : 61 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 11:00:42 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

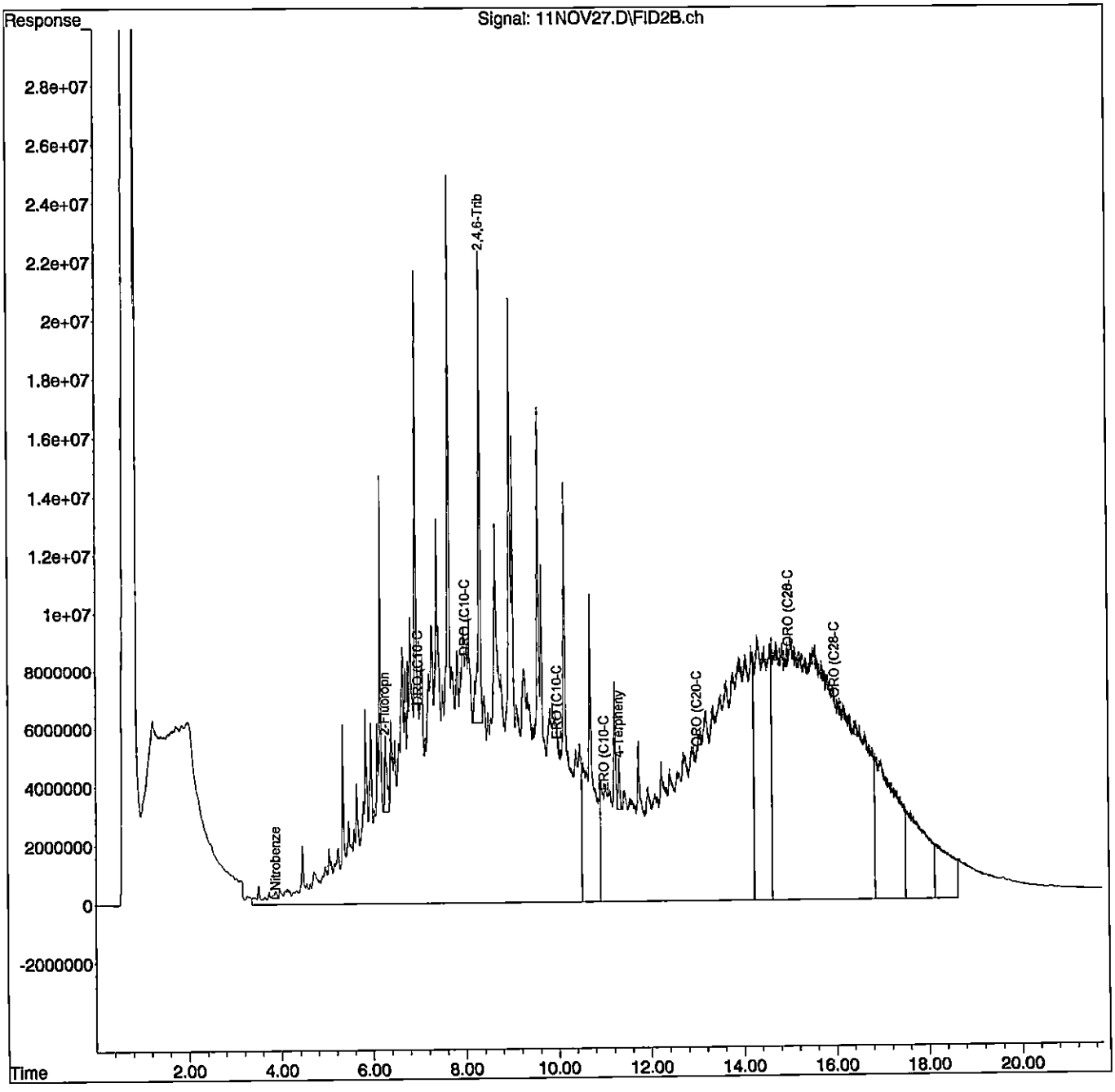
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.881	9245476	1.435	ug/mLm
2) S	2-Fluorophenol	6.268	95869972	2.317	ug/mLm
3) S	2,4,6-Tribromophenol	8.334	484372384	1.944	ug/mLm
4) S	4-Terphenyl-d14	11.322	47400093	1.399	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	33655172448	713.545	ug/mL
6) H	ORO (C28-C40)	16.000	14576470451	799.537	ug/mL
7) H	DRO (C10-C20)	7.000	22044112470	851.002	ug/mL
8) H	ORO (C20-C34)	13.000	22301721312	623.181	ug/mL
9) H	ORO (C20-C40)	15.000	24647425887	641.970	ug/mL
10) H	ORO (C28-C35)	15.000	13298578433	838.400	ug/mL
11) H	ERO (C10-C36)	10.000	45464607427	1490.868	ug/mL
12) H	ERO (C10-C40)	11.000	46301693279	1485.427	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV27.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 8:23 pm
Operator : KJB
Sample : DRLVI ICAL 1000 UG/ML
Misc : 100-10235J
ALS Vial : 61 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 11:00:42 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV29.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 8:53 pm
Operator : KJB
Sample : DRLVI ICV 500 UG/ML
Misc : 100-10236
ALS Vial : 62 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:56:08 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

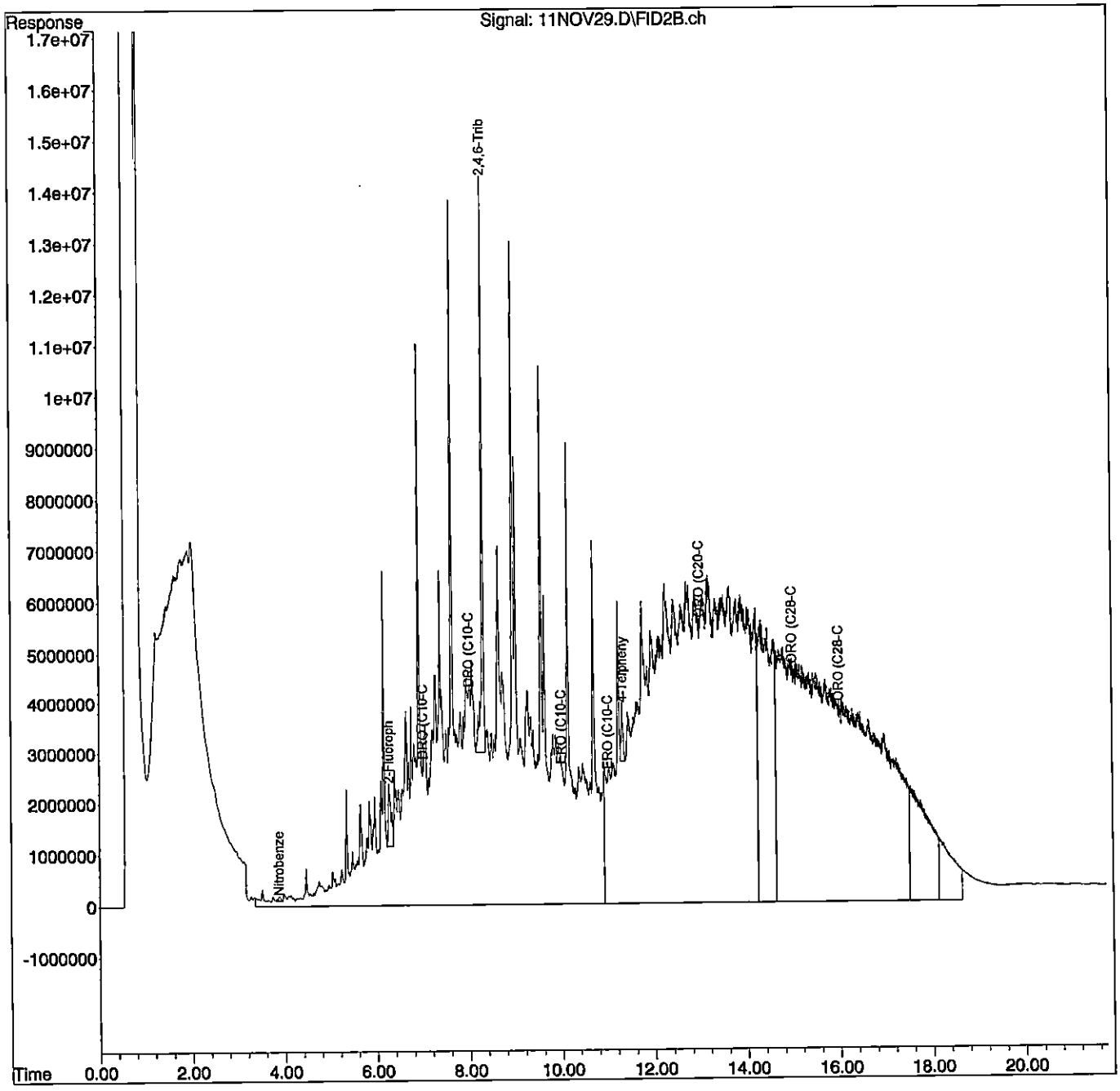
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.878	3707164	0.562	ug/mLm
2) S	2-Fluorophenol	6.263	52495390	1.270	ug/mLm
3) S	2,4,6-Tribromophenol	8.310	274444706	1.102	ug/mLm
4) S	4-Terphenyl-d14	11.317	31270933	0.922	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	20986581665	444.973	ug/mL
6) H	ORO (C28-C40)	16.000	8353643436	456.289	ug/mL
7) H	DRO (C10-C20)	7.000	10576438521	408.298	ug/mL
8) H	ORO (C20-C34)	13.000	16895279224	471.771	ug/mL
9) H	ORO (C20-C40)	15.000	18078525523	470.161	ug/mL
10) H	ORO (C28-C35)	15.000	7569971119	476.168	ug/mL
11) H	ERO (C10-C36)	10.000	27977425668	916.851	ug/mL
12) H	ERO (C10-C40)	11.000	28440599796	911.492	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV29.D
Signal(s) : FID2B.ch
Acq On : 11 Nov 2019 8:53 pm
Operator : KJB
Sample : DRLVI ICV 500 UG/ML
Misc : 100-10236
ALS Vial : 62 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 12 10:56:08 2019
Quant Method : C:\msdchem\1\methods\DRLVI191017.M
Quant Title :
QLast Update : Fri Nov 08 14:53:00 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Nov 11 1530 Sequence Log

Starting sequence Mon Nov 11 15:30:49 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191111.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191111\
Method Path: C:\MSDCHEM\1\METHODS\

Line Type Vial DataFile Method Sample Name

---

1) COMMENT: 'Dual system, unlinked'
2) UNLINKED: 'Unlinked'
Complete paths including drive 'C:\msdchem...' must be specified.
Ignoring keyword string :UNLINKED
Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191111.SEC\
9) RearSamp 51 11NOV07 LVID4B BNA SURR
This computer is now swap bound.
10) Sample 2 11NOV08 LVID4B DRO DIST
11) RearSamp 52 11NOV09 LVID4B DRLVI ICAL 1 UG/ML
This computer is now swap bound.
12) Sample 4 11NOV10 LVID4B DRO CCV 10,000 UG/ML
13) RearSamp 53 11NOV11 LVID4B DRLVI ICAL 2 UG/ML
This computer is now swap bound.
14) Sample 4 11NOV12 LVID4B DRO CCV 10,000 UG/ML
Sequence Table edit performed Mon Nov 11 16:56:12 2019
15) RearSamp 54 11NOV13 LVID4B DRLVI ICAL 5 UG/ML
This computer is now swap bound.
16) Sample 10 11NOV14 LVID4B RINSE
17) RearSamp 55 11NOV15 LVID4B DRLVI ICAL 10 UG/ML
This computer is now swap bound.
18) Sample 10 11NOV16 LVID4B RINSE
Sequence Table edit performed Mon Nov 11 17:51:34 2019
19) RearSamp 56 11NOV17 LVID4B DRLVI ICAL 20 UG/ML
This computer is now swap bound.
20) Sample 11 11NOV18 LVID4B DBLKS1-14364
21) RearSamp 57 11NOV19 LVID4B DRLVI ICAL 50 UG/ML
This computer is now swap bound.
22) Sample 12 11NOV20 LVID4B DLCSS1-145364
23) RearSamp 58 11NOV21 LVID4B DRLVI ICAL 100 UG/ML
This computer is now swap bound.
24) Sample 13 11NOV22 LVID4B 19110544-01A MS
25) RearSamp 59 11NOV23 LVID4B DRLVI ICAL 200 UG/ML
This computer is now swap bound.
26) Sample 14 11NOV24 LVID4B 19110544-01A MSD
27) RearSamp 60 11NOV25 LVID4B DRLVI ICAL 500 UG/ML
This computer is now swap bound.
28) Sample 15 11NOV26 LVID4B RINSE19110544-01A
29) RearSamp 61 11NOV27 LVID4B DRLVI ICAL 1000 UG/ML
This computer is now swap bound.
30) Sample 16 11NOV28 LVID4B 19110541-07A DF10
31) RearSamp 62 11NOV29 LVID4B DRLVI ICV 500 UG/ML
This computer is now swap bound.
32) Sample 17 11NOV30 LVID4B 19110544-02A
33) RearSamp 3 11NOV31 LVID4B DRLVI CCV 500 UG/ML
This computer is now swap bound.

2019 Nov 11 1530 Sequence Log

34) Sample 18 11NOV32 LVID4B 19110544-03A
35) RearSamp 63 11NOV33 LVID4B 19110435-01A DF5
This computer is now swap bound.
36) Sample 19 11NOV34 LVID4B 19110544-04A
37) RearSamp 64 11NOV35 LVID4B 19110435-01A DF10
This computer is now swap bound.
38) Sample 20 11NOV36 LVID4B 19110544-05A
39) RearSamp 65 11NOV37 LVID4B DBLKW1-145331
This computer is now swap bound.
40) Sample 21 11NOV38 LVID4B 19110544-06A
41) RearSamp 66 11NOV39 LVID4B DRLVSW1-145331
This computer is now swap bound.
42) Sample 22 11NOV40 LVID4B 19110544-07A
43) RearSamp 67 11NOV41 LVID4B DLCSW1-145331
This computer is now swap bound.
44) Sample 23 11NOV42 LVID4B 19110544-08
45) RearSamp 68 11NOV43 LVID4B DLCS1=45331
This computer is now swap bound.
46) Sample 24 11NOV44 LVID4B 19110558-01A
47) RearSamp 69 11NOV45 LVID4B 19110539-01B
This computer is now swap bound.
48) Sample 4 11NOV46 LVID4B DRO CCV 10000 UG/ML
49) RearSamp 70 11NOV47 LVID4B 19110541-0B
This computer is now swap bound.
50) Sample 25 11NOV48 LVID4B 19110624-01A
51) RearSamp 71 11NOV49 LVID4B 19110541-02B
This computer is now swap bound.
52) Sample 26 11NOV50 LVID4B 19110624-02A
53) RearSamp 72 11NOV51 LVID4B 19110572-01C
This computer is now swap bound.
54) Sample 27 11NOV52 LVID4B 19110637-01A
55) RearSamp 73 11NOV53 LVID4B 19110572-01C
This computer is now swap bound.
56) Sample 28 11NOV54 LVID4B 19110637-02A
57) RearSamp 74 11NOV55 LVID4B 19110573-01C
This computer is now swap bound.
58) Sample 29 11NOV56 LVID4B 19110637-03A
59) RearSamp 75 11NOV57 LVID4B 19110574-01C
This computer is now swap bound.
60) Sample 30 11NOV58 LVID4B 19110637-04A
61) RearSamp 76 11NOV59 LVID4B 19110575-01C
This computer is now swap bound.
62) Sample 31 11NOV60 LVID4B 19110637-05A
63) RearSamp 3 11NOV61 LVID4B DRLVI CCV 500 UG/ML
This computer is now swap bound.
64) Sample 32 11NOV62 LVID4B 19110637-06A
65) RearSamp 77 11NOV63 LVID4B 19110576-01C
This computer is now swap bound.
66) Sample 33 11NOV64 LVID4B 19110637-07A
67) RearSamp 78 11NOV65 LVID4B 19110634-01B
This computer is now swap bound.
68) Sample 34 11NOV66 LVID4B 19110637-08A
69) RearSamp 79 11NOV67 LVID4B 19110636-01B
This computer is now swap bound.
70) Sample 4 11NOV68 LVID4B DRO CCV 10000 UG/ML
71) RearSamp 80 11NOV69 LVID4B DBLKW1-145430

2019 Nov 11 1530 Sequence Log

This computer is now swap bound.
72) Sample 35 11NOV70 LVID4B DBLKS1
73) RearSamp 81 11NOV71 LVID4B DRLVSW1-145430
This computer is now swap bound.
74) Sample 36 11NOV72 LVID4B DBLKS2
75) RearSamp 82 11NOV73 LVID4B DLCSW1-145430
This computer is now swap bound.
76) Sample 37 11NOV74 LVID4B DLCSS1
77) RearSamp 83 11NOV75 LVID4B 9110801-06AMS
This computer is now swap bound.
78) Sample 38 11NOV76 LVID4B DLCSS2
79) RearSamp 84 11NOV77 LVID4B 19110801-06A MSD
This computer is now swap bound.
80) Sample 39 11NOV78 LVID4B 19110098-01A MS
81) RearSamp 85 11NOV79 LVID4B 19110801-06A
This computer is now swap bound.
82) Sample 40 11NOV80 LVID4B 19110098-01A MSD
83) RearSamp 86 11NOV81 LVID4B 19110834-01A
This computer is now swap bound.
84) Sample 41 11NOV82 LVID4B 19110098-01A
85) RearSamp 87 11NOV83 LVID4B 19110834-02A
This computer is now swap bound.
86) Sample 42 11NOV84 LVID4B 19110436-01A MS
87) RearSamp 88 11NOV85 LVID4B 19110722-01D
This computer is now swap bound.
88) Sample 43 11NOV86 LVID4B 19110436-01A MSD
89) RearSamp 89 11NOV87 LVID4B 1910690-01C
This computer is now swap bound.
90) Sample 44 11NOV88 LVID4B 19110436-01A
91) RearSamp 90 11NOV89 LVID4B 19110690-02C
This computer is now swap bound.
92) Sample 45 11NOV90 LVID4B 19110098-02A
93) RearSamp 91 11NOV91 LVID4B 19110690-03C
This computer is now swap bound.
94) Sample 46 11NOV92 LVID4B 19110098-03A
95) RearSamp 3 11NOV93 LVID4B DRLVI CCV 500 UG/ML

This computer is now swap bound.
96) Sample 47 11NOV94 LVID4B 19110098-04A
97) RearSamp 92 11NOV95 LVID4B 19110690-04C
This computer is now swap bound.
98) Sample 48 11NOV96 LVID4B 19110098-05A
99) RearSamp 3 11NOV97 LVID4B DRLVI CCV 500 UG/ML
This computer is now swap bound.
100) Sample 49 11NOV98 LVID4B 19110436-02A
101) RearSamp 10 11NOV99 LVID4B RINSE
This computer is now swap bound.
102) Sample 4 11NOV00 LVID4B DRO CCV 10000 UG/ML

Sequence completed Tue Nov 12 14:15:25 2019

C:\MSDCHEM\1\DATA\GC8-191111\2019 Nov 11 1530 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191111\2019 Nov 11 1530 Sequence Log .LOG

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV61.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 4:39 am
Operator : KJB
Sample : DRLVI CCV 500 UG/ML
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 12:00:47 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:11:59 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	1.000	0.922	7.8	91	0.00
2	S	2-Fluorophenol	1.000	0.992	0.8	96	0.00
3	S	2,4,6-Tribromophenol	1.000	1.022	-2.2	102	0.12
4	S	4-Terphenyl-d14	1.000	1.134	-13.4	112	0.00
5	H	DRO (C10-C28)	500.000	536.886	-7.4	105	0.00
6	H	ORO (C28-C40)	500.000	478.915	4.2	95	0.00
7	H	DRO (C10-C20)	500.000	-12.665	102.5#	-3	0.00
8	H	ORO (C20-C34)	500.000	-4.222	100.8#	-0	0.00
9	H	ORO (C20-C40)	500.000	-6.516	101.3#	-0	0.00
11	H	ERO (C10-C36)	1000.000	-17.863	101.8#	-1	0.00
12	H	ERO (C10-C40)	1000.000	-18.543	101.9#	-1	0.00

Evaluate Continuing Calibration Report - Not Founds

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
7	H	DRO (C10-C20)	500.000	-12.665	102.5#	-3	0.00
8	H	ORO (C20-C34)	500.000	-4.222	100.8#	-0	0.00
9	H	ORO (C20-C40)	500.000	-6.516	101.3#	-0	0.00
10	H	ORO (C28-C35)	500.000	0.000	100.0#	0	0.00
11	H	ERO (C10-C36)	1000.000	-17.863	101.8#	-1	0.00
12	H	ERO (C10-C40)	1000.000	-18.543	101.9#	-1	0.00

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

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV61.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 4:39 am
Operator : KJB
Sample : DRLVI CCV 500 UG/ML
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 12:00:47 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:11:59 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	4.913	4.985 E6	-1.5	91	0.00
2	S	2-Fluorophenol	32.287	35.980 E6	-11.4	96	0.00
3	S	2,4,6-Tribromophenol	273.485	251.828 E6	7.9	102	0.12
4	S	4-Terphenyl-d14	28.705	38.105 E6	-32.7#	112	0.00
5	H	DRO (C10-C28)	68.038	43.370 E6	36.3#	105	0.00
6	H	ORO (C28-C40)	48.189	17.666 E6	63.3#	95	0.00
7	H	DRO (C10-C20)	34.550	0.000 E6	100.0#	-3#	0.00
8	H	ORO (C20-C34)	56.243	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	79.087	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C10-C36)	52.534	0.000 E6	100.0#	-1#	0.00
12	H	ERO (C10-C40)	53.449	0.000 E6	100.0#	-1#	0.00

Evaluate Continuing Calibration Report - Not Founds

7	H	DRO (C10-C20)	34.550	0.000 E6	100.0#	-3#	0.00
8	H	ORO (C20-C34)	56.243	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	79.087	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	25.791	0.000 E6	100.0#	0#	0.00
11	H	ERO (C10-C36)	52.534	0.000 E6	100.0#	-1#	0.00
12	H	ERO (C10-C40)	53.449	0.000 E6	100.0#	-1#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV61.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 4:39 am
Operator : KJB
Sample : DRLVI CCV 500 UG/ML
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 12:00:47 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:11:59 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

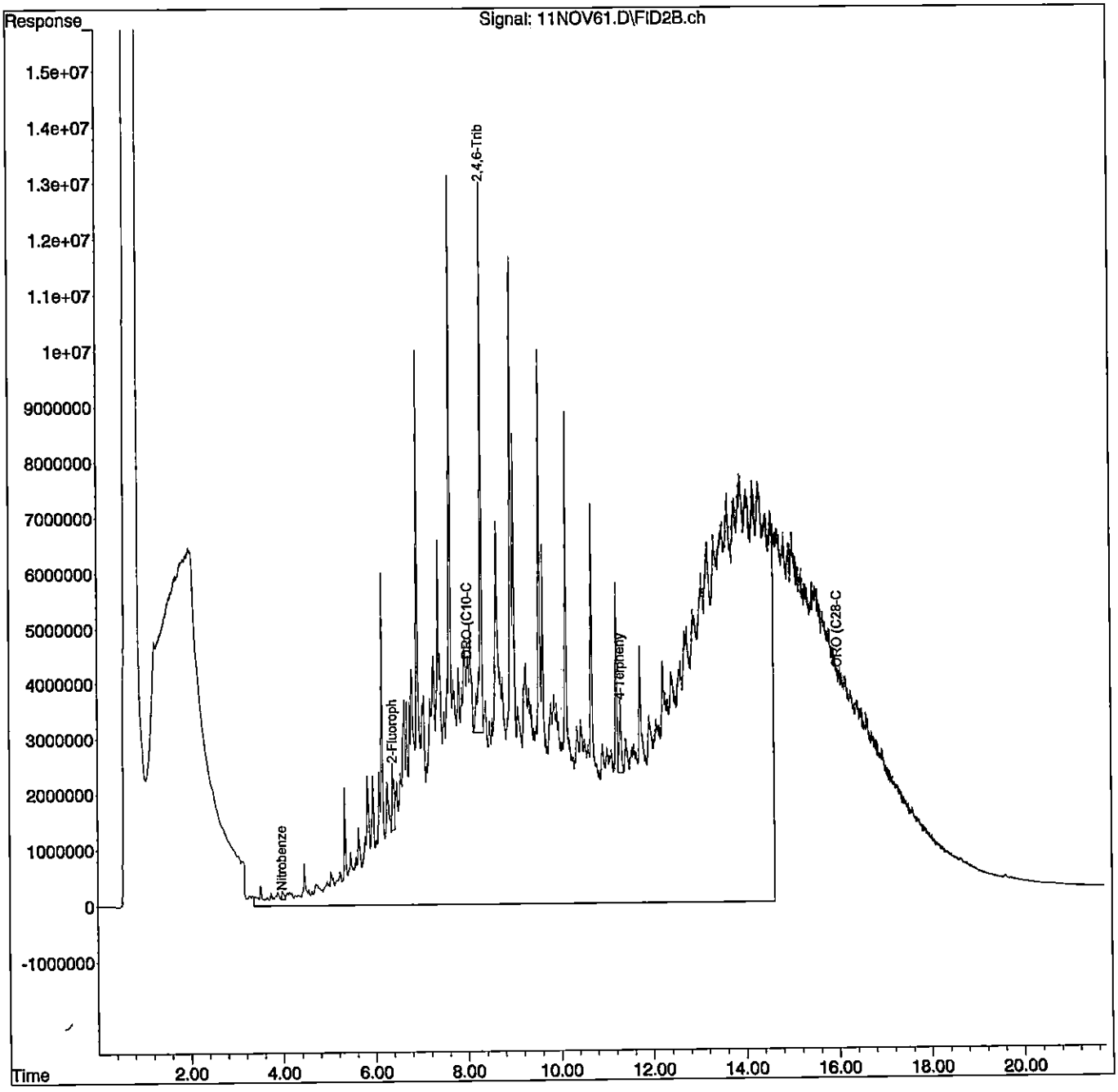
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.971	4984982	0.922	ug/mLm
2) S	2-Fluorophenol	6.376	35979612	0.992	ug/mLm
3) S	2,4,6-Tribromophenol	8.307	251827722	1.022	ug/mLm
4) S	4-Terphenyl-d14	11.302	38105403	1.134	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	21684859276	536.886	ug/mL
6) H	ORO (C28-C40)	16.000	8833014164	478.915	ug/mL
7) H	DRO (C10-C20)	7.000	-292792315	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-38105403	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-38105403	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-330897719	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-330897719	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV61.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 4:39 am
Operator : KJB
Sample : DRLVI CCV 500 UG/ML
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 12:00:47 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:11:59 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV93.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 12:25 pm
Operator : KJB
Sample : DRLVI CCV 500 UG/ML

Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:42:43 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	1.000	0.977	2.3	97	0.00
2	S	2-Fluorophenol	1.000	0.633	36.7#	61	0.00
3	S	2,4,6-Tribromophenol	1.000	0.095	90.5#	9	0.00
4	S	4-Terphenyl-d14	1.000	1.161	-16.1	110	0.00
5	H	DRO (C10-C28)	500.000	543.194	-8.6	106	0.00
6	H	ORO (C28-C40)	500.000	502.810	-0.6	100	0.00
7	H	DRO (C10-C20)	500.000	-6.315	101.3#	-0	0.00
8	H	ORO (C20-C34)	500.000	-4.199	100.8#	-0	0.00
9	H	ORO (C20-C40)	500.000	-6.496	101.3#	-0	0.00
11	H	ERO (C10-C36)	1000.000	-9.172	100.9#	-0	0.00
12	H	ERO (C10-C40)	1000.000	-15.518	101.6#	-0	0.00

Evaluate Continuing Calibration Report - Not Founds

7	H	DRO (C10-C20)	500.000	-6.315	101.3#	-0	0.00
8	H	ORO (C20-C34)	500.000	-4.199	100.8#	-0	0.00
9	H	ORO (C20-C40)	500.000	-6.496	101.3#	-0	0.00
10	H	ORO (C28-C35)	500.000	0.000	100.0#	0	0.00
11	H	ERO (C10-C36)	1000.000	-9.172	100.9#	-0	0.00
12	H	ERO (C10-C40)	1000.000	-15.518	101.6#	-0	0.00

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

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV93.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 12:25 pm
Operator : KJB
Sample : DRLVI CCV 500 UG/ML

Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:42:43 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	4.913	5.288 E6	-7.6	97	0.00
2	S	2-Fluorophenol	32.287	22.685 E6	29.7#	61	0.00
3	S	2,4,6-Tribromophenol	273.485	22.942 E6	91.6#	9#	0.00
4	S	4-Terphenyl-d14	28.705	37.344 E6	-30.1#	110	0.00
5	H	DRO (C10-C28)	68.038	43.876 E6	35.5#	106	0.00
6	H	ORO (C28-C40)	48.189	18.533 E6	61.5#	100	0.00
7	H	DRO (C10-C20)	34.550	0.000 E6	100.0#	-0#	0.00
8	H	ORO (C20-C34)	56.243	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	79.087	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C10-C36)	52.534	0.000 E6	100.0#	-0#	0.00
12	H	ERO (C10-C40)	53.449	0.000 E6	100.0#	-0#	0.00

Evaluate Continuing Calibration Report - Not Founds

7	H	DRO (C10-C20)	34.550	0.000 E6	100.0#	-0#	0.00
8	H	ORO (C20-C34)	56.243	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	79.087	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	25.791	0.000 E6	100.0#	0#	0.00
11	H	ERO (C10-C36)	52.534	0.000 E6	100.0#	-0#	0.00
12	H	ERO (C10-C40)	53.449	0.000 E6	100.0#	-0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV93.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 12:25 pm
Operator : KJB
Sample : DRLVI CCV 500 UG/ML

Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:42:43 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

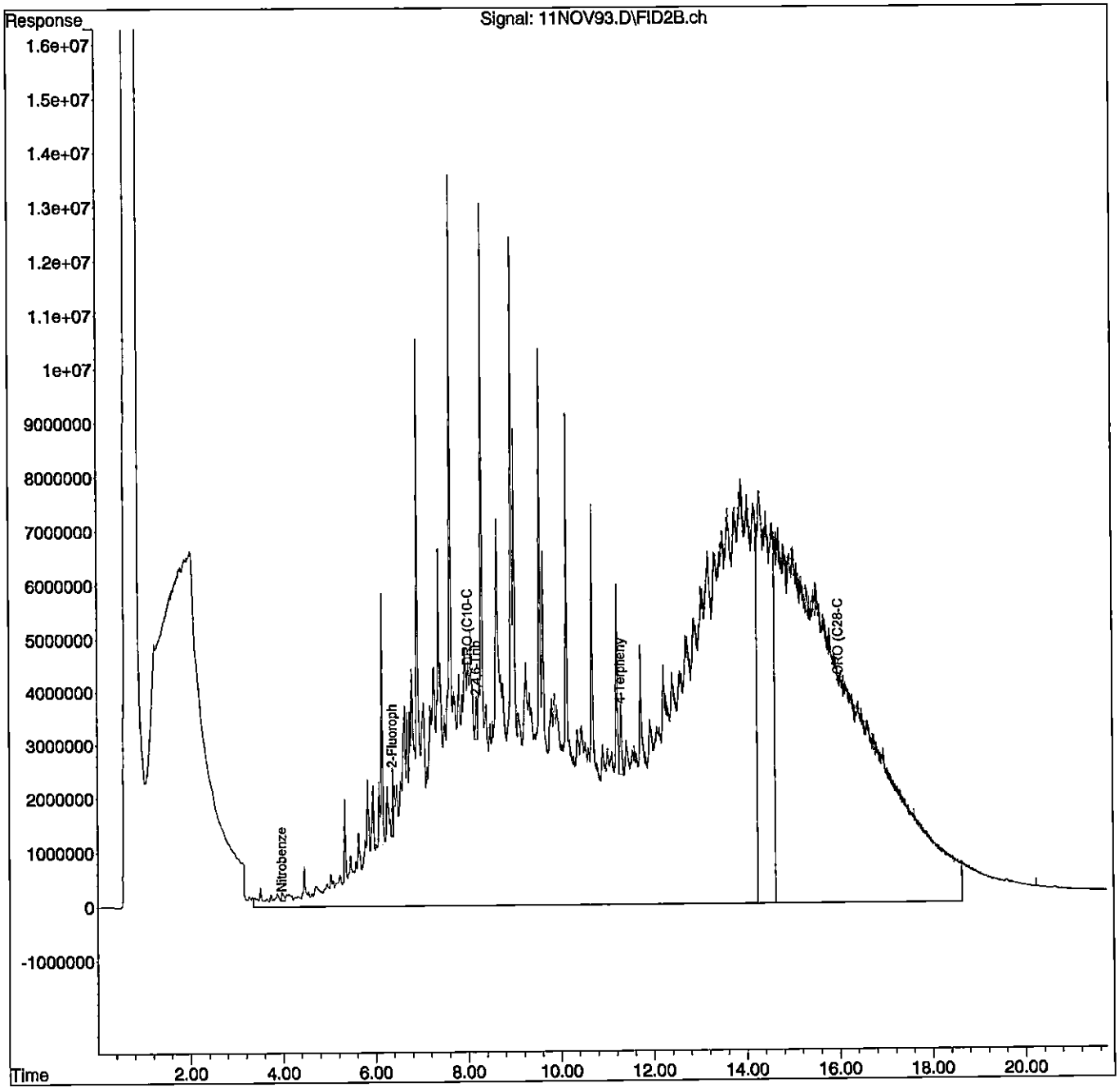
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.972	5287656	0.977	ug/mLm
2) S	2-Fluorophenol	6.375	22685058	0.633	ug/mLm
3) S	2,4,6-Tribromophenol	8.189	22941871	0.095	ug/mLm
4) S	4-Terphenyl-d14	11.303	37343704	1.161	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	21938043179	543.194	ug/mL
6) H	ORO (C28-C40)	16.000	9266575975	502.810	ug/mL
7) H	DRO (C10-C20)	7.000	-50914585	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-37343704	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-37343704	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-88258289	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-88258289	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV93.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 12:25 pm
Operator : KJB
Sample : DRLVI CCV 500 UG/ML
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:42:43 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV69.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 6:36 am
Operator : KJB
Sample : DBLKW1-145430
Misc :
ALS Vial : 80 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:37:07 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

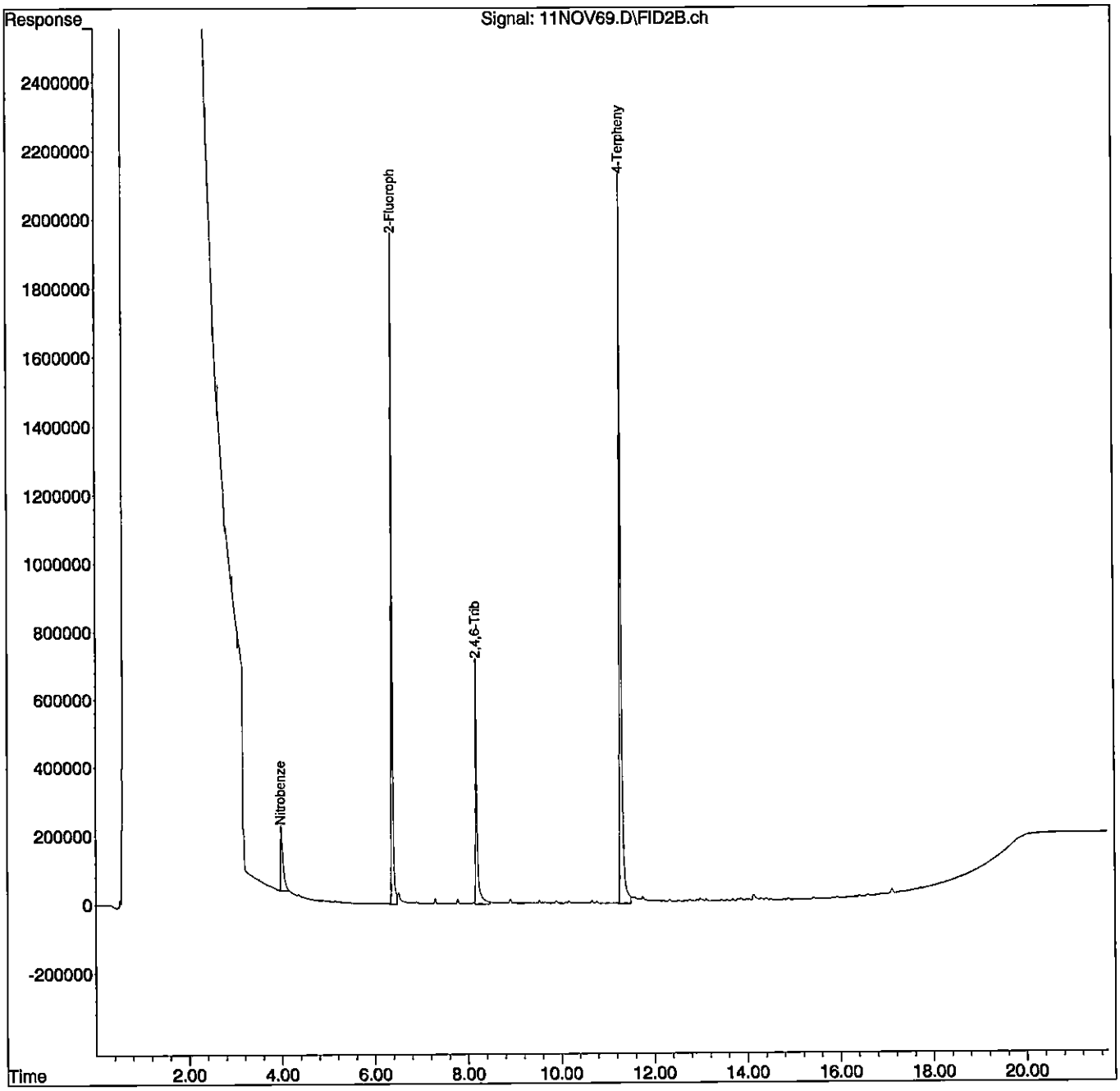
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.976	6869454	1.262	ug/mLm
2) S	2-Fluorophenol	6.370	38140129	1.050	ug/mLm
3) S	2,4,6-Tribromophenol	8.175	17252750	0.071	ug/mLm
4) S	4-Terphenyl-d14	11.289	58674648	1.824	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	78398626	N.D.	ug/mL
6) H	ORO (C28-C40)	16.000	58752854	N.D.	ug/mL
7) H	DRO (C10-C20)	7.000	-62262332	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-58674648	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-58674648	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-120936980	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-120936980	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV69.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 6:36 am
Operator : KJB
Sample : DBLKW1-145430
Misc :
ALS Vial : 80 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:37:07 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV73.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 7:34 am
Operator : KJB
Sample : DLCSW1-145430
Misc :
ALS Vial : 82 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:38:25 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

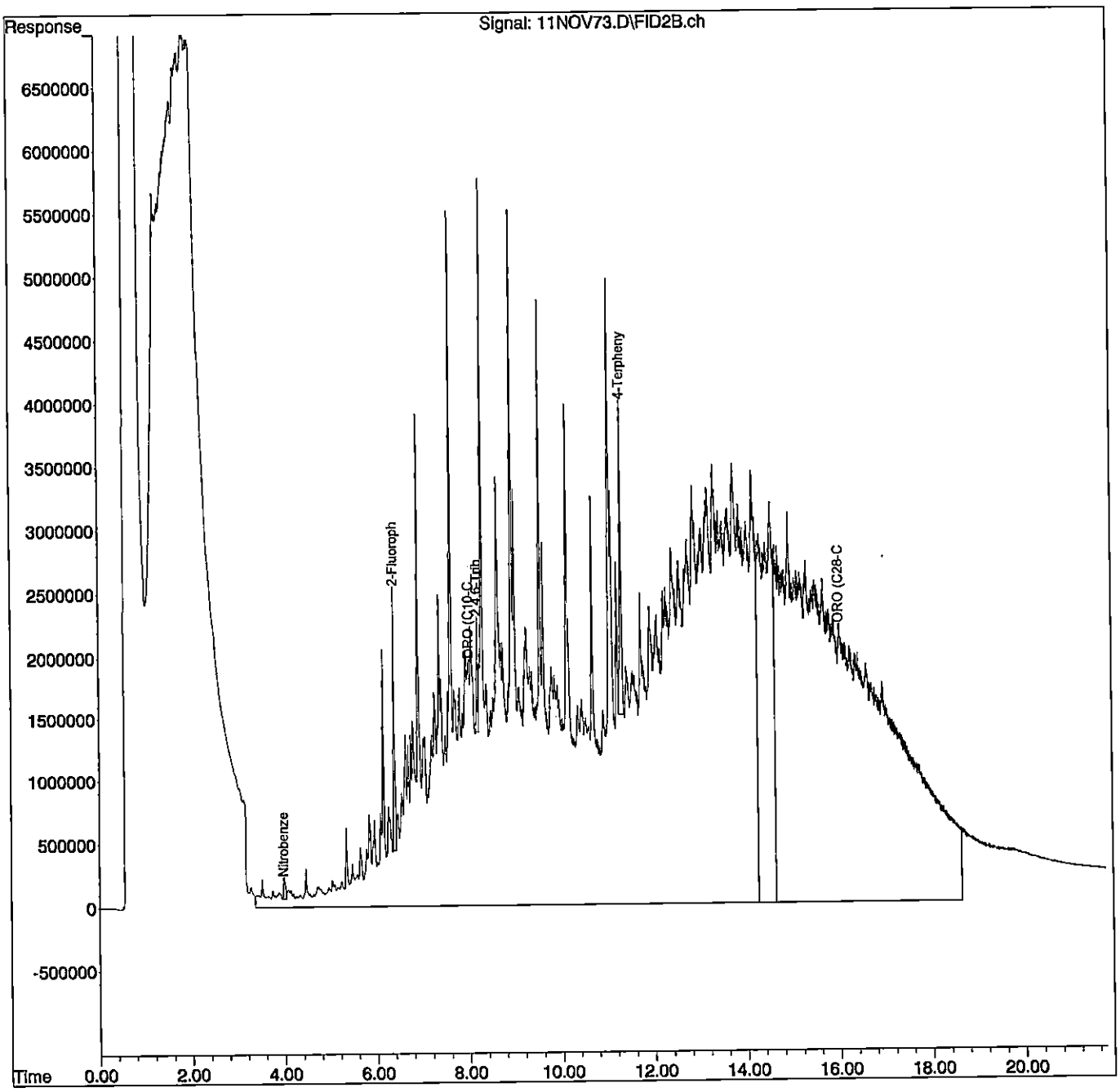
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.976	5557473	1.025	ug/mLm
2) S	2-Fluorophenol	6.378	43940102	1.207	ug/mLm
3) S	2,4,6-Tribromophenol	8.187	19448908	0.080	ug/mLm
4) S	4-Terphenyl-d14	11.309	63728108	1.981	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	10556104302	259.653	ug/mL
6) H	ORO (C28-C40)	16.000	4304382175	229.329	ug/mL
7) H	DRO (C10-C20)	7.000	-68946483	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-63728108	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-63728108	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-132674592	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-132674592	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV73.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 7:34 am
Operator : KJB
Sample : DLCSW1-145430
Misc :
ALS Vial : 82 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:38:25 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV75.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 8:03 am
Operator : KJB
Sample : 19110801-06A MS
Misc :
ALS Vial : 83 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:38:42 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

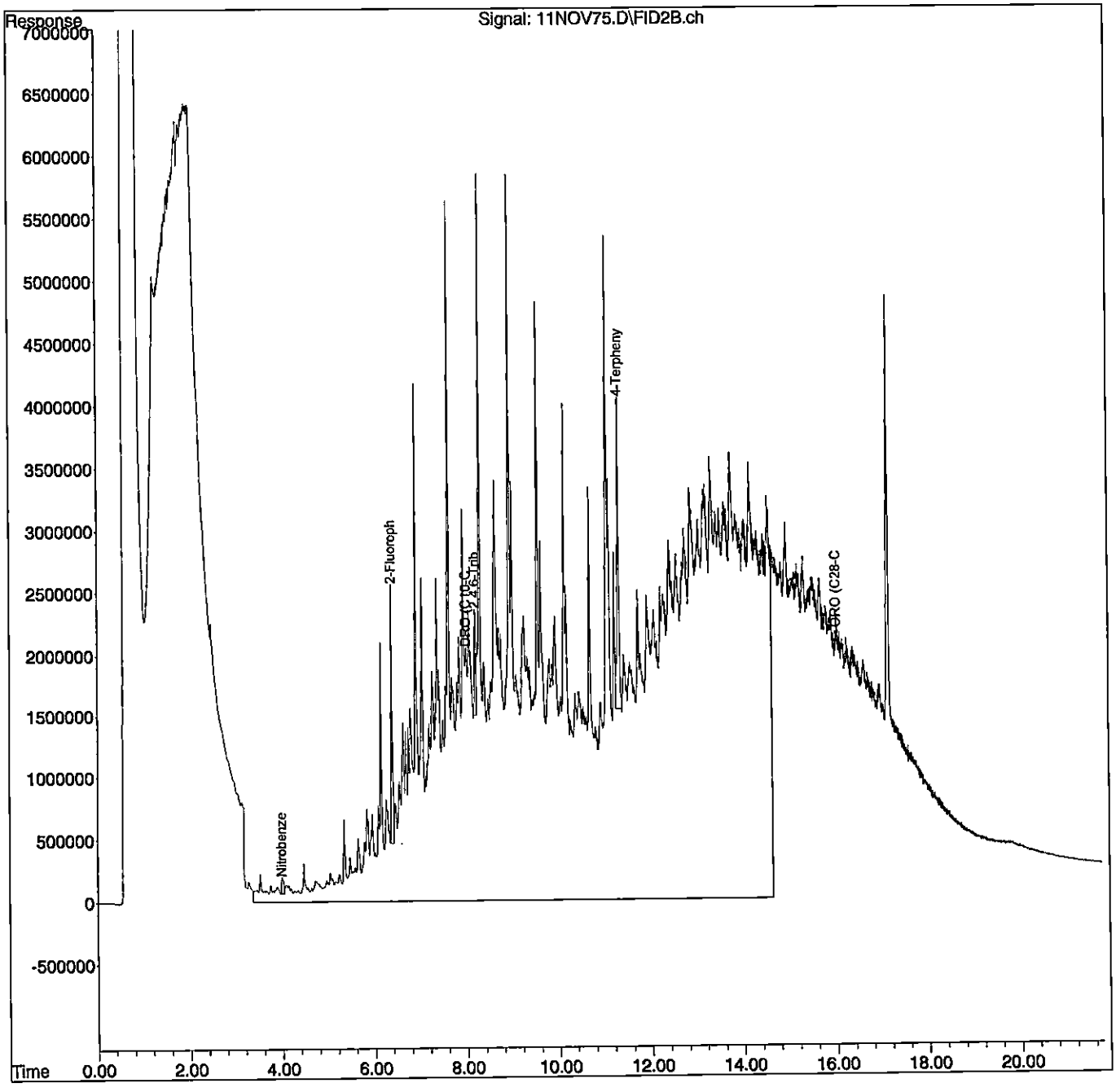
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.980	4442306	0.824	ug/mLm
2) S	2-Fluorophenol	6.378	44871326	1.232	ug/mLm
3) S	2,4,6-Tribromophenol	8.190	18103661	0.074	ug/mLm
4) S	4-Terphenyl-d14	11.310	66558053	2.069	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	10871310589	267.506	ug/mL
6) H	ORO (C28-C40)	16.000	4494740425	239.821	ug/mL
7) H	DRO (C10-C20)	7.000	-67417292	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-66558053	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-66558053	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-133975346	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-133975346	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV75.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 8:03 am
Operator : KJB
Sample : 19110801-06A MS
Misc :
ALS Vial : 83 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:38:42 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV77.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 8:32 am
Operator : KJB
Sample : 19110801-06A MSD
Misc :
ALS Vial : 84 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:39:04 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

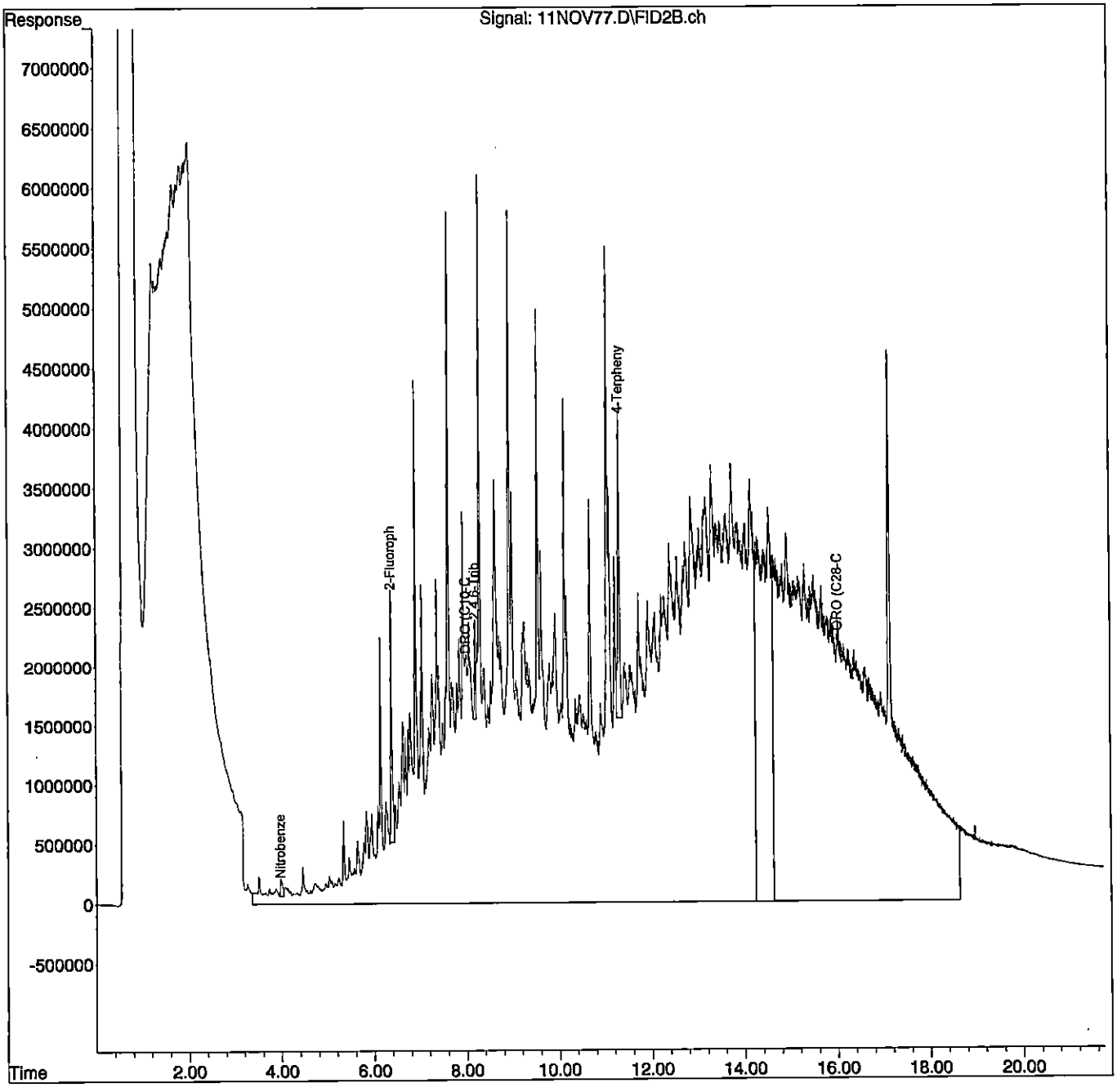
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	3.976	4990355	0.923	ug/mLm
2) S	2-Fluorophenol	6.374	47807260	1.311	ug/mLm
3) S	2,4,6-Tribromophenol	8.194	17314007	0.071	ug/mLm
4) S	4-Terphenyl-d14	11.305	67272381	2.091	ug/mLm
Target Compounds					
5) H	DRO (C10-C28)	8.000	11291930689	277.984	ug/mL
6) H	ORO (C28-C40)	16.000	4532958474	241.927	ug/mL
7) H	DRO (C10-C20)	7.000	-70111622	N.D.	ug/mL
8) H	ORO (C20-C34)	13.000	-67272381	N.D.	ug/mL
9) H	ORO (C20-C40)	15.000	-67272381	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C10-C36)	10.000	-137384002	N.D.	ug/mL
12) H	ERO (C10-C40)	11.000	-137384002	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191111.SEC\
Data File : 11NOV77.D
Signal(s) : FID2B.ch
Acq On : 12 Nov 2019 8:32 am
Operator : KJB
Sample : 19110801-06A MSD
Misc :
ALS Vial : 84 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 13:39:04 2019
Quant Method : C:\msdchem\1\methods\DRLVI191111.M
Quant Title :
QLast Update : Tue Nov 12 11:07:19 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



ALS Group, USA

PREP BATCH REPORT

Batch ID: **145430** Prep Code: **DRLVI_3511_W**

Start Date: **11/11/2019 3:25:18 PM** End Date: **11/11/2019 5:22:01 PM**

Technician: **Taylor DenUyl**

InitSamp Wt/Vol:	120 mL
FinSampVol:	2 mL
OriginalFac:	0.0166667
PrepUnitFac:	1

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
19110690-01C	Groundwater			120	0	2	0.0166667
19110690-02C	Groundwater			120	0	2	0.0166667
19110690-03C	Groundwater			120	0	2	0.0166667
19110690-04C	Groundwater			120	0	2	0.0166667
19110722-01D	Wastewater			40	0	2	0.05
FULL VOLUME							
19110801-06A	Water			120	0	2	0.0166667
19110801-06A MS				120	0	2	0.0166667
19110801-06A MS				120	0	2	0.0166667
19110834-01A	Water			120	0	2	0.0166667
19110834-02A	Water			120	0	2	0.0166667
DBLKW1-145430				120	0	2	0.0166667
DLCSW1-145430				120	0	2	0.0166667
DRLVSW1-145430				120	0	2	0.0166667
24 uL of DRO RLVS Spike, 400-0069							

Notes: *50uL Surrogate (3081-143-4) added to all samples. 50uL of DRO Spike (400-0118) added to QC. Hexane (3081-149-1).Sodium Chloride NO110419. All samples are B1/E1 unless otherwise noted.*

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111228.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 8:55 pm
Operator : KJB
Sample : 19110801-01A
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:55:26 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

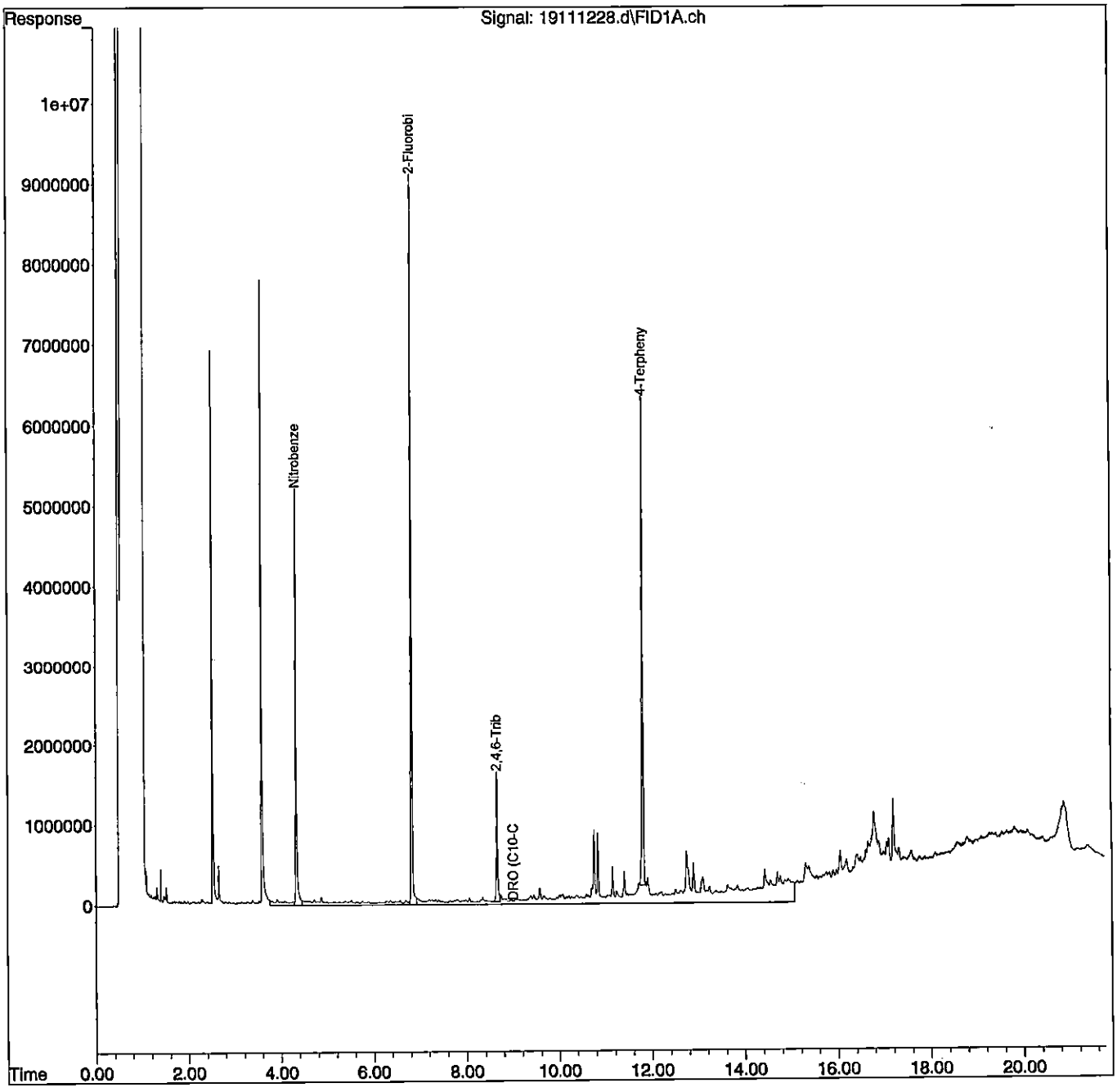
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.322	80888508	6.388	ug/mLm
2) S	2-Fluorobipehenyl	6.821	155600259	43.476	ug/mLm
3) S	2,4,6-Tribromophenol	8.651	32994553	2.277	ug/mLm
4) S	4-Terphenyl-d14	11.809	120069947	33.153	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-269483320	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-120069947	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	704937389	109.206	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-120069947	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	-389553268	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-389553268	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111228.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 8:55 pm
Operator : KJB
Sample : 19110801-01A
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:55:26 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111260.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 4:40 am
Operator : KJB
Sample : 19110801-02A
Misc :
ALS Vial : 33 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:30:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

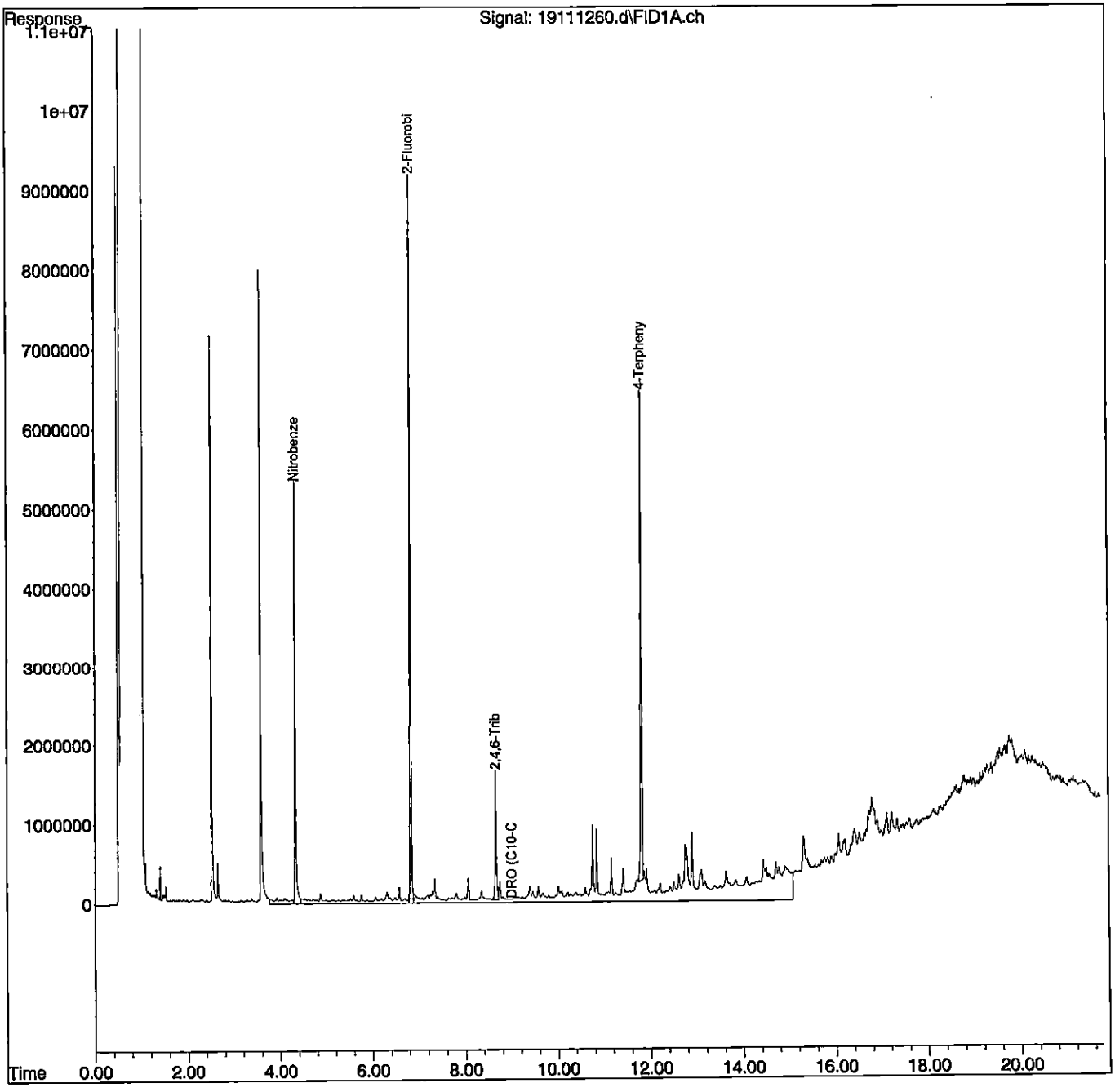
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.325	81198315	6.412	ug/mLm
2) S	2-Fluorobipehenyl	6.825	153804355	43.381	ug/mLm
3) S	2,4,6-Tribromophenol	8.654	32353678	2.254	ug/mLm
4) S	4-Terphenyl-d14	11.811	117596999	32.470	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-267356348	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-117596999	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	861158994	142.591	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-117596999	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	-384953347	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-384953347	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111260.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 4:40 am
Operator : KJB
Sample : 19110801-02A
Misc :
ALS Vial : 33 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:30:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111262.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 5:09 am
Operator : KJB
Sample : 19110801-03A
Misc :
ALS Vial : 34 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:31:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

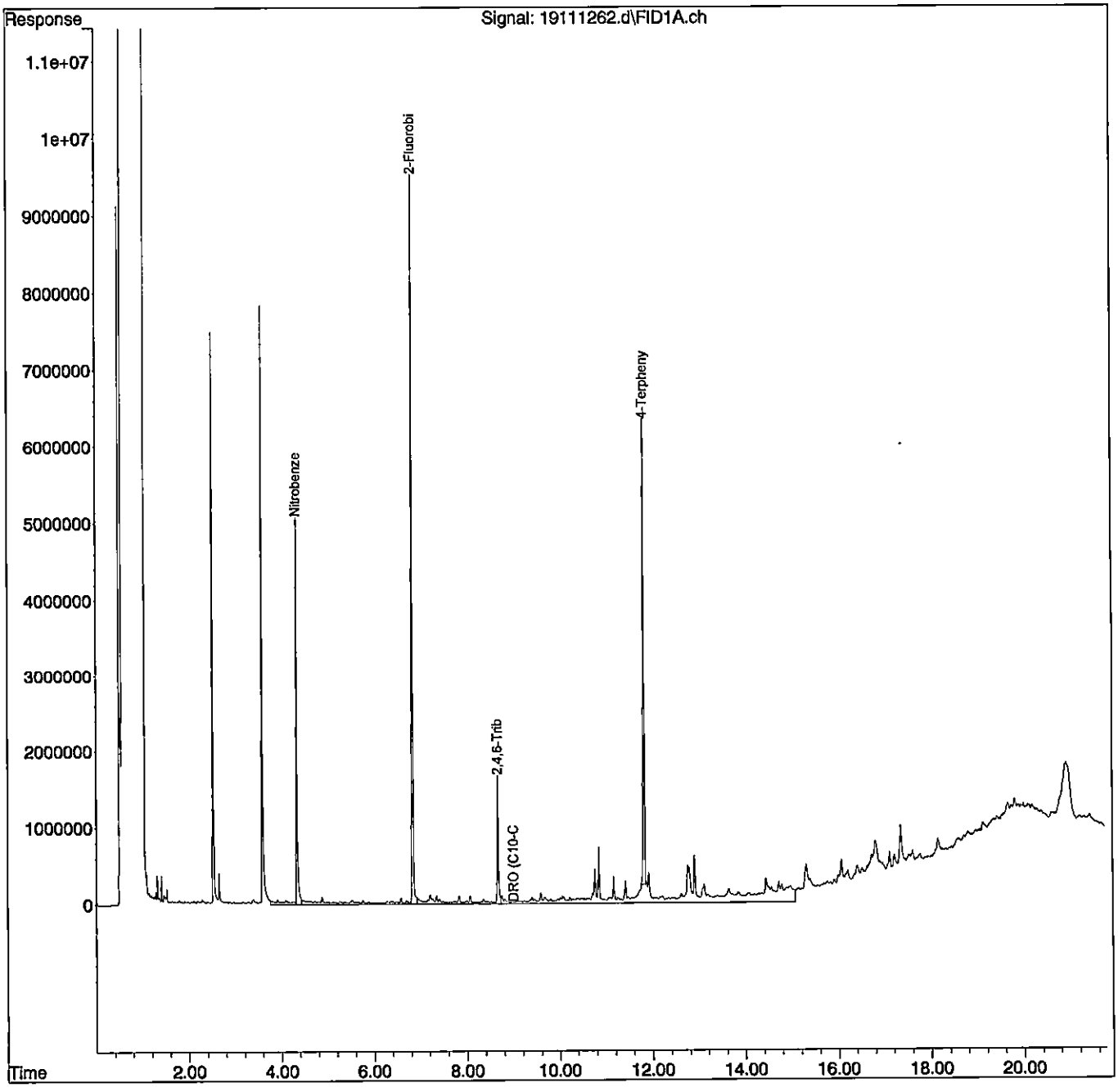
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	Nitrobenzene-d5	4.326	79981769	6.319	ug/mLm
2)	S	2-Fluorobipehenyl	6.826	156910480	43.545	ug/mLm
3)	S	2,4,6-Tribromophenol	8.657	32978764	2.277	ug/mLm
4)	S	4-Terphenyl-d14	11.813	114856051	31.713	ug/mLm
Target Compounds						
5)	H	DRO (C10-C20)	7.548	-269871013	N.D.	ug/mL
6)	H	ORO (C20-C34)	14.560	-114856051	N.D.	ug/mL
7)	H	DRO (C10-C28)	9.000	528404220	71.480	ug/mL
8)	H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9)	H	ORO (C20-C40)	15.165	-114856051	N.D.	ug/mL
10)	H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11)	H	ERO (C8-C40)	10.500	-384727064	N.D.	ug/mL
12)	H	DIESEL (IOWA)	8.818	-384727064	N.D.	ug/mL
13)	H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111262.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 5:09 am
Operator : KJB
Sample : 19110801-03A
Misc :
ALS Vial : 34 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:31:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111264.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 5:38 am
Operator : KJB
Sample : 19110801-04A
Misc :
ALS Vial : 35 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:32:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

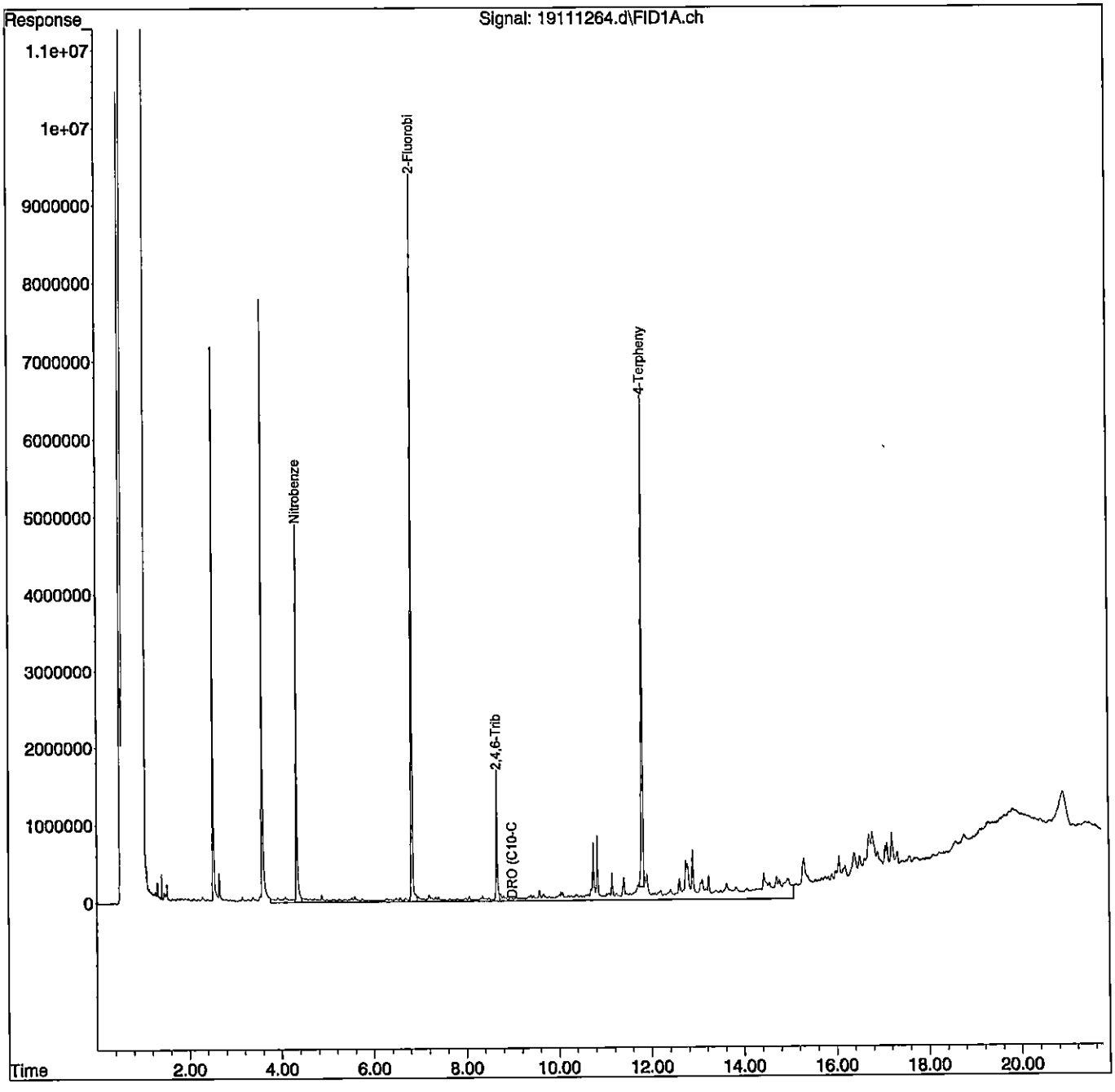
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.325	77682354	6.142	ug/mLm
2) S	2-Fluorobipehenyl	6.826	154896363	43.438	ug/mLm
3) S	2,4,6-Tribromophenol	8.655	33644094	2.301	ug/mLm
4) S	4-Terphenyl-d14	11.811	122143717	33.726	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-266222811	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-122143717	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	586519370	83.900	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-122143717	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	-388366529	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-388366529	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111264.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 5:38 am
Operator : KJB
Sample : 19110801-04A
Misc :
ALS Vial : 35 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:32:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111266.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 6:07 am
Operator : KJB
Sample : 19110801-05A
Misc :
ALS Vial : 36 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:33:26 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

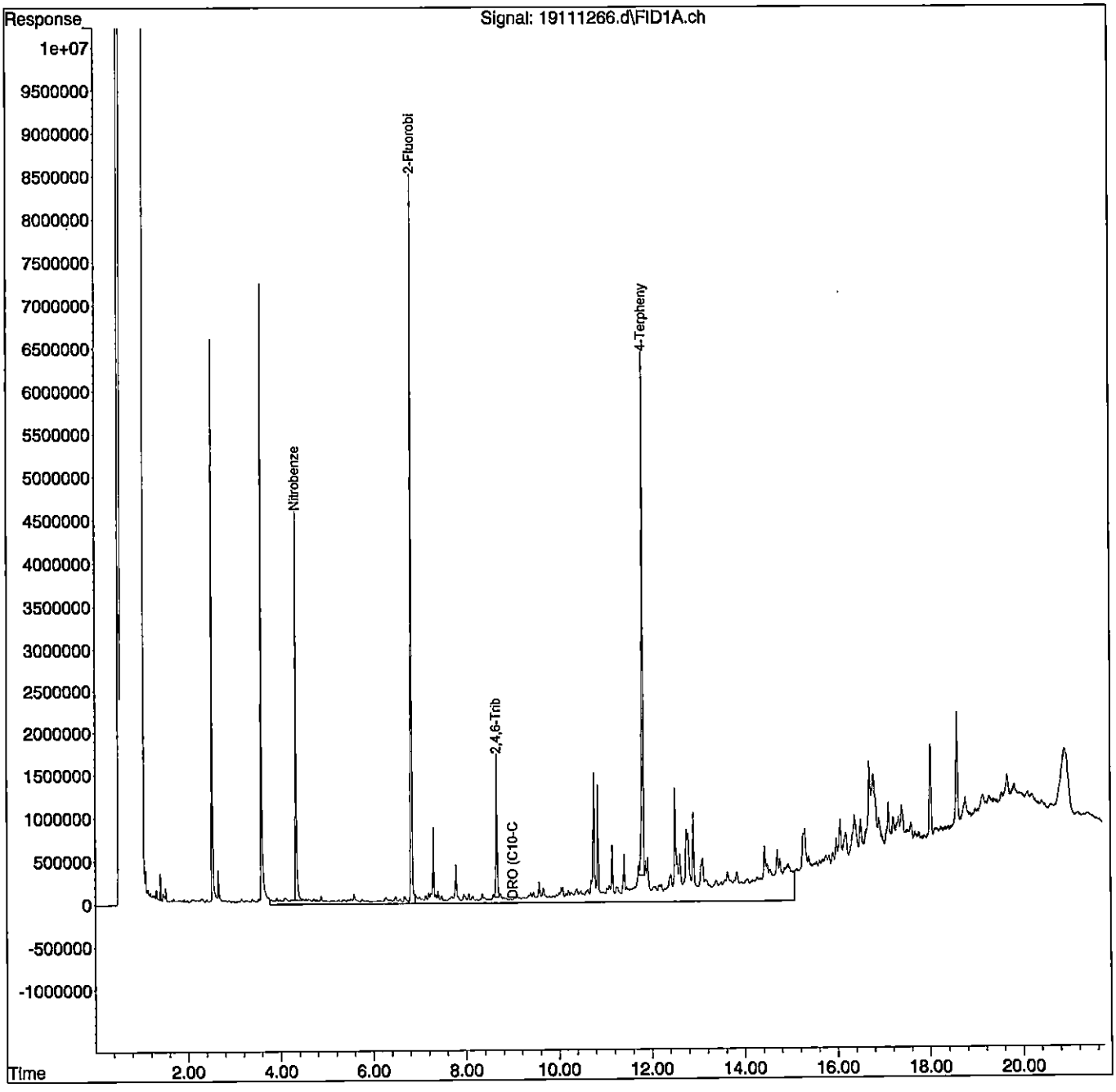
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.325	68285692	5.421	ug/mLm
2) S	2-Fluorobipehenyl	6.824	146631744	42.997	ug/mLm
3) S	2,4,6-Tribromophenol	8.656	31260760	2.214	ug/mLm
4) S	4-Terphenyl-d14	11.811	125997729	34.791	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-246178195	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-125997729	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	1220419931	219.366	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-125997729	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	-372175924	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-372175924	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111266.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 6:07 am
Operator : KJB
Sample : 19110801-05A
Misc :
ALS Vial : 36 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:33:26 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Method Path : C:\msdchem\1\methods\
Method File : DRO191030M.M
Title :
Last Update : Fri Nov 22 11:19:12 2019
Response Via : Initial Calibration

Calibration Files
50 =30OCT08.d 100 =30OCT10.d 250 =30OCT12.d
500 =30OCT14.d 1000 =30OCT16.d 2500 =30OCT18.d

		Compound	50	100	250	500	1000	2500	Avg		%RSD
1)	S	Nitrobenzene-d5	0.693	0.689	0.578	0.694	0.866	0.794	0.852	E7	34.84
2)	S	2-Fluorobipeh...	0.740	0.847	0.730	0.618	0.622	0.521	0.780	E7	78.81
3)	S	2,4,6-Tribrom...	2.834	2.689	2.135	2.060	2.105	1.920	1.955	E7	31.26
4)	S	4-Terphenyl-d14	4.115	4.613	3.372	3.491	3.834	3.255	3.735	E6	10.59
5)	H	DRO (C10-C20)	5.451	4.576	3.228	3.367	3.741	3.041	3.603	E6	22.09
6)	H	ORO (C20-C34)	5.641	4.847	2.983	2.995	3.597	3.056	3.572	E6	25.89
7)	H	DRO (C10-C28)	7.774	7.510	5.064	4.975	5.327	4.604	5.412	E6	22.12
8)	H	ORO (C28-C40)	5.495	6.590	2.125	1.917	2.072	1.915	2.818	E6	61.11
9)	H	ORO (C20-C40)	9.450	9.571	4.242	3.546	4.426	3.827	5.081	E6	46.30
10)	H	ORO (C28-C35)	3.171	4.198	1.608	1.617	1.816	1.542	2.063	E6	43.38
11)	H	ERO (C8-C40)	7.135	6.809	3.715	3.692	4.127	3.454	4.316	E6	32.80
12)	H	DIESEL (IOWA)	6.129	5.503	4.025	4.025	4.317	3.691	4.258	E6	20.24
13)	H	OIL (IOWA)	1.053	0.996	0.318	0.364	0.384	0.311	0.477	E7	60.74

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method Path : C:\msdchem\1\methods\
Method File : DRO191030M.M
Title :
Last Update : Fri Nov 22 11:19:12 2019
Response Via : Initial Calibration

Calibration Files
50 =30OCT08 100 =30OCT10 250 =30OCT12 500 =30OCT14 1000=30OCT16
2500=30OCT18 5000=30OCT20 10K =30OCT22 50K =30OCT26 25K =30OCT24

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	Nitrobenzene-d5	Lin	-2.3945 e6	1.3037 e7	-----	0.9290
2)	S	2-Fluorobipehenyl	Quad	5.2753 e7	-1.4182 e7	3.8062 e5	0.9866
3)	S	2,4,6-Tribromophenol	Quad	-3.0439 e7	2.8341 e7	-2.1323 e5	0.9533
4)	S	4-Terphenyl-d14	Lin	6.0865 e4	3.6198 e6	-----	0.9994
5)	H	DRO (C10-C20)	Lin	1.2932 e8	3.1148 e6	-----	0.9994
6)	H	ORO (C20-C34)	Lin	9.9434 e7	3.1962 e6	-----	0.9970
7)	H	DRO (C10-C28)	Lin	1.9392 e8	4.6794 e6	-----	0.9997
8)	H	ORO (C28-C40)	Lin	-3.0064 e8	2.0833 e6	-----	0.9992
9)	H	ORO (C20-C40)	Lin	2.9855 e8	3.9539 e6	-----	0.9969
10)	H	ORO (C28-C35)	Lin	-2.7655 e8	1.7320 e6	-----	0.9990
11)	H	ERO (C8-C40)	Lin	4.3462 e8	3.4949 e6	-----	0.9994
12)	H	DIESEL (IOWA)	Lin	1.5862 e8	3.6590 e6	-----	0.9995
13)	H	OIL (IOWA)	Lin	3.7389 e8	3.3590 e6	-----	0.9964

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT04.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:02 pm
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 09:06:20 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

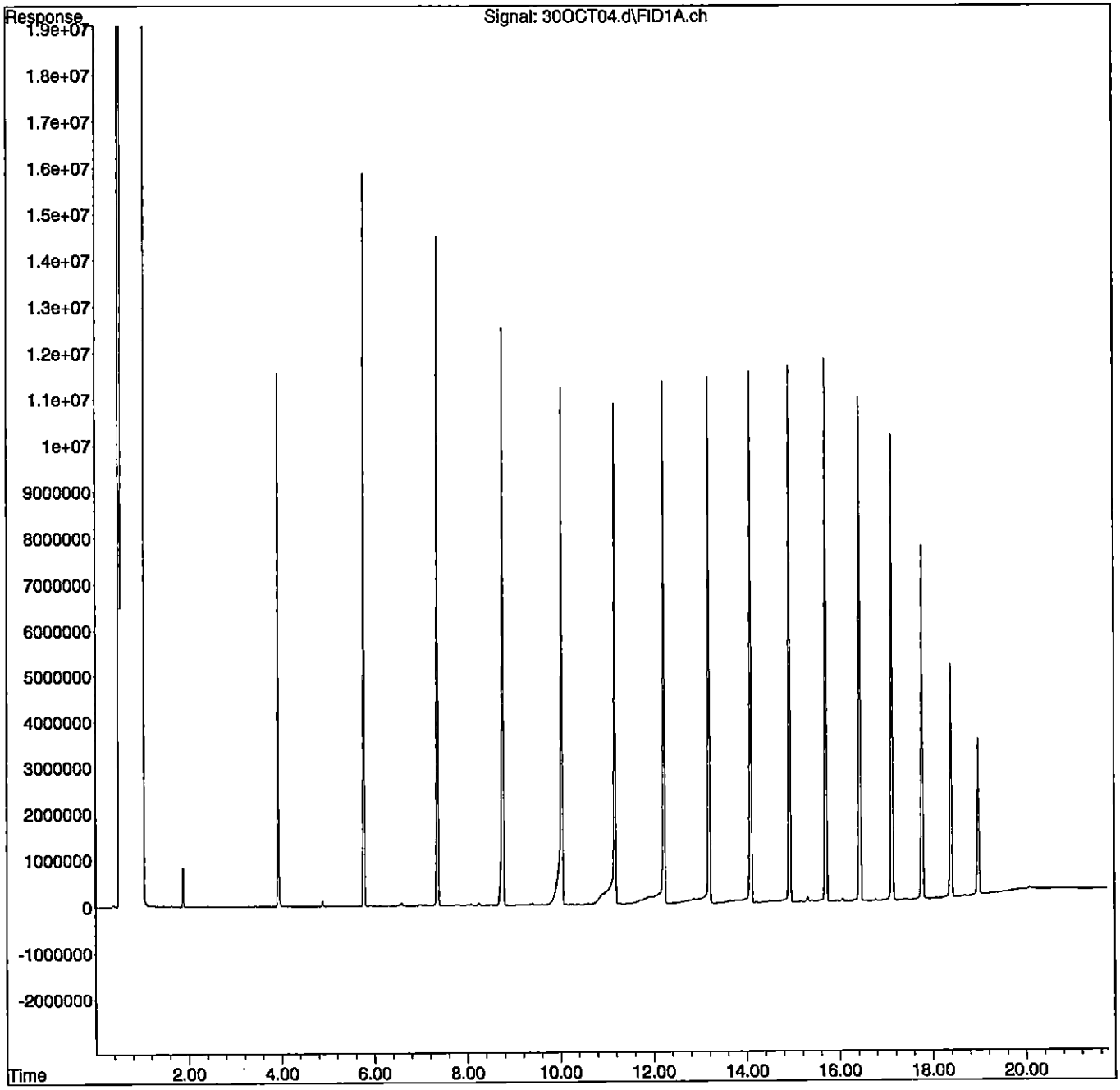
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT04.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:02 pm
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 09:06:20 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT06.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:31 pm
Operator : KJB
Sample : BNA SURROGATE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 13:00:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

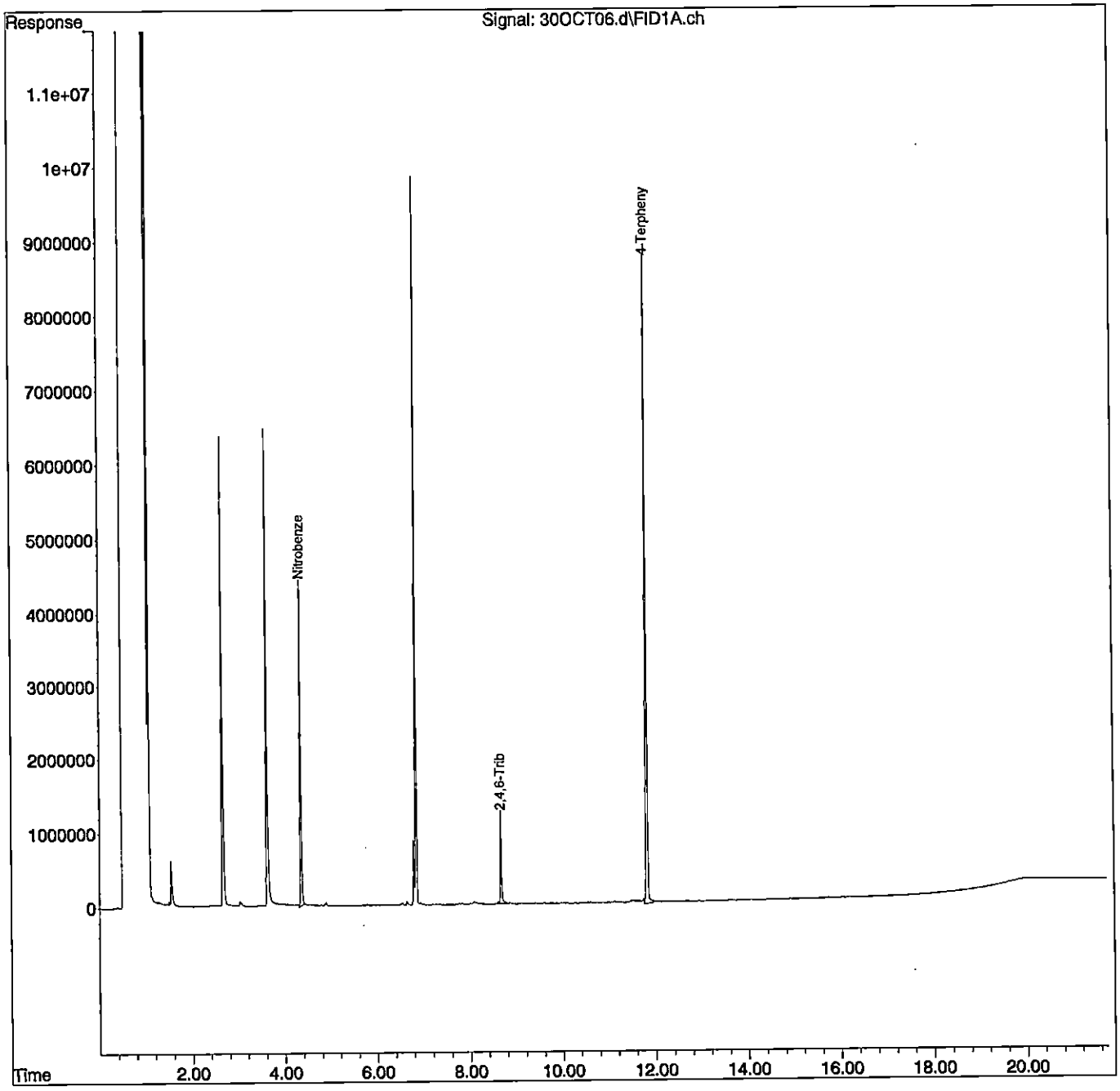
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.348	75166406	10.354	ug/mLm
2) S	2-Fluorobipehenyl	6.839	155466804	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.660	22688792	1.574	ug/mLm
4) S	4-Terphenyl-d14	11.821f	165380733	62.445	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mLd
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT06.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:31 pm
Operator : KJB
Sample : BNA SURROGATE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 13:00:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT08.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:01 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10288A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:18:41 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

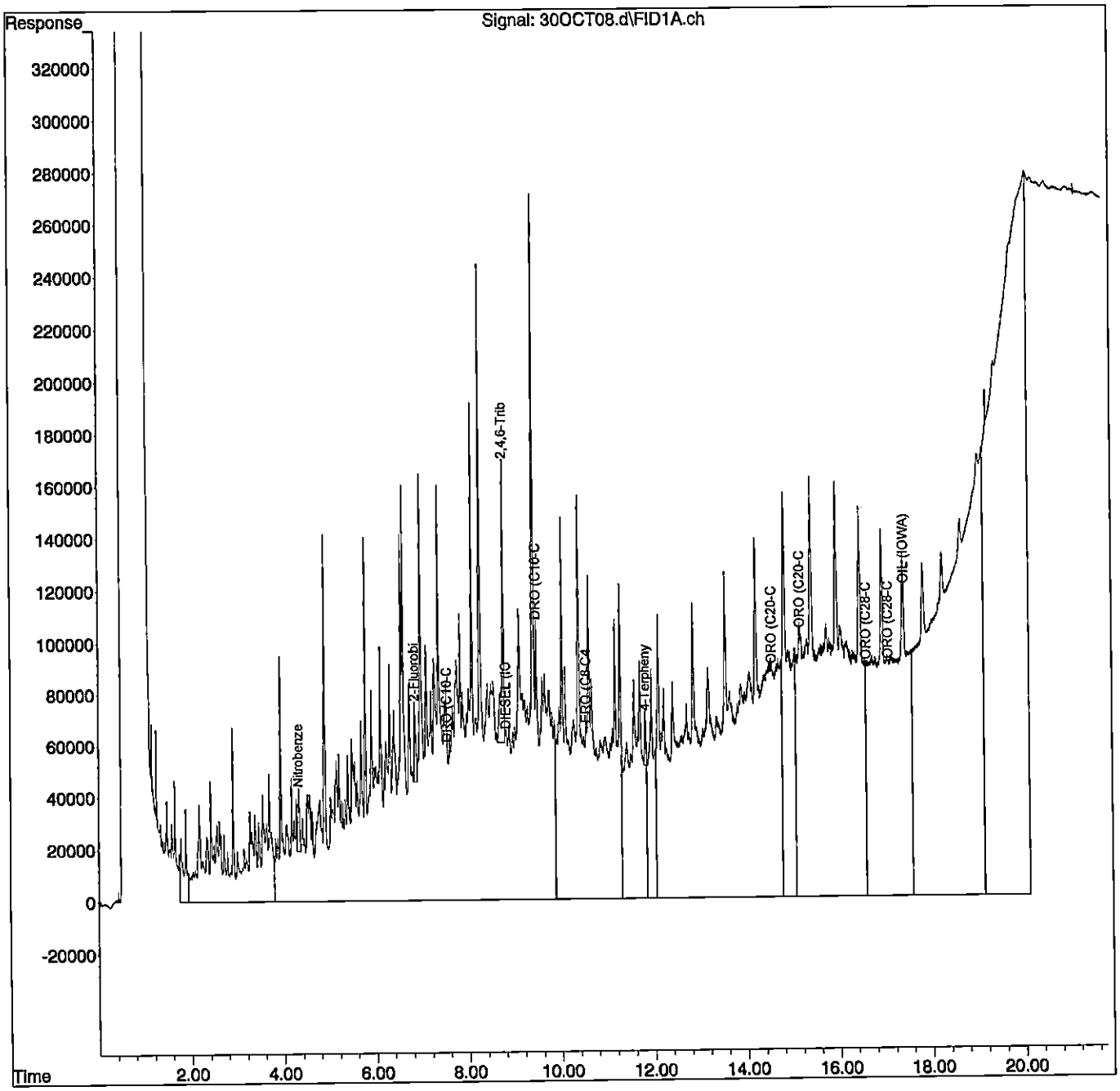
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.317	692554	0.107	ug/mLm
2) S	2-Fluorobipehenyl	6.831	740138	0.588	ug/mLm
3) S	2,4,6-Tribromophenol	8.753	2833915	0.642	ug/mLm
4) S	4-Terphenyl-d14	11.817	411536	0.118	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	272566760	88.866	ug/mL
6) H	ORO (C20-C34)	14.560	282027138	101.493	ug/mL
7) H	DRO (C10-C28)	9.472	388677648	83.453	ug/mL
8) H	ORO (C28-C40)	17.070	286056710	120.609	ug/mL
9) H	ORO (C20-C40)	15.165	472509994	124.068	ug/mL
10) H	ORO (C28-C35)	16.581	158545095	113.961	ug/mL
11) H	ERO (C8-C40)	10.557	713502270	201.046	ug/mL
12) H	DIESEL (IOWA)	8.818	306457160	65.609	ug/mL
13) H	OIL (IOWA)	17.414	526401627	231.923	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT08.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:01 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10288A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:18:41 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT10.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:30 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10288B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

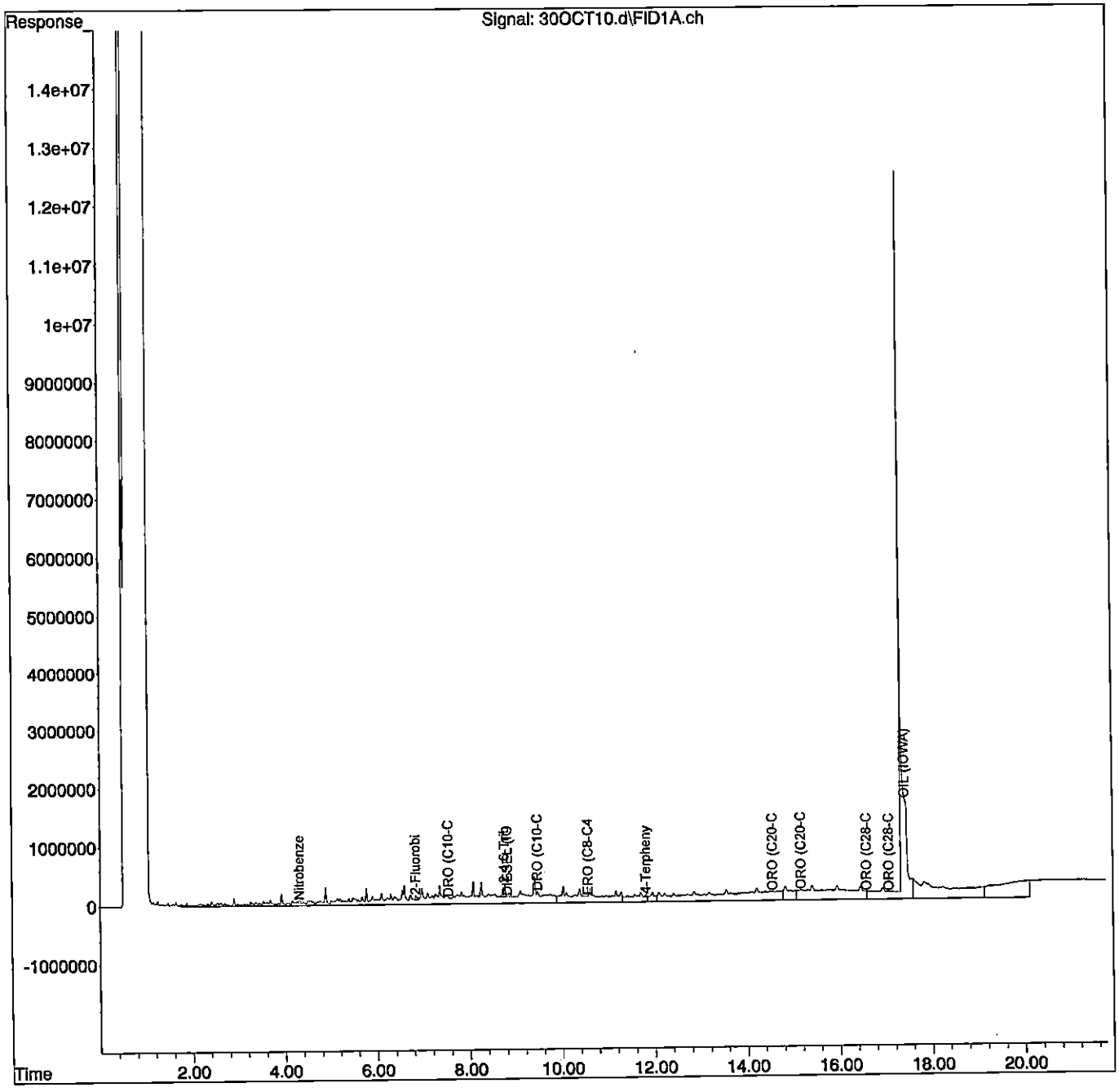
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.314	1377315	0.201	ug/mLm
2) S	2-Fluorobipehenyl	6.832	1693662	0.840	ug/mLm
3) S	2,4,6-Tribromophenol	8.751	5377178	0.761	ug/mLm
4) S	4-Terphenyl-d14	11.811	922590	0.312	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	457624351	147.664	ug/mL
6) H	ORO (C20-C34)	14.560	484699726	173.356	ug/mL
7) H	DRO (C10-C28)	9.472	750996350	159.380	ug/mL
8) H	ORO (C28-C40)	17.070	658424596	288.442	ug/mL
9) H	ORO (C20-C40)	15.165	957141645	251.344	ug/mL
10) H	ORO (C28-C35)	16.581	419768024	297.996	ug/mL
11) H	ERO (C8-C40)	10.557	1361770717	388.132	ug/mL
12) H	DIESEL (IOWA)	8.818	550318807	116.957	ug/mL
13) H	OIL (IOWA)	17.414	996467819	441.813	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT10.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:30 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10288B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT12.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:59 pm
Operator : KJB
Sample : DRO ICAL 250 UG/L
Misc : 100-10288C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:55 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

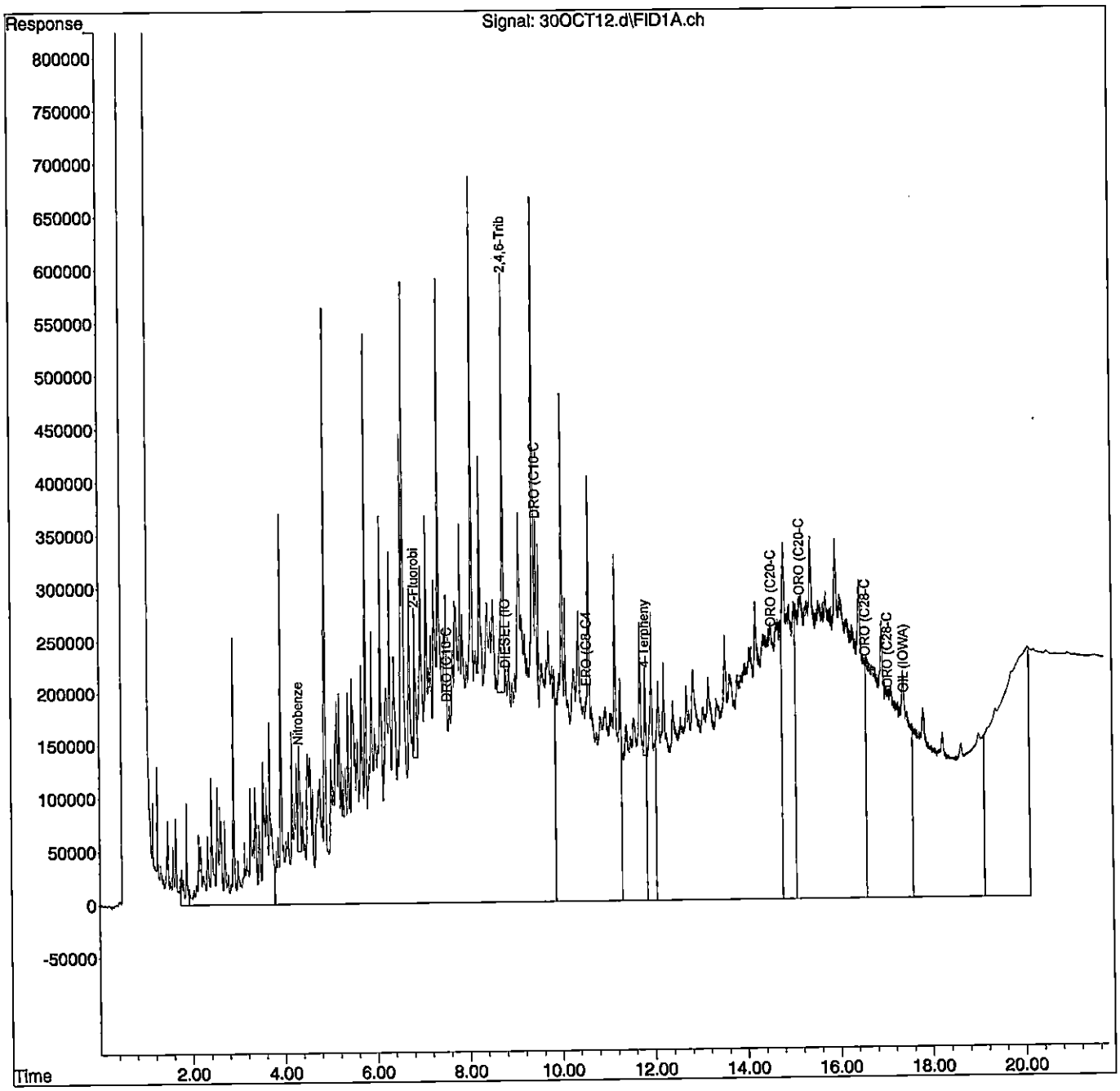
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.313	2892224	0.410	ug/mLm
2) S	2-Fluorobipehenyl	6.830	3648006	1.359	ug/mLm
3) S	2,4,6-Tribromophenol	8.752	10676800	1.009	ug/mLm
4) S	4-Terphenyl-d14	11.811	1685764	0.600	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	806974198	258.663	ug/mL
6) H	ORO (C20-C34)	14.560	745712045	265.906	ug/mL
7) H	DRO (C10-C28)	9.472	1266061913	267.316	ug/mL
8) H	ORO (C28-C40)	17.070	545625385	237.601	ug/mL
9) H	ORO (C20-C40)	15.165	1060400722	278.462	ug/mL
10) H	ORO (C28-C35)	16.581	401883650	285.397	ug/mL
11) H	ERO (C8-C40)	10.557	1857310307	531.141	ug/mL
12) H	DIESEL (IOWA)	8.818	1006161150	212.941	ug/mL
13) H	OIL (IOWA)	17.414	796002526	352.303	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT12.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:59 pm
Operator : KJB
Sample : DRO ICAL 250 UG/L
Misc : 100-10288C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:55 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT14.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:28 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10288D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:20:19 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

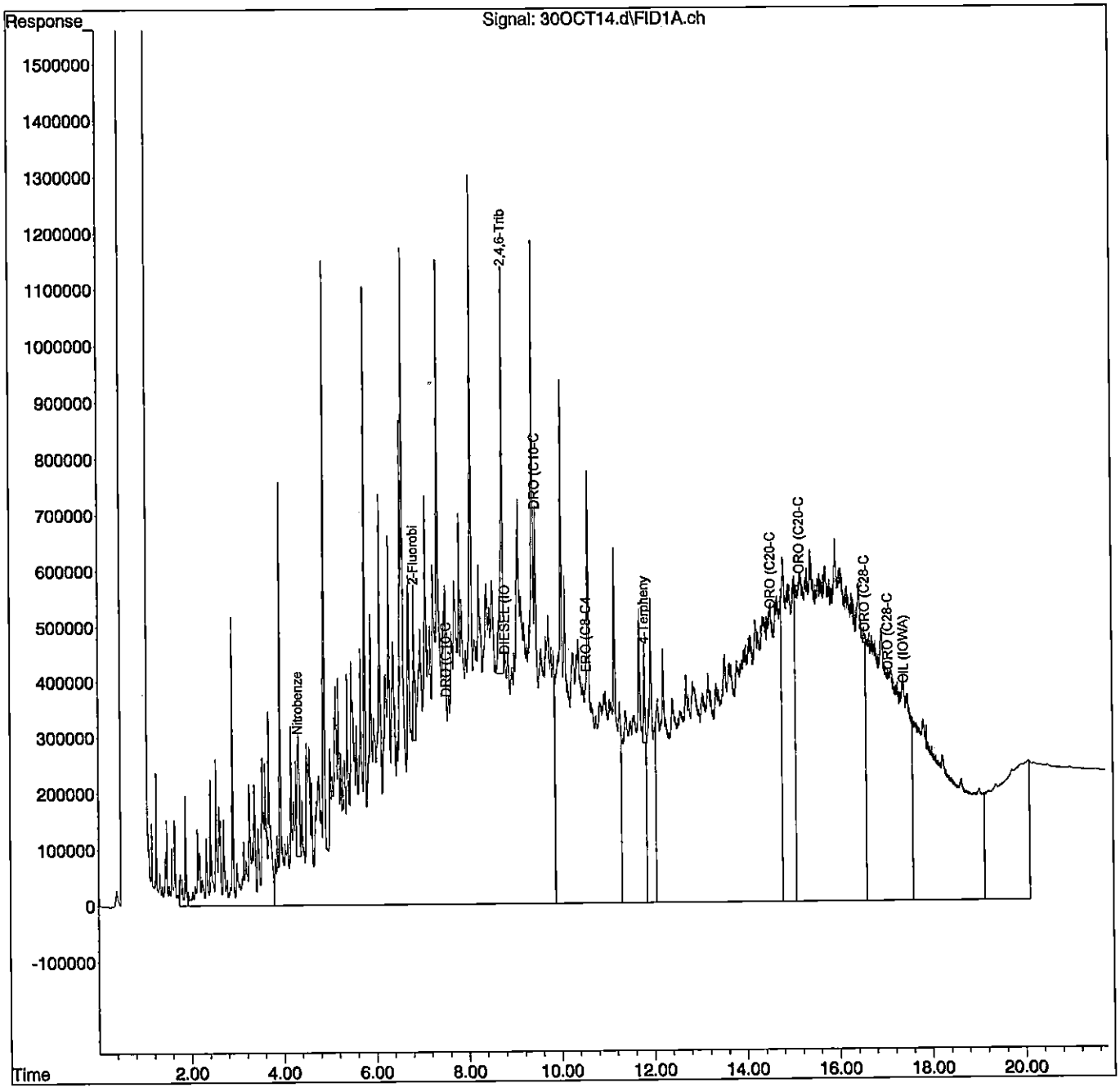
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S Nitrobenzene-d5	4.318	6940727	0.967	ug/mLm
2)	S 2-Fluorobipehenyl	6.830	6183810	2.039	ug/mLm
3)	S 2,4,6-Tribromophenol	8.752	20599901	1.475	ug/mLm
4)	S 4-Terphenyl-d14	11.810	3490949	1.282	ug/mLm
	Target Compounds				
5)	H DRO (C10-C20)	7.548	1683508935	537.163	ug/mL
6)	H ORO (C20-C34)	14.560	1497684790	532.540	ug/mL
7)	H DRO (C10-C28)	9.472	2487634312	523.307	ug/mL
8)	H ORO (C28-C40)	17.070	1059415770	469.176	ug/mL
9)	H ORO (C20-C40)	15.165	1772917928	465.585	ug/mL
10)	H ORO (C28-C35)	16.581	808349855	571.757	ug/mL
11)	H ERO (C8-C40)	10.557	3692311661	1060.709	ug/mL
12)	H DIESEL (IOWA)	8.818	2012326373	424.802	ug/mL
13)	H OIL (IOWA)	17.414	1820345762	809.685	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT14.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:28 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10288D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:20:19 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT16.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:57 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10288E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:09:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

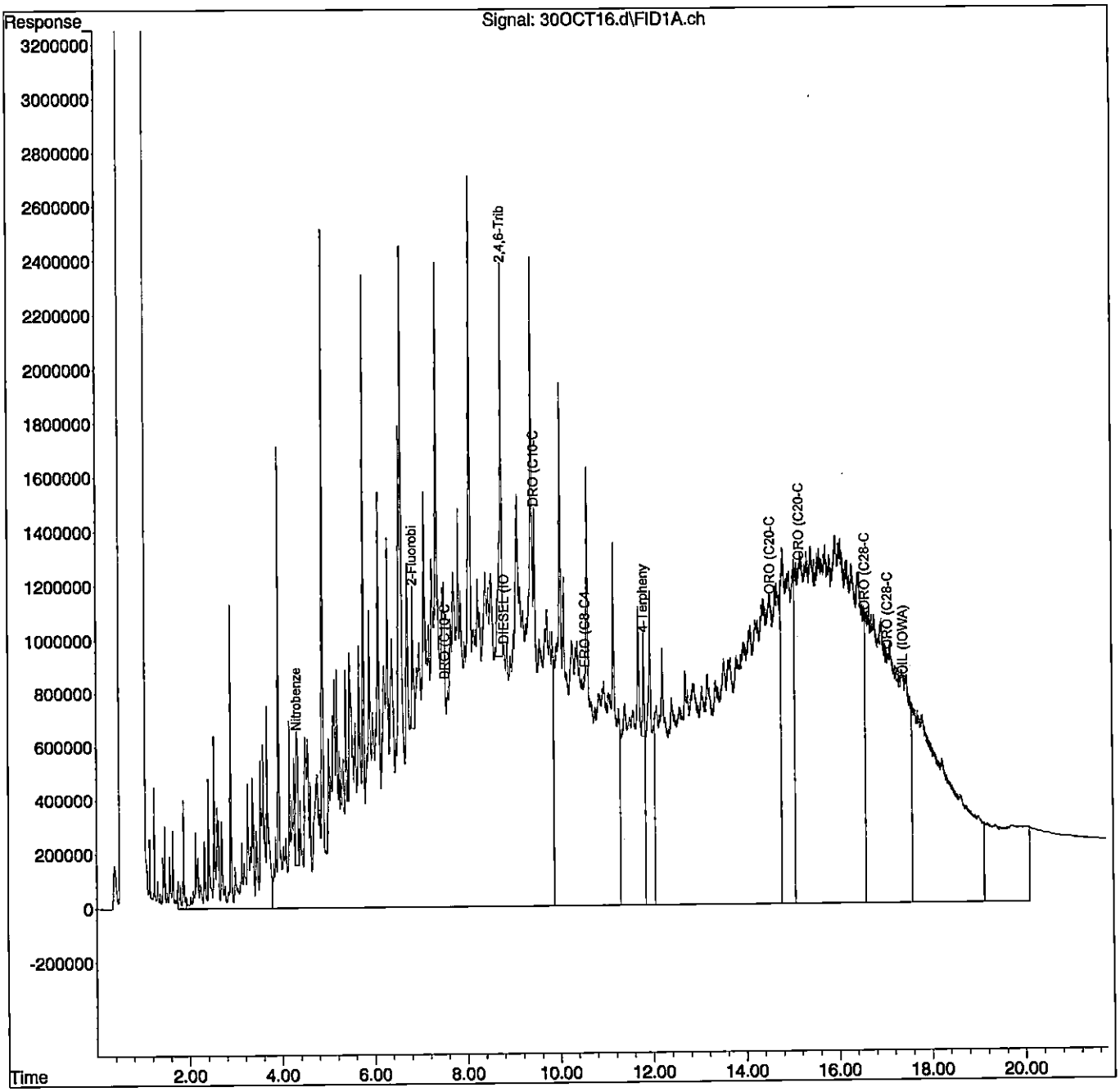
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.322	17320346	2.395	ug/mLm
2) S	2-Fluorobipehenyl	6.830	12444345	3.745	ug/mLm
3) S	2,4,6-Tribromophenol	8.755	42090428	2.494	ug/mLm
4) S	4-Terphenyl-d14	11.811	7668164	2.860	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	3741433600	1191.025	ug/mL
6) H	ORO (C20-C34)	14.560	3597453513	1277.075	ug/mL
7) H	DRO (C10-C28)	9.472	5327440820	1118.412	ug/mL
8) H	ORO (C28-C40)	17.070	2071852618	925.499	ug/mL
9) H	ORO (C20-C40)	15.165	4425760140	1162.283	ug/mL
10) H	ORO (C28-C35)	16.581	1816441068	1281.971	ug/mL
11) H	ERO (C8-C40)	10.557	8254363859	2377.285	ug/mL
12) H	DIESEL (IOWA)	8.818	4317363726	910.158	ug/mL
13) H	OIL (IOWA)	17.414	3837339290	1710.296	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT16.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:57 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10288E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:09:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT18.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:26 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10288F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:17:12 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

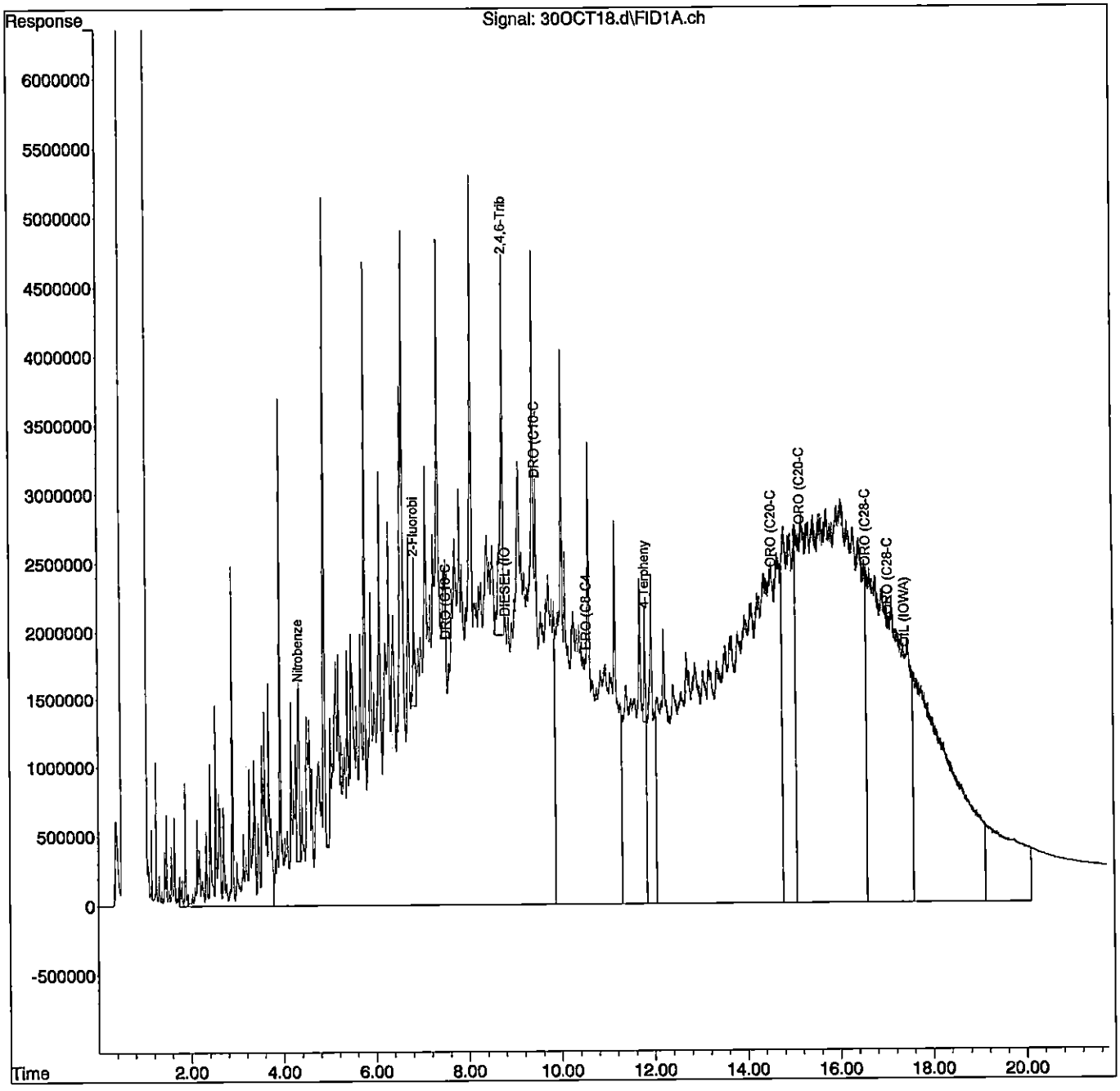
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.335	39696898	5.474	ug/mLm
2) S	2-Fluorobipehenyl	6.835	26049468	7.612	ug/mLm
3) S	2,4,6-Tribromophenol	8.760	95999853	5.106	ug/mLm
4) S	4-Terphenyl-d14	11.814	16273604	6.111	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	7602685829	2417.857	ug/mL
6) H	ORO (C20-C34)	14.560	7638779978	2710.046	ug/mL
7) H	DRO (C10-C28)	9.472	11509689451	2413.953	ug/mL
8) H	ORO (C28-C40)	17.070	4788127507	2149.771	ug/mL
9) H	ORO (C20-C40)	15.165	9567554007	2512.635	ug/mL
10) H	ORO (C28-C35)	16.581	3856166914	2718.985	ug/mL
11) H	ERO (C8-C40)	10.557	17271853551	4979.667	ug/mL
12) H	DIESEL (IOWA)	8.818	9227835662	1944.122	ug/mL
13) H	OIL (IOWA)	17.414	7778108821	3469.897	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT18.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:26 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10288F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:17:12 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT20.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:55 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10288G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:40:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

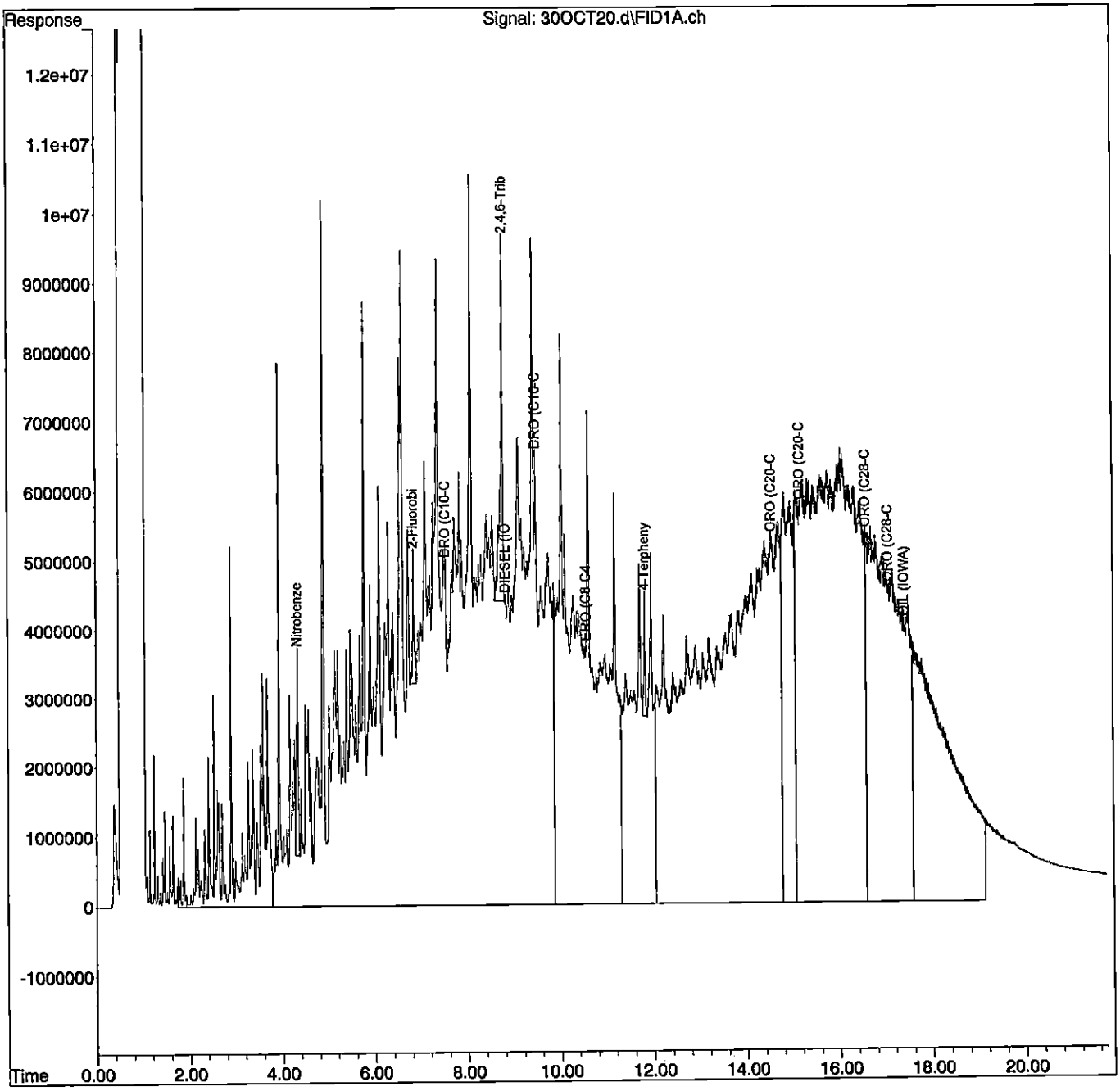
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.333	78660816	10.835	ug/mLm
2) S	2-Fluorobipehenyl	6.842	49514409	14.900	ug/mLm
3) S	2,4,6-Tribromophenol	8.771	173960056	9.039	ug/mLm
4) S	4-Terphenyl-d14	11.823	38389950	14.467	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	15959321728	5073.003	ug/mL
6) H	ORO (C20-C34)	14.560	16553519603	5871.029	ug/mL
7) H	DRO (C10-C28)	9.472	23865677954	5003.252	ug/mL
8) H	ORO (C28-C40)	17.070	10608892516	4773.292	ug/mL
9) H	ORO (C20-C40)	15.165	20803426454	5463.433	ug/mL
10) H	ORO (C28-C35)	16.581	8745864758	6163.843	ug/mL
11) H	ERO (C8-C40)	10.557	36964204271	10662.738	ug/mL
12) H	DIESEL (IOWA)	8.818	19609965826	4130.215	ug/mL
13) H	OIL (IOWA)	17.414	17590906733	7851.427	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT20.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:55 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10288G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:40:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT22.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:25 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10288H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:24:17 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

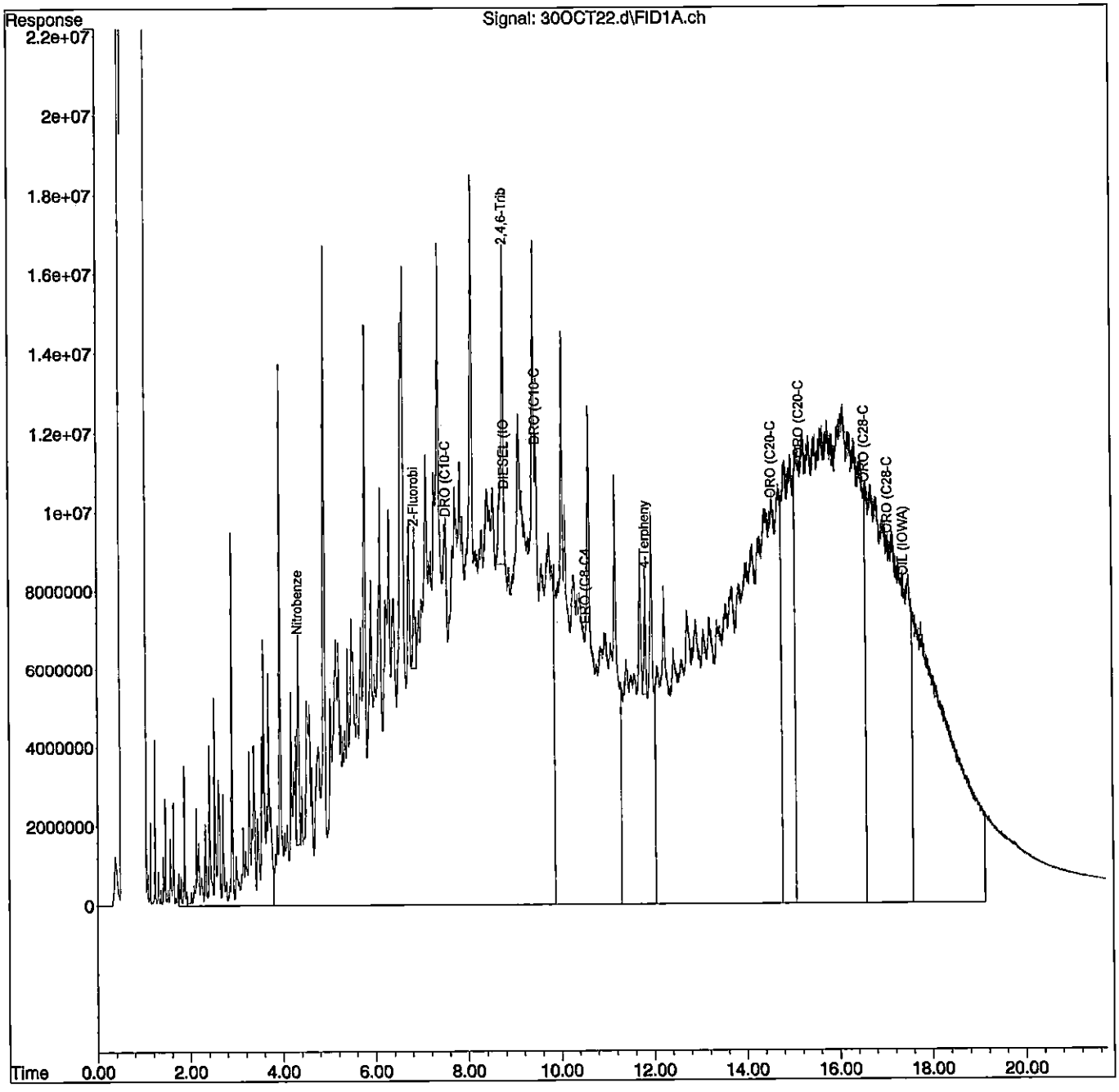
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.339	153137709	21.082	ug/mLm
2) S	2-Fluorobipehenyl	6.857	92824704	31.728	ug/mLm
3) S	2,4,6-Tribromophenol	8.781	295190513	15.587	ug/mLm
4) S	4-Terphenyl-d14	11.835	71381707	26.931	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	31866746709	10127.253	ug/mL
6) H	ORO (C20-C34)	14.560	29054299470	10303.548	ug/mL
7) H	DRO (C10-C28)	9.472	46947519672	9840.243	ug/mL
8) H	ORO (C28-C40)	17.070	18099435567	8149.410	ug/mL
9) H	ORO (C20-C40)	15.165	35035084274	9200.993	ug/mL
10) H	ORO (C28-C35)	16.581	14604864176	10291.587	ug/mL
11) H	ERO (C8-C40)	10.557	70415065161	20316.416	ug/mL
12) H	DIESEL (IOWA)	8.818	36604135232	7708.559	ug/mL
13) H	OIL (IOWA)	17.414	31916967894	14248.183	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT22.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:25 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10288H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:24:17 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT24.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:54 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10288I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:42:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

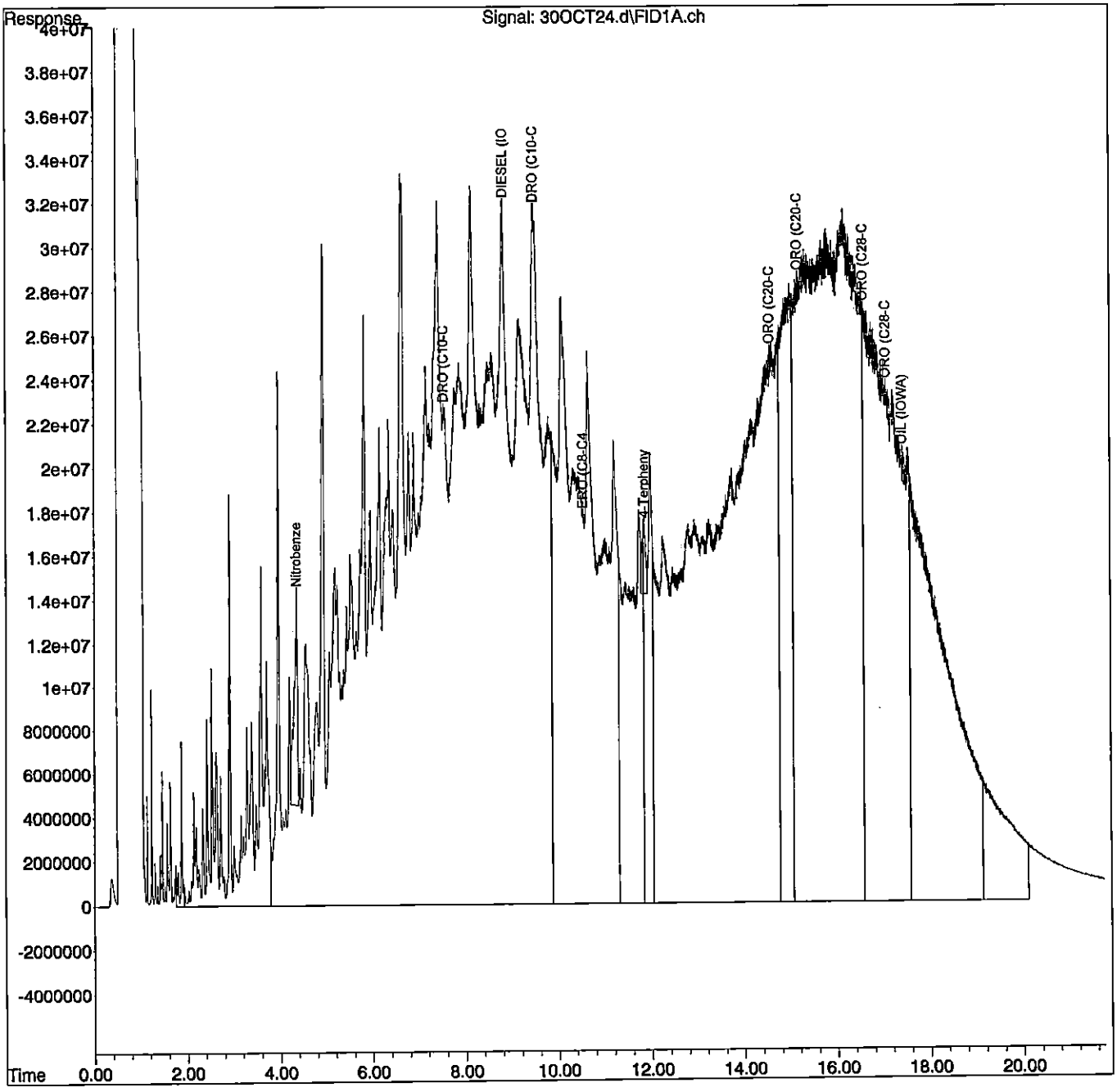
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.361	513730181	70.698	ug/mLm
2) S	2-Fluorobipehenyl	6.791	146460073	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.822	972844493	BelowCal	ug/mLm
4) S	4-Terphenyl-d14	11.857	182172324	68.789	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	79423264261	25237.338	ug/mL
6) H	ORO (C20-C34)	14.560	76228556993	27030.569	ug/mL
7) H	DRO (C10-C28)	9.472	1.18572e+011	24849.710	ug/mL
8) H	ORO (C28-C40)	17.070	50958220953	22959.439	ug/mL
9) H	ORO (C20-C40)	15.165	1.02185e+011	26836.096	ug/mL
10) H	ORO (C28-C35)	16.581	43275911937	30490.724	ug/mL
11) H	ERO (C8-C40)	10.557	1.76896e+011	51046.029	ug/mL
12) H	DIESEL (IOWA)	8.818	92007978916	19374.563	ug/mL
13) H	OIL (IOWA)	17.414	81035663080	36180.263	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT24.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:54 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10288I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:42:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT26.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:23 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10288J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:31:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

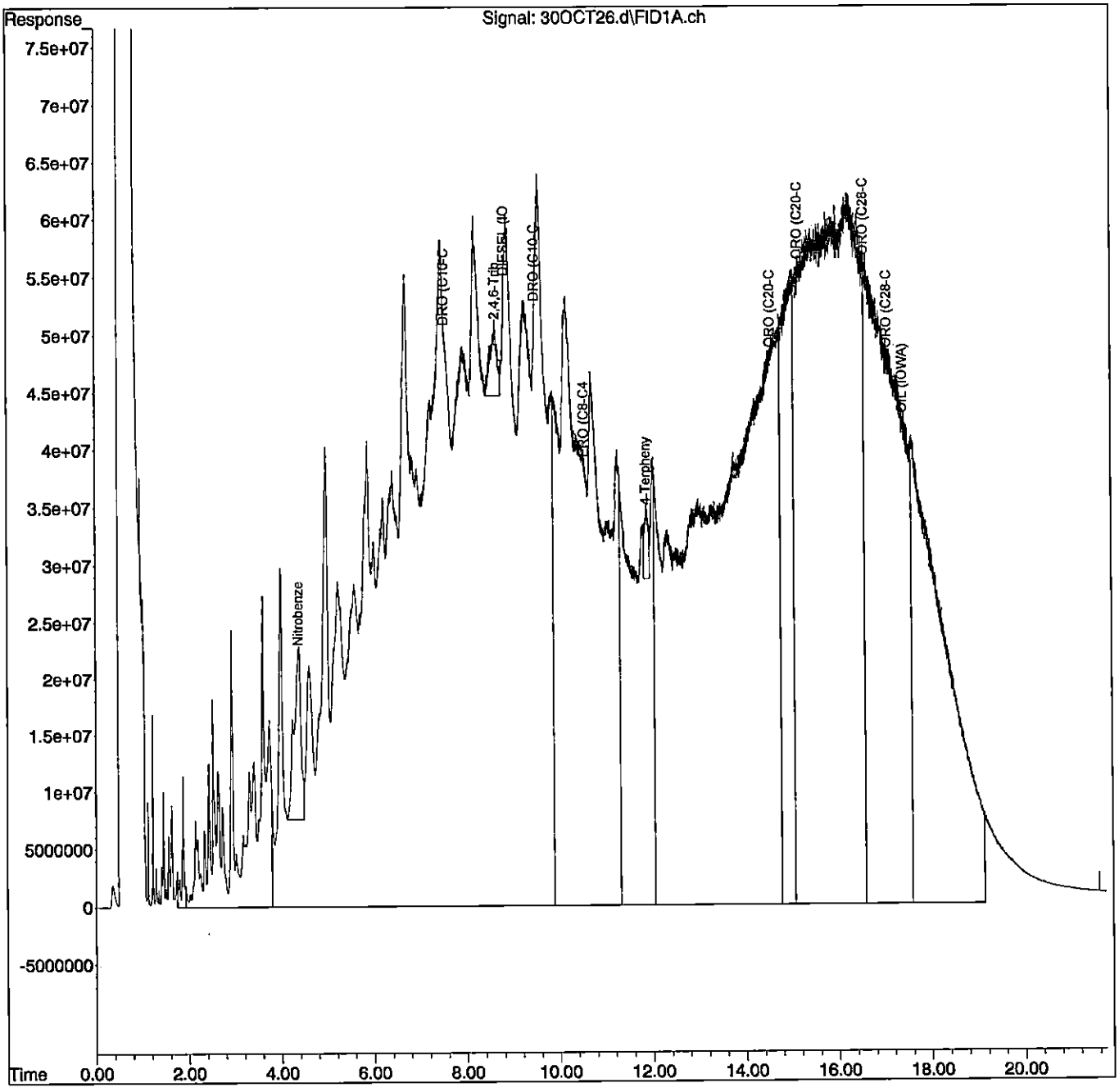
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.378	1623050884	223.333	ug/mLm
2) S	2-Fluorobipehenyl	6.693	2469964512	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.631	648363811	39.624	ug/mLm
4) S	4-Terphenyl-d14	11.875	361636781	136.591	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	1.53513e+011	48777.661	ug/mL
6) H	ORO (C20-C34)	14.560	1.66633e+011	59086.213	ug/mL
7) H	DRO (C10-C28)	9.472	2.32557e+011	48736.172	ug/mL
8) H	ORO (C28-C40)	17.070	1.0471e+011	47186.151	ug/mL
9) H	ORO (C20-C40)	15.165	1.99958e+011	52513.514	ug/mL
10) H	ORO (C28-C35)	16.581	86644405896	61044.409	ug/mL
11) H	ERO (C8-C40)	10.557	3.46766e+011	100069.291	ug/mL
12) H	DIESEL (IOWA)	8.818	1.81357e+011	38188.152	ug/mL
13) H	OIL (IOWA)	17.414	1.74529e+011	77926.035	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT26.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:23 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10288J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:31:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT28.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:52 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10288K
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:46:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:26 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

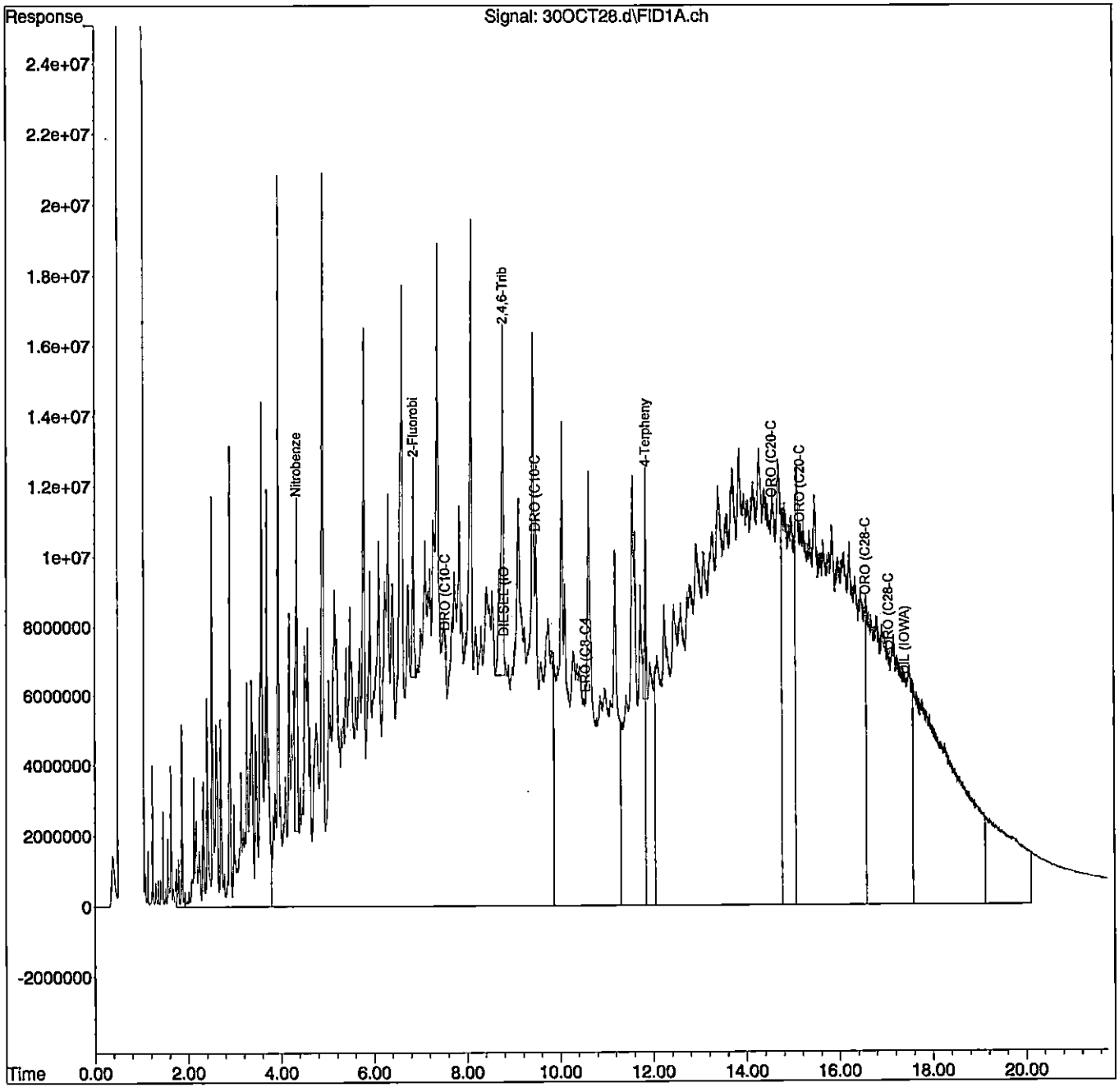
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.341	264106184	20.441 ug/mLm
2) S	2-Fluorobipehenyl	6.860	143292757	42.816 ug/mLm
3) S	2,4,6-Tribromophenol	8.780	381775820	16.624 ug/mLm
4) S	4-Terphenyl-d14	11.845	155390653	42.911 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	31041047955	9924.267 ug/mL
6) H	ORO (C20-C34)	14.560	32300202545	10074.692 ug/mL
7) H	DRO (C10-C28)	9.472	48063641238	10229.939 ug/mL
8) H	ORO (C28-C40)	17.070	16555511769	8090.979 ug/mL
9) H	ORO (C20-C40)	15.165	42173711652	10590.735 ug/mL
10) H	ORO (C28-C35)	16.581	13663837718	8048.876 ug/mL
11) H	ERO (C8-C40)	10.557	72049595207	20491.003 ug/mL
12) H	DIESEL (IOWA)	8.818	37331335770	10159.148 ug/mL
13) H	OIL (IOWA)	17.414	31853351554	9371.722 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT28.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:52 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10288K
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:46:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:26 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Oct 30 1731 Sequence Log

Starting sequence Wed Oct 30 17:31:21 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191030.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191030\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Comment: 'DUAL SYSTEM, UNLINKED'				
2)	Unlinked: 'UNLINKED'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191030.SEC\				
3)	RearSamp	1	30OCT01	LVID4B	DRLVI DIST
This computer is now swap bound.					
4)	Sample	10	30OCT02	LVID4B	RINSE
5)	RearSamp	3	30OCT03	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
6)	Sample	2	30OCT04	LVID4B	DRO DIST
7)	RearSamp	3	30OCT05	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
8)	Sample	11	30OCT06	LVID4B	BNA SURROGATE
9)	RearSamp	51	30OCT07	LVID4B	DBLKW1-144848
This computer is now swap bound.					
10)	Sample	12	30OCT08	LVID4B	DRO ICAL 50 UG/L
11)	RearSamp	52	30OCT09	LVID4B	DLCSW1-144848
This computer is now swap bound.					
12)	Sample	13	30OCT10	LVID4B	DRO ICAL 100 UG/L
13)	RearSamp	53	30OCT11	LVID4B	DRLVSW1-144848
This computer is now swap bound.					
14)	Sample	14	30OCT12	LVID4B	DRO ICAL 250 UG/L
15)	RearSamp	54	30OCT13	LVID4B	19102158-10B
This computer is now swap bound.					
16)	Sample	15	30OCT14	LVID4B	DRO ICAL 500 UG/L
17)	RearSamp	55	30OCT15	LVID4B	19102158-10B MS
This computer is now swap bound.					
18)	Sample	16	30OCT16	LVID4B	DRO ICAL 1000 UG/L
19)	RearSamp	56	30OCT17	LVID4B	19102158-10B MSD
This computer is now swap bound.					
20)	Sample	17	30OCT18	LVID4B	DRO ICAL 2500 UG/L
21)	RearSamp	57	30OCT19	LVID4B	19102158-11B
This computer is now swap bound.					
22)	Sample	18	30OCT20	LVID4B	DRO ICAL 5000 UG/L
23)	RearSamp	58	30OCT21	LVID4B	19102158-12B
This computer is now swap bound.					
24)	Sample	19	30OCT22	LVID4B	DRO ICAL 10,000 UG/L
25)	RearSamp	59	30OCT23	LVID4B	19102158-13B
This computer is now swap bound.					
26)	Sample	20	30OCT24	LVID4B	DRO ICAL 25,000 UG/L
27)	RearSamp	60	30OCT25	LVID4B	19102158-14B
This computer is now swap bound.					
28)	Sample	21	30OCT26	LVID4B	DRO ICAL 50,000 UG/L
29)	RearSamp	3	30OCT27	LVID4B	DRLVI CCV 500 UG/ML

2019 Oct 30 1731 Sequence Log

This computer is now swap bound.
30) Sample 22 30OCT28 LVID4B DRO ICV 10,000 UG/L
31) RearSamp 61 30OCT29 LVID4B 19102158-15B
This computer is now swap bound.
32) Sample 10 30OCT30 LVID4B RINSE
33) RearSamp 62 30OCT31 LVID4B 19102084-01C
This computer is now swap bound.
34) Sample 10 30OCT32 LVID4B RINSE
35) RearSamp 63 30OCT33 LVID4B 19102084-02C
This computer is now swap bound.
36) Sample 10 30OCT34 LVID4B RINSE
37) RearSamp 64 30OCT35 LVID4B 19102196-05B
This computer is now swap bound.
38) Sample 10 30OCT36 LVID4B RINSE
39) RearSamp 65 30OCT37 LVID4B 19102196-06B
This computer is now swap bound.
40) Sample 10 30OCT38 LVID4B RINSE
41) RearSamp 66 30OCT39 LVID4B 19102298-01A
This computer is now swap bound.
42) Sample 10 30OCT40 LVID4B RINSE
43) RearSamp 3 30OCT41 LVID4B DRLVI CCV 500 UG/ML
This computer is now swap bound.
44) Sample 10 30OCT42 LVID4B RINSE

Sequence completed Thu Oct 31 03:39:20 2019

C:\MSDCHEM\1\DATA\GC8-191030\2019 Oct 30 1731 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191030\2019 Oct 30 1731 Sequence Log .LOG

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111218.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 6:29 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:41:21 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	12.111	39.4#	102	-0.02
2	S	2-Fluorobipehenyl	20.000	41.056	-105.3#	121	0.00
3	S	2,4,6-Tribromophenol	20.000	15.517	22.4#	121	0.11
4	S	4-Terphenyl-d14	20.000	18.571	7.1	94	0.00
5	H	DRO (C10-C20)	10000.000	-242.350	102.4#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-52.161	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	10973.910	-9.7	110	-0.47
8	H	ORO (C28-C40)	10000.000	11202.280	-12.0	127	-0.07
9	H	ORO (C20-C40)	10000.000	-92.523	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	21454.158	-7.3	107	-0.06
12	H	DIESEL (IOWA)	10000.000	-232.697	102.3#	-2	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-242.350	102.4#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-52.161	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-92.523	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
12	H	DIESEL (IOWA)	10000.000	-232.697	102.3#	-2	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111218.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 6:29 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:41:21 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	8.516	7.775 E6	8.7	102	-0.02
2	S	2-Fluorobipehenyl	7.800	5.603 E6	28.2#	121	0.00
3	S	2,4,6-Tribromophenol	19.552	17.899 E6	8.5	121	0.11
4	S	4-Terphenyl-d14	3.735	3.364 E6	9.9	94	0.00
5	H	DRO (C10-C20)	3.603	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	3.572	0.000 E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	5.412	5.154 E6	4.8	110	-0.47
8	H	ORO (C28-C40)	2.818	2.304 E6	18.2	127	-0.07
9	H	ORO (C20-C40)	5.081	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	4.316	3.771 E6	12.6	107	-0.06
12	H	DIESEL (IOWA)	4.258	0.000 E6	100.0#	-2#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.603	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	3.572	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	5.081	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	2.063	0.000 E6	100.0#	0#	0.00
12	H	DIESEL (IOWA)	4.258	0.000 E6	100.0#	-2#	0.00
13	H	OIL (IOWA)	4.771	0.000 E6	100.0#	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111218.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 6:29 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:41:21 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

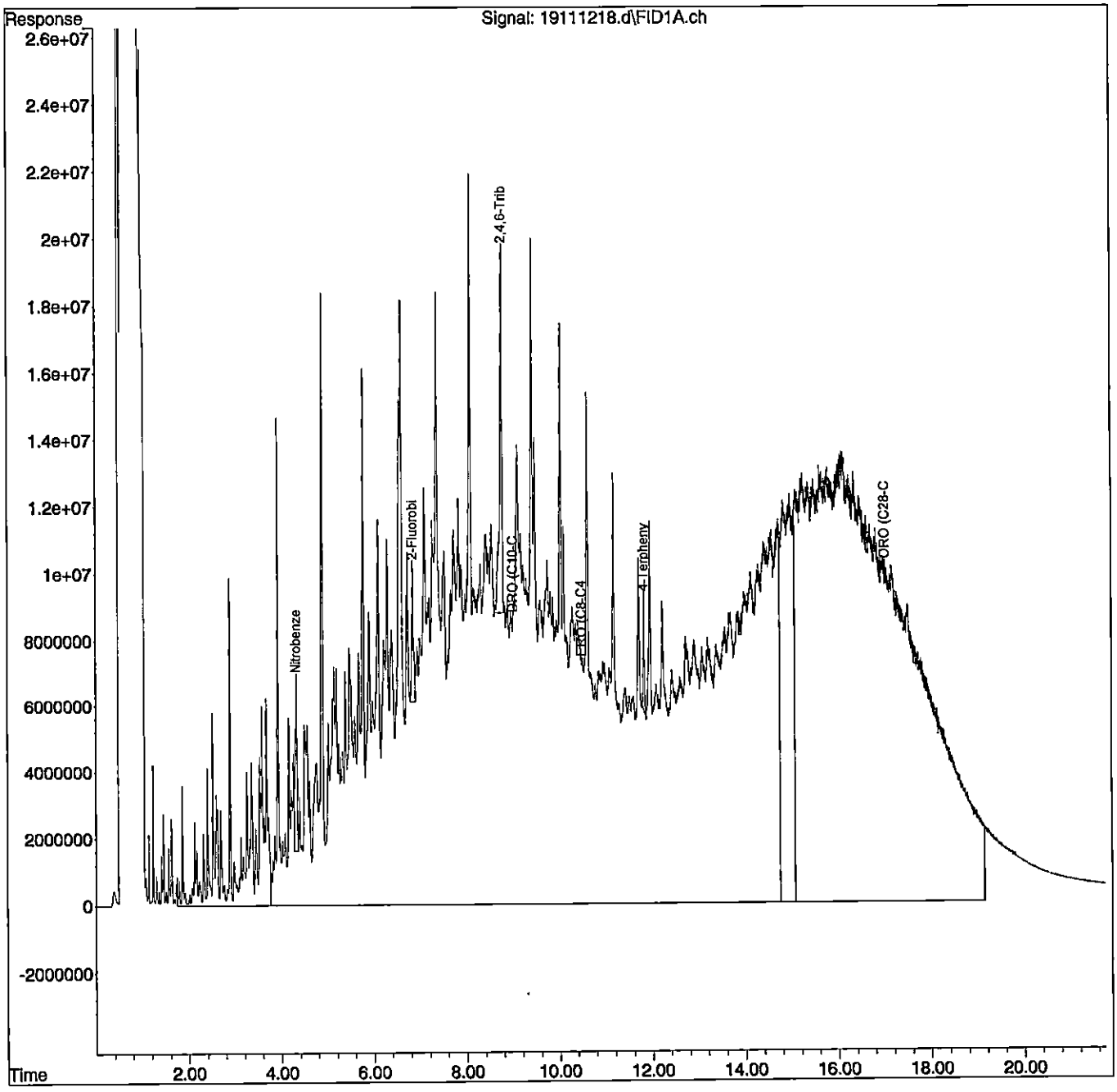
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.328	155505431	12.111	ug/mLm
2) S	2-Fluorobipehenyl	6.843	112060161	41.056	ug/mLm
3) S	2,4,6-Tribromophenol	8.773	357976185	15.517	ug/mLm
4) S	4-Terphenyl-d14	11.826	67283437	18.571	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-625541778	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-67283437	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	51544962745	10973.910	ug/mL
8) H	ORO (C28-C40)	17.000	23037365328	11202.280	ug/mL
9) H	ORO (C20-C40)	15.165	-67283437	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	75415772827	21454.158	ug/mL
12) H	DIESEL (IOWA)	8.818	-692825215	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111218.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 6:29 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:41:21 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111248.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 1:45 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:15:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	12.063	39.7#	101	-0.02
2	S	2-Fluorobipehenyl	20.000	41.589	-107.9#	131	0.00
3	S	2,4,6-Tribromophenol	20.000	15.918	20.4#	124	0.11
4	S	4-Terphenyl-d14	20.000	20.873	-4.4	106	0.00
5	H	DRO (C10-C20)	10000.000	-247.894	102.5#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-54.768	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	11461.349	-14.6	115	-0.47
8	H	ORO (C28-C40)	10000.000	10886.459	-8.9	124	-0.07
9	H	ORO (C20-C40)	10000.000	-94.631	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	22289.195	-11.4	111	-0.06
12	H	DIESEL (IOWA)	10000.000	-239.694	102.4#	-2	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-247.894	102.5#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-54.768	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-94.631	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
12	H	DIESEL (IOWA)	10000.000	-239.694	102.4#	-2	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111248.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 1:45 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:15:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	8.516	7.744 E6	9.1	101	-0.02
2	S	2-Fluorobipehenyl	7.800	6.063 E6	22.3#	131	0.00
3	S	2,4,6-Tribromophenol	19.552	18.333 E6	6.2	124	0.11
4	S	4-Terphenyl-d14	3.735	3.781 E6	-1.2	106	0.00
5	H	DRO (C10-C20)	3.603	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	3.572	0.000 E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	5.412	5.383 E6	0.5	115	-0.47
8	H	ORO (C28-C40)	2.818	2.238 E6	20.6#	124	-0.07
9	H	ORO (C20-C40)	5.081	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	4.316	3.917 E6	9.2	111	-0.06
12	H	DIESEL (IOWA)	4.258	0.000 E6	100.0#	-2#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.603	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	3.572	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	5.081	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	2.063	0.000 E6	100.0#	0#	0.00
12	H	DIESEL (IOWA)	4.258	0.000 E6	100.0#	-2#	0.00
13	H	OIL (IOWA)	4.771	0.000 E6	100.0#	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111248.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 1:45 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:15:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

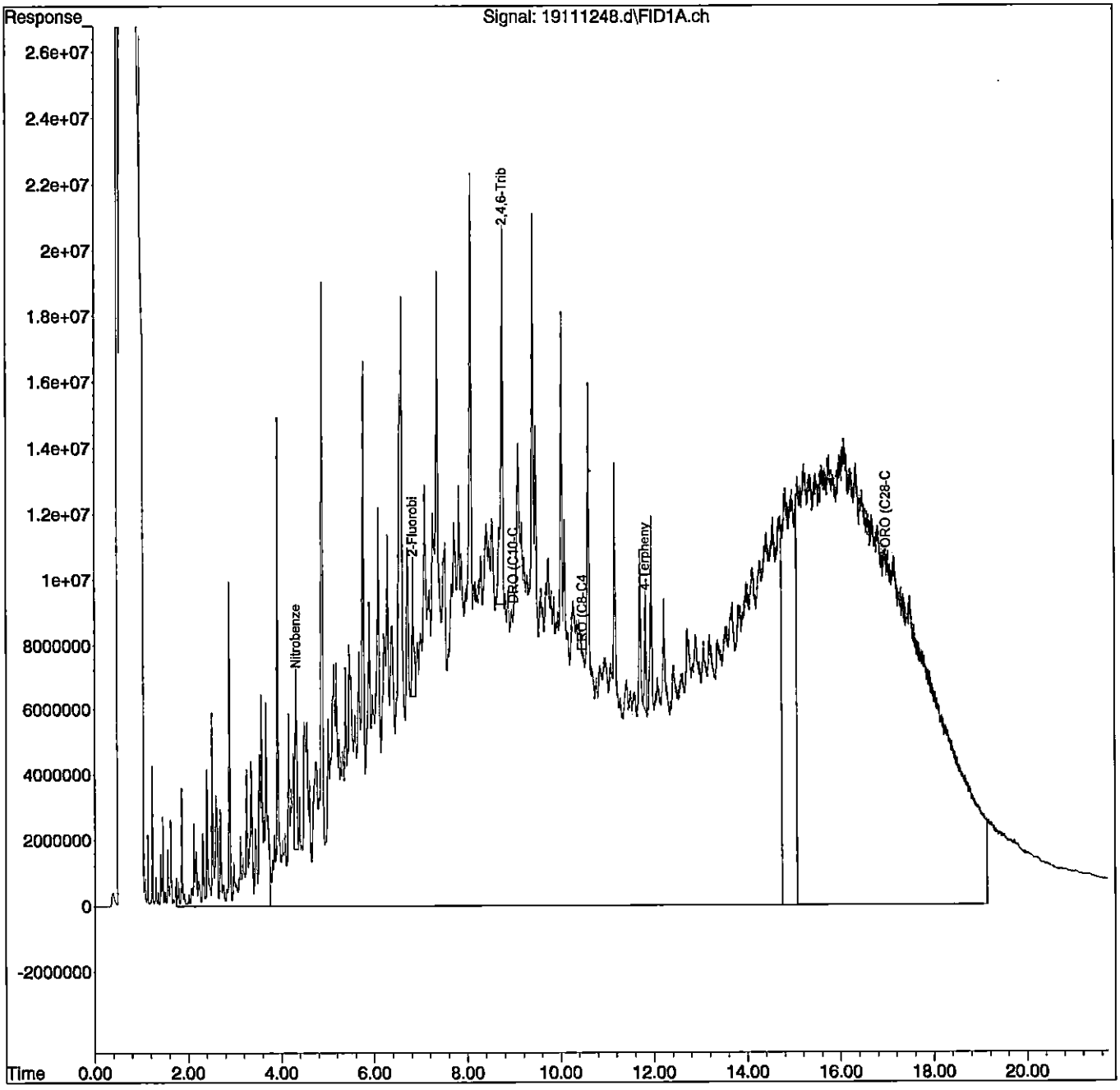
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.328	154878978	12.063	ug/mLm
2) S	2-Fluorobipehenyl	6.845	121268771	41.589	ug/mLm
3) S	2,4,6-Tribromophenol	8.774	366662930	15.918	ug/mLm
4) S	4-Terphenyl-d14	11.828	75616327	20.873	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-642810679	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-75616327	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	53825870069	11461.349	ug/mL
8) H	ORO (C28-C40)	17.000	22379408478	10886.459	ug/mL
9) H	ORO (C20-C40)	15.165	-75616327	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	78334181319	22289.195	ug/mL
12) H	DIESEL (IOWA)	8.818	-718427007	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111248.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 1:45 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 16:15:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111270.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 7:05 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 17:24:10 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	11.755	41.2#	99	-0.02
2	S	2-Fluorobipehenyl	20.000	41.249	-106.2#	124	0.01
3	S	2,4,6-Tribromophenol	20.000	16.750	16.3	130	0.12
4	S	4-Terphenyl-d14	20.000	20.202	-1.0	103	0.01
5	H	DRO (C10-C20)	10000.000	-250.420	102.5#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-54.009	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	11778.619	-17.8	118	-0.47
8	H	ORO (C28-C40)	10000.000	10849.827	-8.5	123	-0.07
9	H	ORO (C20-C40)	10000.000	-94.017	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	22722.967	-13.6	113	-0.06
12	H	DIESEL (IOWA)	10000.000	-241.182	102.4#	-2	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-250.420	102.5#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-54.009	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-94.017	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
12	H	DIESEL (IOWA)	10000.000	-241.182	102.4#	-2	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111270.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 7:05 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 17:24:10 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	8.516	7.543 E6	11.4	99	-0.02
2	S	2-Fluorobipehenyl	7.800	5.769 E6	26.0#	124	0.01
3	S	2,4,6-Tribromophenol	19.552	19.223 E6	1.7	130	0.12
4	S	4-Terphenyl-d14	3.735	3.659 E6	2.0	103	0.01
5	H	DRO (C10-C20)	3.603	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	3.572	0.000 E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	5.412	5.531 E6	-2.2	118	-0.47
8	H	ORO (C28-C40)	2.818	2.230 E6	20.9#	123	-0.07
9	H	ORO (C20-C40)	5.081	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	4.316	3.993 E6	7.5	113	-0.06
12	H	DIESEL (IOWA)	4.258	0.000 E6	100.0#	-2#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.603	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	3.572	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	5.081	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	2.063	0.000 E6	100.0#	0#	0.00
12	H	DIESEL (IOWA)	4.258	0.000 E6	100.0#	-2#	0.00
13	H	OIL (IOWA)	4.771	0.000 E6	100.0#	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111270.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 7:05 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 17:24:10 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

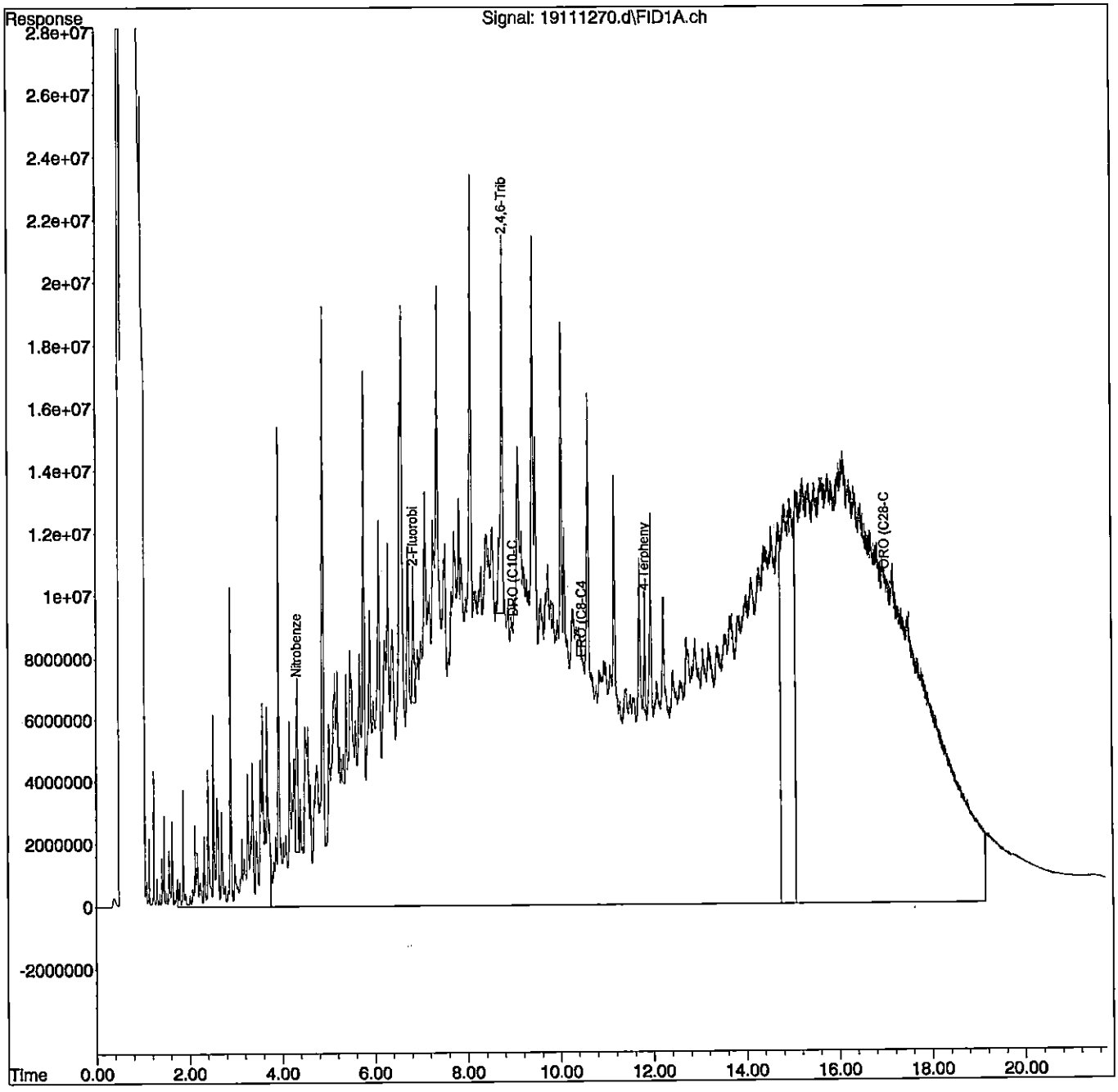
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.330	150854310	11.755	ug/mLm
2) S	2-Fluorobipehenyl	6.850	115372327	41.249	ug/mLm
3) S	2,4,6-Tribromophenol	8.780	384453939	16.750	ug/mLm
4) S	4-Terphenyl-d14	11.834	73189694	20.202	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-650680575	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-73189694	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	55310493843	11778.619	ug/mL
8) H	ORO (C28-C40)	17.000	22303090859	10849.827	ug/mL
9) H	ORO (C20-C40)	15.165	-73189694	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	79850193675	22722.967	ug/mL
12) H	DIESEL (IOWA)	8.818	-723870269	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111270.d
Signal(s) : FID1A.ch
Acq On : 13 Nov 2019 7:05 am
Operator : KJB
Sample : DRO CCV 10000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 17:24:10 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111202.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 2:37 pm
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:21:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

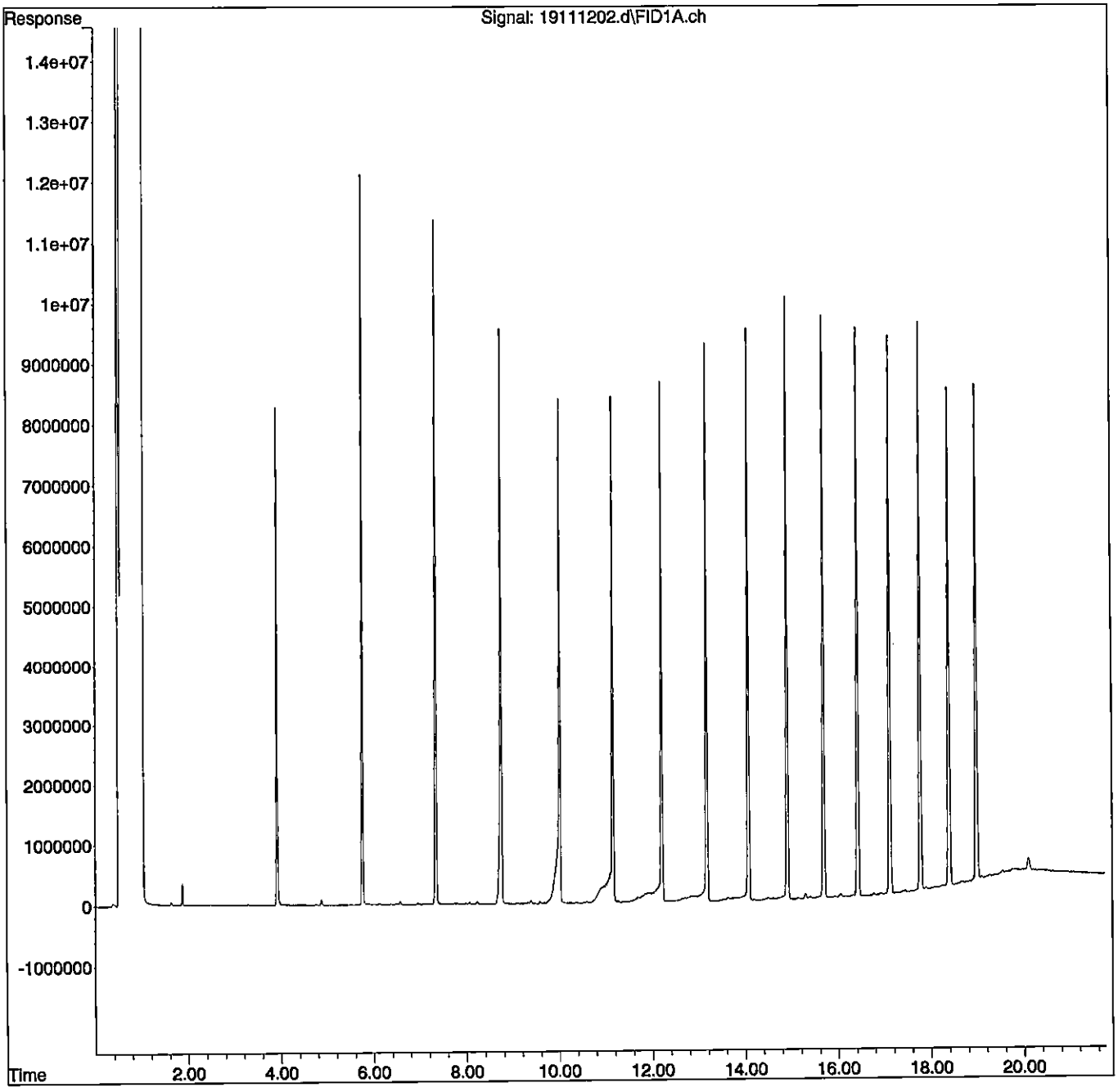
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111202.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 2:37 pm
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:21:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111220.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 6:58 pm
Operator : KJB
Sample : dblks1-145429
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 17:01:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

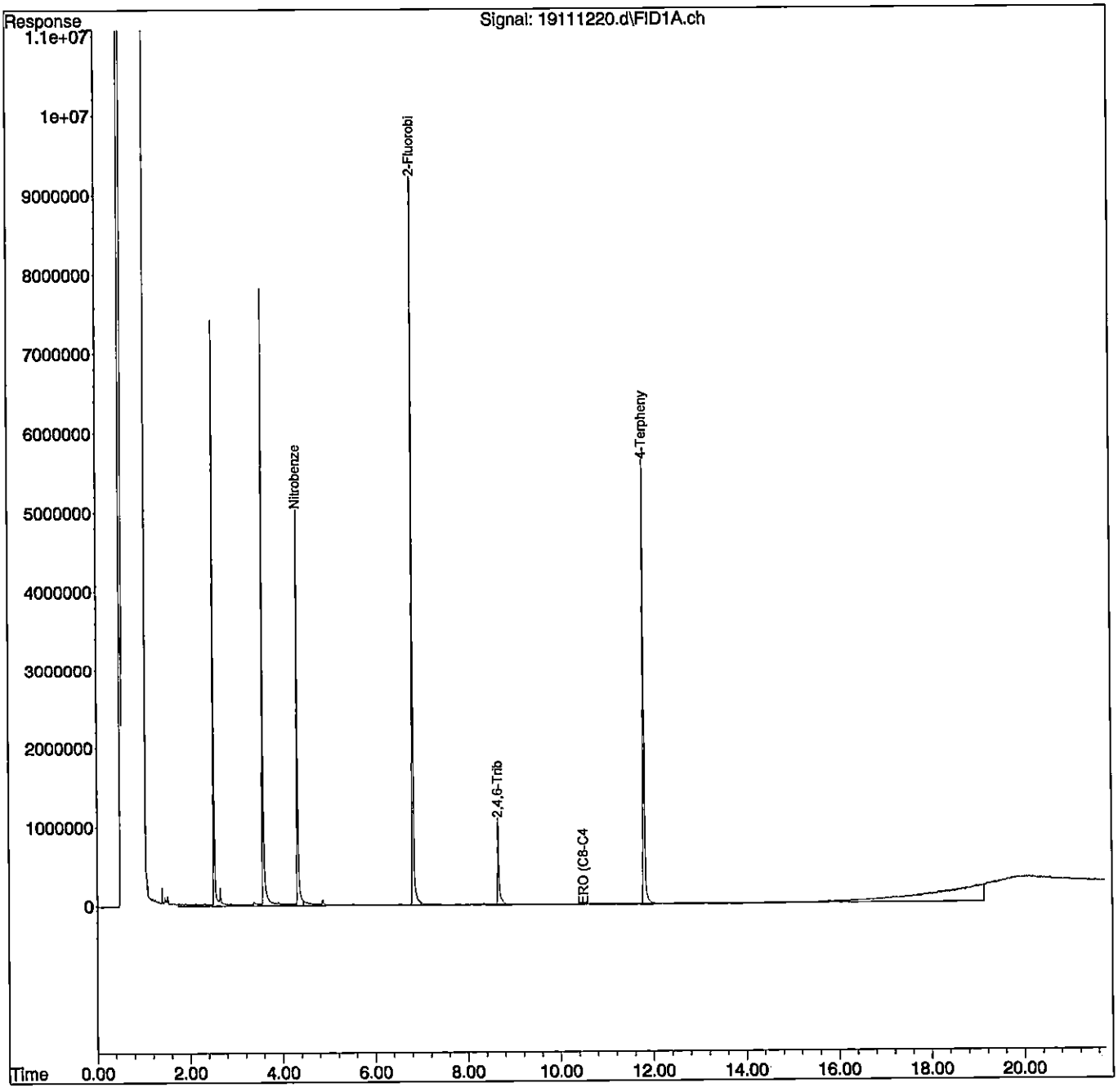
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.324	79899113	6.312	ug/mLm
2) S	2-Fluorobipehenyl	6.825	153969436	43.389	ug/mLm
3) S	2,4,6-Tribromophenol	8.654	27828520	2.089	ug/mLm
4) S	4-Terphenyl-d14	11.809	117748898	32.512	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-261697068	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-117748898	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	97544344	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	15.165	-117748898	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	552843382	33.827	ug/mL
12) H	DIESEL (IOWA)	8.818	-379445966	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111220.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 6:58 pm
Operator : KJB
Sample : dblks1-145429
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 17:01:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111222.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 7:27 pm
Operator : KJB
Sample : DLCSS1-145429
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:45:35 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

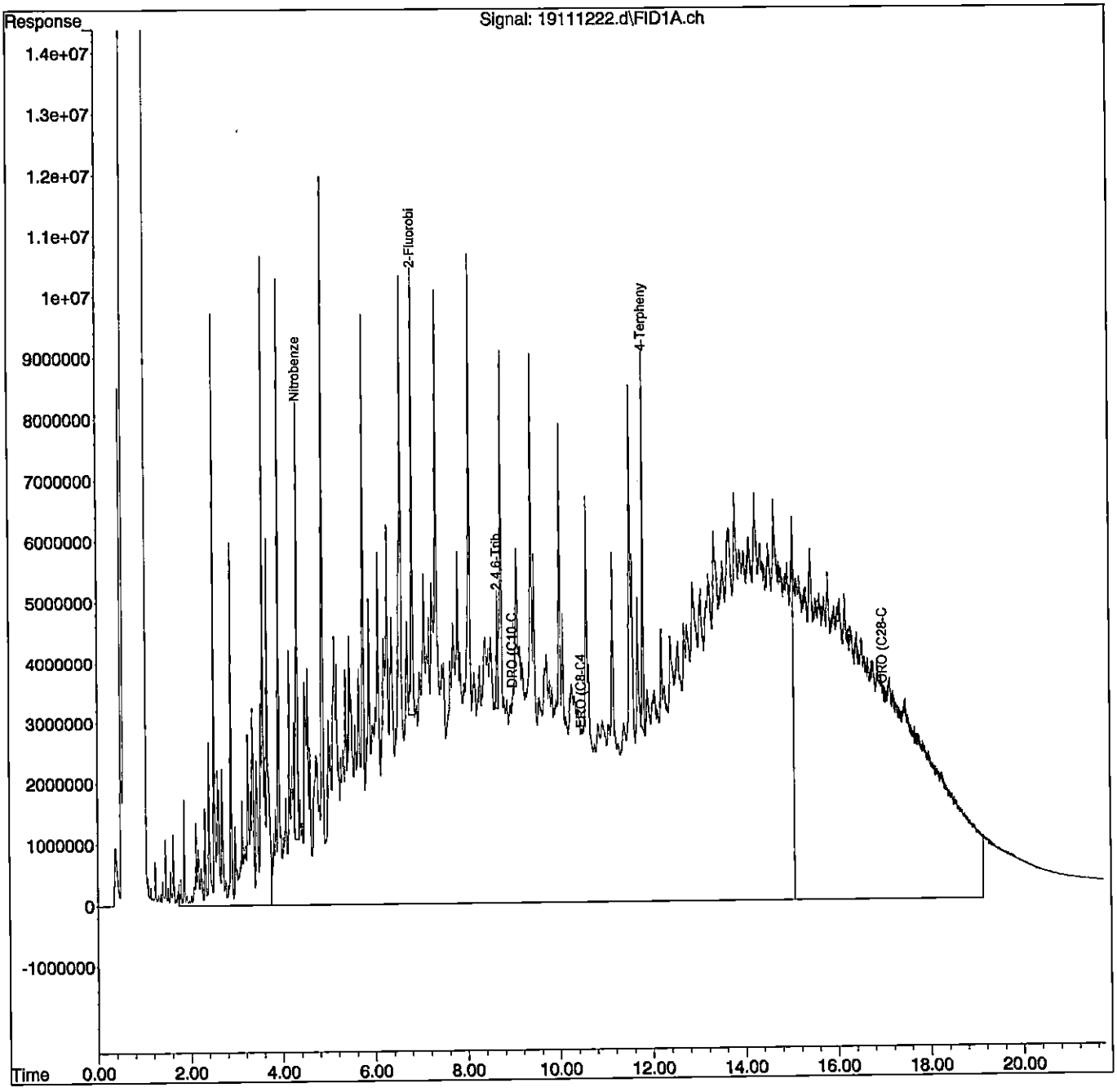
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.326	155255956	12.092	ug/mLm
2) S	2-Fluorobipehenyl	6.832	149882156	43.172	ug/mLm
3) S	2,4,6-Tribromophenol	8.665	40428422	2.549	ug/mLm
4) S	4-Terphenyl-d14	11.817	113350259	31.297	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-345566533	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-113350259	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	25127959066	5328.497	ug/mL
8) H	ORO (C28-C40)	17.000	8453905517	4202.195	ug/mL
9) H	ORO (C20-C40)	15.165	-113350259	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	34856638229	9849.081	ug/mL
12) H	DIESEL (IOWA)	8.818	-458916792	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111222.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 7:27 pm
Operator : KJB
Sample : DLCSS1-145429
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:45:35 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111224.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 7:57 pm
Operator : KJB
Sample : 19110801-01A MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:48:13 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

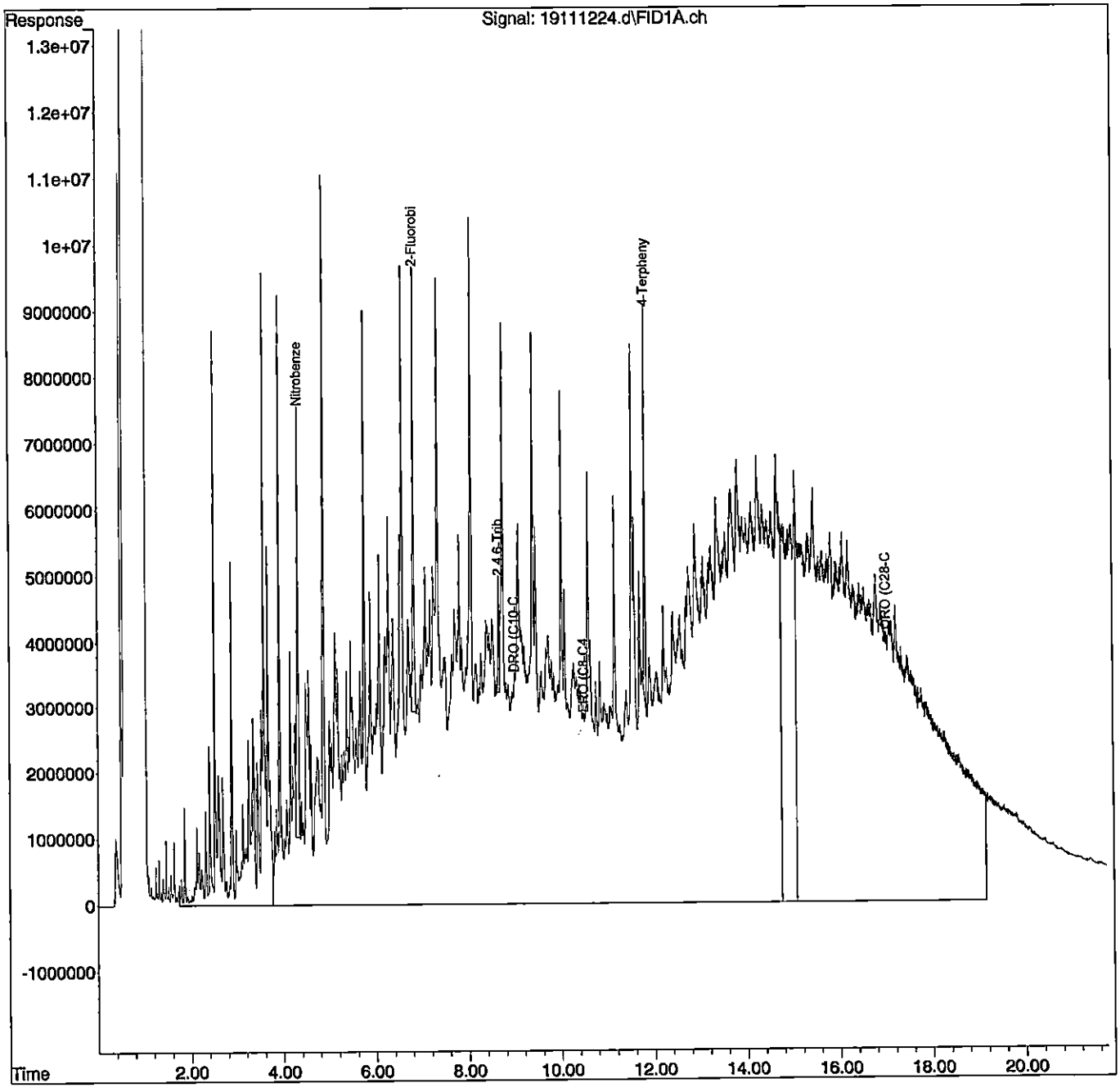
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.325	143863585	11.218	ug/mLm
2) S	2-Fluorobipehenyl	6.832	131533381	42.169	ug/mLm
3) S	2,4,6-Tribromophenol	8.663	37707795	2.450	ug/mLm
4) S	4-Terphenyl-d14	11.821	109983691	30.367	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-313104761	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-109983691	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	25150712458	5333.360	ug/mL
8) H	ORO (C28-C40)	17.000	9880067003	4886.755	ug/mL
9) H	ORO (C20-C40)	15.165	-109983691	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	35986170508	10172.271	ug/mL
12) H	DIESEL (IOWA)	8.818	-423088452	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111224.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 7:57 pm
Operator : KJB
Sample : 19110801-01A MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:48:13 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111226.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 8:26 pm
Operator : KJB
Sample : 1110801-01A MSD
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:50:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

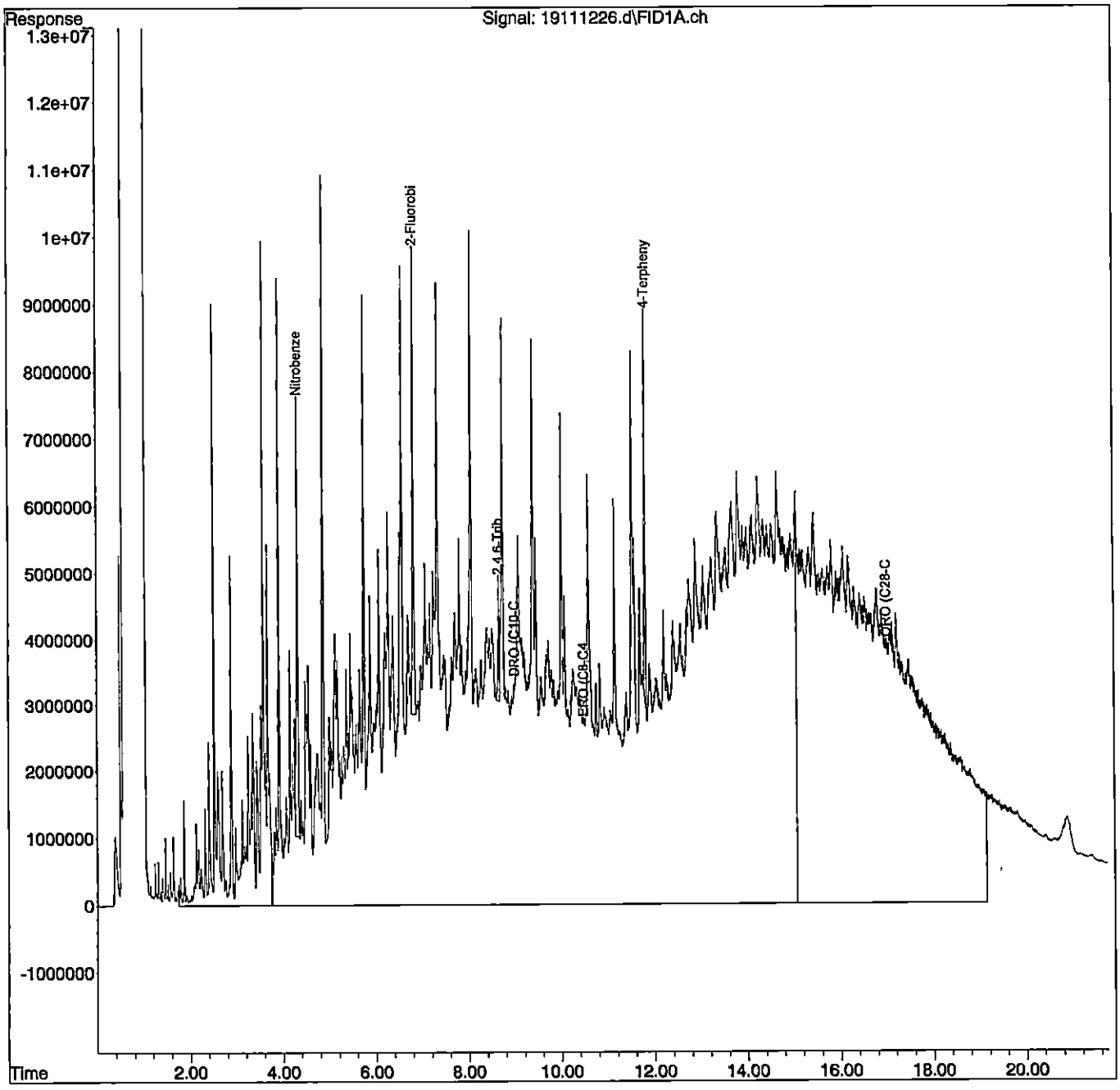
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.326	148265421	11.556	ug/mLm
2) S	2-Fluorobipehenyl	6.830	134926663	42.357	ug/mLm
3) S	2,4,6-Tribromophenol	8.665	40299318	2.545	ug/mLm
4) S	4-Terphenyl-d14	11.819	103828956	28.667	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-323491402	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-103828956	N.D.	ug/mL
7) H	DRO (C10-C28)	9.000	24398411266	5172.590	ug/mL
8) H	ORO (C28-C40)	17.000	9263251633	4590.683	ug/mL
9) H	ORO (C20-C40)	15.165	-103828956	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.500	34990918448	9887.502	ug/mL
12) H	DIESEL (IOWA)	8.818	-427320359	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191112\
Data File : 19111226.d
Signal(s) : FID1A.ch
Acq On : 12 Nov 2019 8:26 pm
Operator : KJB
Sample : 1110801-01A MSD
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 13 15:50:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Nov 12 1435 Sequence Log

Starting sequence Tue Nov 12 14:35:23 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191112.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191112\
Method Path: C:\MSDCHEM\1\METHODS\

Line Type Vial DataFile Method Sample Name

---

1) Comment: 'DUAL SYSTEM, UNLINKED'
2) Unlinked: 'UNLINKED'
Complete paths including drive 'C:\msdchem...' must be specified.
Ignoring keyword string :UNLINKED
Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191112.SEC\
3) RearSamp 10 19111201 LVID4B RINSE
This computer is now swap bound.
4) Sample 2 19111202 LVID4B DRO DIST
5) RearSamp 10 19111203 LVID4B RINSE
This computer is now swap bound.
6) Sample 3 19111204 LVID4B DRO CCV 10,000 UG/ML wrong vial ca rerun
7) RearSamp 10 19111205 LVID4B RINSE
This computer is now swap bound.
8) Sample 3 19111206 LVID4B DRO CCV 10,000 UG/ML wrong vial ca rerun
9) RearSamp 10 19111207 LVID4B RINSE

This computer is now swap bound.
10) Sample 4 19111208 LVID4B DRO CCV 10,000 UG/ML
11) RearSamp 10 19111209 LVID4B RINSE

This computer is now swap bound.
12) Sample 4 19111210 LVID4B DRO CCV 10,000 UG/ML
13) RearSamp 10 19111211 LVID4B RINSE
This computer is now swap bound.
14) Sample 11 19111212 LVID4B BLK-145421
15) RearSamp 10 19111213 LVID4B RINSE

This computer is now swap bound.
16) Sample 12 19111214 LVID4B LCS-145421
17) RearSamp 10 19111215 LVID4B RINSE

This computer is now swap bound.
18) Sample 13 19111216 LVID4B 19110097-01A DF10
19) RearSamp 10 19111217 LVID4B RINSE

This computer is now swap bound.
20) Sample 4 19111218 LVID4B DRO CCV 10,000 UG/ML
21) RearSamp 10 19111219 LVID4B RINSE

This computer is now swap bound.
22) Sample 14 19111220 LVID4B dblks1-145429
23) RearSamp 10 19111221 LVID4B RINSE

This computer is now swap bound.
24) Sample 15 19111222 LVID4B DLCSS1-145429

2019 Nov 12 1435 Sequence Log

25) RearSamp 10 19111223 LVID4B RINSE

This computer is now swap bound.
26) Sample 16 19111224 LVID4B 19110801-01A MS
27) RearSamp 10 19111225 LVID4B RINSE

This computer is now swap bound.
28) Sample 17 19111226 LVID4B 1110801-01A MSD
29) RearSamp 10 19111227 LVID4B RINSE

This computer is now swap bound.
30) Sample 18 19111228 LVID4B 19110801-01A
31) RearSamp 10 19111229 LVID4B RINSE

This computer is now swap bound.
32) Sample 19 19111230 LVID4B 19110622-01A
33) RearSamp 10 19111231 LVID4B RINSE

This computer is now swap bound.
34) Sample 20 19111232 LVID4B 19110622-02A
35) RearSamp 10 19111233 LVID4B RINSE

This computer is now swap bound.
36) Sample 21 19111234 LVID4B 19110622-03A
37) RearSamp 10 19111235 LVID4B RINSE

This computer is now swap bound.
38) Sample 22 19111236 LVID4B 19110622-04A
39) RearSamp 10 19111237 LVID4B RINSE

This computer is now swap bound.
40) Sample 23 19111238 LVID4B 19110622-05A
41) RearSamp 10 19111239 LVID4B RINSE

This computer is now swap bound.
42) Sample 24 19111240 LVID4B 19110622-06A
43) RearSamp 10 19111241 LVID4B RINSE

This computer is now swap bound.
44) Sample 25 19111242 LVID4B 19110637-09A
45) RearSamp 10 19111243 LVID4B RINSE

This computer is now swap bound.
46) Sample 26 19111244 LVID4B 19110697-10A
47) RearSamp 10 19111245 LVID4B RINSE

This computer is now swap bound.
48) Sample 27 19111246 LVID4B 19110637-11A
49) RearSamp 10 19111247 LVID4B RINSE

This computer is now swap bound.
50) Sample 4 19111248 LVID4B DRO CCV 10000 UG/ML
51) RearSamp 10 19111249 LVID4B RINSE

This computer is now swap bound.
52) Sample 28 19111250 LVID4B 19110637-12A

2019 Nov 12 1435 Sequence Log

53) RearSamp 10 19111251 LVID4B RINSE

This computer is now swap bound.
54) Sample 29 19111252 LVID4B 19110637-13A
55) RearSamp 10 19111253 LVID4B RINSE

This computer is now swap bound.
56) Sample 30 19111254 LVID4B 19110637-14A
57) RearSamp 10 19111255 LVID4B RINSE

This computer is now swap bound.
58) Sample 31 19111256 LVID4B 19110637-15A
59) RearSamp 10 19111257 LVID4B RINSE

This computer is now swap bound.
60) Sample 32 19111258 LVID4B 19110637-16A
61) RearSamp 10 19111259 LVID4B RINSE

This computer is now swap bound.
62) Sample 33 19111260 LVID4B 19110801-02A
63) RearSamp 10 19111261 LVID4B RINSE

This computer is now swap bound.
64) Sample 34 19111262 LVID4B 19110801-03A
65) RearSamp 10 19111263 LVID4B RINSE

This computer is now swap bound.
66) Sample 35 19111264 LVID4B 19110801-04A
67) RearSamp 10 19111265 LVID4B RINSE

This computer is now swap bound.
68) Sample 36 19111266 LVID4B 19110801-05A
69) RearSamp 10 19111267 LVID4B RINSE

This computer is now swap bound.
70) Sample 37 19111268 LVID4B 19110818-01A
71) RearSamp 10 19111269 LVID4B RINSE

This computer is now swap bound.
72) Sample 4 19111270 LVID4B DRO CCV 10000 UG/ML

Sequence completed Wed Nov 13 07:28:14 2019

C:\MSDCHEM\1\DATA\GC8-191112\2019 Nov 12 1435 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191112\2019 Nov 12 1435 Sequence Log .LOG

ALS Group, USA

PREP BATCH REPORT

Batch ID: **145429** Prep Code: **DRO_3550_S**

Start Date: **11/12/2019 8:00:00 AM** End Date: **11/12/2019 12:10:54 PM**

Technician: **Matthew Krause**

InitSamp Wt/Vol:	15 g
FinSampVol:	1 mL
OriginalFac:	66.6667
PrepUnitFac:	1000

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
19110622-01A	Soil		15.417		0	1	64.8635
19110622-02A	Soil		15.796		0	1	63.3072
19110622-03A	Soil		15.123		0	1	66.1244
19110622-04A	Soil		15.049		0	1	66.4496
19110622-05A	Soil		15.39		0	1	64.9773
19110622-06A	Soil		15.471		0	1	64.6371
19110637-09A	Soil		15.245		0	1	65.5953
19110637-10A	Soil		15.848		0	1	63.0994
19110637-11A	Soil		15.267		0	1	65.5008
19110637-12A	Soil		15.155		0	1	65.9848
19110637-13A	Soil		15.077		0	1	66.3262
19110637-14A	Soil		15.243		0	1	65.6039
19110637-15A	Soil		15.191		0	1	65.8285
19110637-16A	Soil		15.224		0	1	65.6858
19110801-01A	Soil		15.164		0	1	65.9457
19110801-01A MS			15.144		0	1	66.0328
19110801-01A MS			15.067		0	1	66.3702
19110801-02A	Soil		15.015		0	1	66.6001
19110801-03A	Soil		15.135		0	1	66.072
19110801-04A	Soil		15.362		0	1	65.0957
19110801-05A	Soil		15.264		0	1	65.5136
19110818-01A	Soil		15.834		0	1	63.1552
DBLKS1-145429			15		0	1	66.6667
DLCSS1-145429			15		0	1	66.6667

Notes: *500uL Surrogate (3081-143-4) added to all samples. 500 uL DRO Spike (400-0112) added to QC. DCM (3081-153-2). Hydromatrix, H102919. Sodium Sulfate S110419. Balance 5. All extractions are B1/E1 unless otherwise noted.*

Inorganic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

Wet Chemistry

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-I80-Soil-01-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-01A

Level (low/med): LOW Date Received: 11/9/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	22			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-I80-Soil-02-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-02A

Level (low/med): LOW Date Received: 11/9/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	21			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-I80-Soil-03-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-03A

Level (low/med): LOW Date Received: 11/9/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	25			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-I80-Soil-04-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-04A

Level (low/med): LOW Date Received: 11/9/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	25			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-I80-Soil-05-110819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19110801

Matrix: Soil Lab Sample ID: 19110801-05A

Level (low/med): LOW Date Received: 11/9/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	22			

ALS Group, USA

Date: 04-Dec-19

Client: Tetra Tech EM Inc.

Work Order: 19110801

Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **R275058** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R275058** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**

Client ID: Run ID: **MOIST_191111E** SeqNo: **6048372** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R275058** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**

Client ID: Run ID: **MOIST_191111E** SeqNo: **6048371** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19110833-04A DUP** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**

Client ID: Run ID: **MOIST_191111E** SeqNo: **6048368** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.18	0.10	0	0	0	0-0	11.34	1.42	10	H

DUP Sample ID: **19110833-05A DUP** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**

Client ID: Run ID: **MOIST_191111E** SeqNo: **6048370** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.53	0.10	0	0	0	0-0	13.05	3.61	10	H

The following samples were analyzed in this batch:

19110801-01A	19110801-02A	19110801-03A
19110801-04A	19110801-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Moisture

Analyst:	KT	Date/Time In:	11/11/19 5:11 PM	Temp In Deg C:	107.5
Review By:		Date/Time Out:	11/12/19 7:43 AM	Temp Out Deg C:	105.5
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_191111E	Sand BPL:	2049-184-4
SOP:	HN-WC-018	Balance ID:	6	Oven ID:	11

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.1458	0	0.0000				1.146	0.02	0.02	Moisture
LCS		LCS	LCS	1.1633	0	8.3172				9.4805	100.00	100.00	Moisture
19110833-04A	1	SAMP	W1	1.156	0	8.2216				8.445	88.66	11.34	Moisture
19110833-04A DUP	1	DUP	W2	1.1534	0	8.2172				8.4518	88.82	11.18	Moisture
19110833-01A	1	SAMP	W3	1.16	0	7.4174				7.1856	81.24	18.76	Moisture
19110833-02A	1	SAMP	W4	1.1581	0	9.1016				8.7158	83.04	16.96	Moisture
19110833-03A	1	SAMP	W5	1.1544	0	7.1835				7.2826	85.31	14.69	Moisture
19110801-05A	1	SAMP	W6	1.1625	0	8.8823				8.101	78.12	21.88	Moisture
19110802-01A	1	SAMP	W7	1.1914	0	9.5005				8.8703	80.83	19.17	Moisture
19110801-01A	1	SAMP	W8	1.1426	0	7.7034				7.1411	77.87	22.13	Moisture
19110801-02A	1	SAMP	W9	1.158	0	8.7962				8.1017	78.94	21.06	Moisture
19110801-03A	1	SAMP	W10	1.1622	0	8.6251				7.5969	74.60	25.40	Moisture
19110801-04A	1	SAMP	W11	1.1571	0	7.7936				6.9907	74.85	25.15	Moisture
19110833-05A	1	SAMP	W12	1.1676	0	8.7489				8.7749	86.95	13.05	Moisture
19110833-05A DUP	1	DUP	W13	1.1773	0	8.7543				8.7468	86.47	13.53	Moisture
19102309-15B		SAMP	W14	1.1461	0	9.4073				9.6428	90.32	9.68	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture
		SAMP									#DIV/0!	#DIV/0!	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/12/2019 9:34	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

Copyright ALS Environmental, 2019

Section IV

ATTACHMENTS

-Previously Issued Report(s)

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

13-Nov-2019

Andre Baker
Tetra Tech EM Inc.
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

Re: **Joliet Chemical Fire PRP Clean UP** Work Order: **19110801**

Dear Andre,

ALS Environmental received 6 samples on 09-Nov-2019 11:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: IL: 200076

ALS Group, USA

Date: 13-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: **19110801**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19110801-01	MPGI-I80-Soil-01-110819	Soil		11/8/2019 13:10	11/9/2019 11:30	☐
19110801-02	MPGI-I80-Soil-02-110819	Soil		11/8/2019 13:12	11/9/2019 11:30	☐
19110801-03	MPGI-I80-Soil-03-110819	Soil		11/8/2019 13:14	11/9/2019 11:30	☐
19110801-04	MPGI-I80-Soil-04-110819	Soil		11/8/2019 13:16	11/9/2019 11:30	☐
19110801-05	MPGI-I80-Soil-05-110819	Soil		11/8/2019 13:18	11/9/2019 11:30	☐
19110801-06	MPGI-RB-01-110819	Water		11/8/2019 13:20	11/9/2019 11:30	☐

Client:	Tetra Tech EM Inc.
Project:	Joliet Chemical Fire PRP Clean UP
Work Order:	19110801

Case Narrative

Samples for the above noted Work Order were received on 11/09/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-01-110819
Collection Date: 11/8/2019 01:10 PM

Work Order: 19110801
Lab ID: 19110801-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**9.2**		**3.6**	**6.4**	**mg/Kg-dry**	1	11/12/2019 20:55
Surr: 4-Terphenyl-d14	*66.4*			*33-111*	*%REC*	1	11/12/2019 20:55
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**22**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-02-110819
Collection Date: 11/8/2019 01:12 PM

Work Order: 19110801
Lab ID: 19110801-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**12**		**3.6**	**6.3**	**mg/Kg-dry**	1	11/13/2019 04:40
Surr: 4-Terphenyl-d14	*65.0*			*33-111*	*%REC*	1	11/13/2019 04:40
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**21**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-03-110819
Collection Date: 11/8/2019 01:14 PM

Work Order: 19110801
Lab ID: 19110801-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**6.3**	J	**3.8**	**6.6**	**mg/Kg-dry**	1	11/13/2019 05:09
Surr: 4-Terphenyl-d14	*63.5*			*33-111*	*%REC*	1	11/13/2019 05:09
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**25**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-04-110819
Collection Date: 11/8/2019 01:16 PM

Work Order: 19110801
Lab ID: 19110801-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**7.3**		**3.7**	**6.5**	**mg/Kg-dry**	1	11/13/2019 05:38
Surr: 4-Terphenyl-d14	*67.5*			*33-111*	*%REC*	1	11/13/2019 05:38
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**25**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-05-110819
Collection Date: 11/8/2019 01:18 PM

Work Order: 19110801
Lab ID: 19110801-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**18**		**3.6**	**6.3**	**mg/Kg-dry**	1	11/13/2019 06:07
Surr: 4-Terphenyl-d14	*69.6*			*33-111*	*%REC*	1	11/13/2019 06:07
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**22**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-RB-01-110819
Collection Date: 11/8/2019 01:20 PM

Work Order: 19110801
Lab ID: 19110801-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW3511 / 11/11/19		Analyst: **BCM**
DRO (C10-C28)	**0.080**	J	**0.040**	**0.10**	**mg/L**	1	11/12/2019 09:01
Surr: 4-Terphenyl-d14	*83.1*			*35-161*	*%REC*	1	11/12/2019 09:01

Note: See Qualifiers page for a list of qualifiers and their definitions.

QC BATCH REPORT

Batch ID: **145429** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **dblks1-145429-145429** Units: **mg/Kg** Analysis Date: **11/12/2019 06:58 P**

Client ID: Run ID: **GC8_191112A** SeqNo: **6053407** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.167*	0	*3.33*	0	*65.1*	*33-111*	0			

LCS Sample ID: **DLCSS1-145429-145429** Units: **mg/Kg** Analysis Date: **11/12/2019 07:27 P**

Client ID: Run ID: **GC8_191112A** SeqNo: **6053408** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	355.2	5.0	333	0	107	58-111	0			
Surr: 4-Terphenyl-d14	*2.087*	0	*3.33*	0	*62.7*	*33-111*	0			

MS Sample ID: **19110801-01A MS** Units: **mg/Kg** Analysis Date: **11/12/2019 07:57 P**

Client ID: **MPGI-I80-Soil-01-110819** Run ID: **GC8_191112A** SeqNo: **6053409** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	352.2	5.0	329.8	7.202	105	58-111	0			
Surr: 4-Terphenyl-d14	*2.005*	0	*3.298*	0	*60.8*	*33-111*	0			

MSD Sample ID: **19110801-01A MSD** Units: **mg/Kg** Analysis Date: **11/12/2019 08:26 P**

Client ID: **MPGI-I80-Soil-01-110819** Run ID: **GC8_191112A** SeqNo: **6053410** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	343.3	5.0	331.5	7.202	101	58-111	343.3	0	30	
Surr: 4-Terphenyl-d14	*1.903*	0	*3.315*	0	*57.4*	*33-111*	1.903	*0*	*30*	

The following samples were analyzed in this batch:

19110801-01A	19110801-02A	19110801-03A
19110801-04A	19110801-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19110801
Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **145430** Instrument ID **GC8** Method: **SW8015C**

MBLK Sample ID: **DBLKW1-145430-145430** Units: **mg/L** Analysis Date: **11/12/2019 06:36 A**
Client ID: Run ID: **GC8_191111D** SeqNo: **6052425** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	0.10								
Surr: 4-Terphenyl-d14	*0.03033*	0	*0.0417*	0	*72.7*	*35-161*	0			

LCS Sample ID: **DLCSW1-145430-145430** Units: **mg/L** Analysis Date: **11/12/2019 07:34 A**
Client ID: Run ID: **GC8_191111D** SeqNo: **6052427** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.328	0.10	4.17	0	104	60-150	0			
Surr: 4-Terphenyl-d14	*0.033*	0	*0.0417*	0	*79.1*	*35-161*	0			

MS Sample ID: **19110801-06A MS** Units: **mg/L** Analysis Date: **11/12/2019 08:03 A**
Client ID: **MPGI-RB-01-110819** Run ID: **GC8_191111D** SeqNo: **6052428** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.458	0.10	4.17	0.08	105	60-150	0			
Surr: 4-Terphenyl-d14	*0.0345*	0	*0.0417*	0	*82.7*	*35-161*	0			

MSD Sample ID: **19110801-06A MSD** Units: **mg/L** Analysis Date: **11/12/2019 08:32 A**
Client ID: **MPGI-RB-01-110819** Run ID: **GC8_191111D** SeqNo: **6052429** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.633	0.10	4.17	0.08	109	60-150	4.458	3.84	30	
Surr: 4-Terphenyl-d14	*0.03483*	0	*0.0417*	0	*83.5*	*35-161*	0.0345	*0.962*	*30*	

The following samples were analyzed in this batch: 19110801-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19110801
Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **R275058** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R275058** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048372** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R275058** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048371** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19110833-04A DUP** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048368** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.18	0.10	0	0	0	0-0	11.34	1.42	10	H

DUP Sample ID: **19110833-05A DUP** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048370** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.53	0.10	0	0	0	0-0	13.05	3.61	10	H

The following samples were analyzed in this batch:

19110801-01A	19110801-02A	19110801-03A
19110801-04A	19110801-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

19110801

ALS Environmental

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:		☒ Non Standard or urgent TAT (List due date): 24 hour
PROJECT: 103x903160690002aj001	ALS QUOTE NO.:	
ORDER NUMBER:		
PROJECT MANAGER: Andre Baker	CONTACT PH: 8353793749	
SAMPLER: Brendan Martin	SAMPLER MOBILE:	
COC emailed to ALS? (~~YES~~) NO	EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com		
Email Invoice to (will default to PM if no other addresses are listed):		

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Brendan Martin	FED EX	FED EX	
DATE/TIME: 11/08/19 1400	DATE/TIME:	DATE/TIME:	DATE/TIME: 11/9/19 1130

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SR2 4.4°C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO(SW846 8015	Percent Solids							
1	MPGI-I80-Soil-01-110819	110819 1310	Soil	None	1	X	X							
2	MPGI-I80-Soil-02-110819	110819 1312	Soil		1	X	X							
3	MPGI-I80-Soil-03-110819	110819 1314	Soil		1	X	X							
4	MPGI-I80-Soil-04-110819	110819 1316	Soil		1	X	X							
5	MPGI-I80-Soil-05-110819	110819 1318	Soil		1	X	X							Dup of Sample "02"
	~~MPGI-I80-Soil-06-110819~~	~~110819~~	~~Soil~~		~~1~~	~~X~~	~~X~~	BR						
6	MPGI-RB-01-110819	110819 1320	Water		1	X	X							Rinsate Blank
				TOTAL	6	BR								

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

2

ALS Group, USA

Sample Receipt Checklist

Client Name: **TETRATECH-EM-CHI** Date/Time Received: **09-Nov-19 11:30**

Work Order: **19110801** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 11-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 12-Nov-19 (Date)

Matrices: Soil, Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4/4.4 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/11/2019 1:14:46 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order: 19111271

Project Name:

Joliet Fire

Tetra Tech EM Inc.

Andre Baker

1 South Wacker Dr

Suite 3700

Chicago, IL 60606

09-Dec-2019

Certificate No: IL: 200076

Contents

Section I: Case Narrative

Section II: Sample Receipt

Section III: Analytical Data

Section IV: Attachments

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

Section I

CASE NARRATIVE

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: 19111271

Case Narrative

Samples for the above noted Work Order were received on 11/16/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:

Batch 145756, Method DRO_8015_S, Sample 19111271-01A: DRO surrogate recovery high due to matrix interference.

Batch 145756, Method DRO_8015_S, Sample 19111271-01A MS/MSD: DRO surrogate recovery high in parent sample and MS/MSD due to matrix interference.

Batch 145756, Method DRO_8015_S, Sample 19111271-01A MSD: The MSD recovery was outside of the control limit for DRO. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required.

Batch 145756, Method DRO_8015_S, Sample DLCSS1-145756: The LCS recovery was above the upper control limit for DRO. The sample results for this batch may be biased high.

Wet Chemistry:
No other deviations or anomalies were noted.Batch 145756, Method DRO_8015_S, Sample DLCSS1-145756: 1
Batch 145756, Method DRO_8015_S, Sample 19111271-01A MSD: surogate high in parent sample due to matrix interference
Batch 145756, Method DRO_8015_S, Sample 19111271-01A MSD: surogate high in parent sample due to matrix interference

Section II

SAMPLE RECEIPT

-Sample Summary

-Shipping Documents*

-Chain of Custody

-Receipt Checklist

(* = As applicable)

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: **19111271**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19111271-01	MPGI-I80-Soil-06-111519	Soil		11/15/2019 10:00	11/16/2019 09:45	☐

1911271

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS : ☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE: [redacted]	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) X Non Standard or urgent TAT (List due date): 24 Hr TAT	Custody Seal Intact? Yes No N/A
PROJECT: 103x903100690002sj001	ALS QUOTE NO.:	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: ALS-1 Mod. 1	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Andre Baker CONTACT PH: 6303793748	OF: 1 2 3 4 5 6 7	Other comment:

SAMPLER: Brendan Martin	SAMPLER MOBILE:	RELINQUISHED BY: Brendan Martin	RECEIVED BY:	RELINQUISHED BY:
COC emailed to ALS? (YES)	EDD FORMAT (or default):	DATE/TIME: 11/15/19 1400	DATE/TIME: FED EX	DATE/TIME: FED EX
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com, Brendan.martin@tetratech.com		Brendan Martin		
Email Invoice to (will default to PM if no other addresses are listed):				

RECEIVED BY:	
	DATE/TIME: 11/16/19 0945

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SR2 3.2°C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO/SW8660 8015	Percent Solids							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MPGI-I60-Soil-06-111519	11/15/19, 1000	Soil	None	2	X	X							Extra container for MS/MSD
				TOTAL	2									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Group, USA

Sample Receipt Checklist

Client Name: ***TETRATECH-EM-CHI*** Date/Time Received: ***16-Nov-19 09:45***

Work Order: ***19111271*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 16-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 20-Nov-19 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.2/3.2 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/16/2019 11:09:57 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Section III

Analytical Data

-Analysis Data Sheet

-QC Summary

-QC Batch Report

-Summary Forms (if applicable)

-Raw Data

Raw Data Format

Organic Ordering

-Field Sample Data

-Calibration Data

-Initial

-Continuing

-Instrument QC Data (BFB, DFTPP, etc. as applicable)

-QC Data

-Sequence Logs

-Extraction Logs

Inorganic Ordering

-Instrument Data

-Digestion/Preparation Data

-Calculation Data (if applicable)

Organic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

GC
Semi-Volatile Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Diesel Range Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-I80-Soil-06-111519

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19111271

Matrix: Soil Lab Sample ID: 19111271-01A

Sample wt/vol: 15.01 (g/mL) g Lab File ID:

% Moisture: not dec. 27 Date Received: 11/16/2019

Extraction Type: Date Extracted 11/18/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/20/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	1,600	

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.

Work Order: 19111271

Project: Joliet Fire

QC BATCH REPORT

Batch ID: **145756** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-145756-145756** Units: **mg/Kg** Analysis Date: **11/20/2019 05:11 A**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070447** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.831*	0	*3.33*	0	*85*	*33-111*	0			

LCS Sample ID: **DLCSS1-145756-145756** Units: **mg/Kg** Analysis Date: **11/20/2019 05:40 A**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070532** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	370	5.0	333	0	111	58-111	0			S
Surr: 4-Terphenyl-d14	*2.352*	0	*3.33*	0	*70.6*	*33-111*	0			

MS Sample ID: **19111271-01A MS** Units: **mg/Kg** Analysis Date: **11/20/2019 06:09 A**

Client ID: **MPGI-I80-Soil-06-111519** Run ID: **GC8_191119A** SeqNo: **6070450** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1464	5.0	332.4	1141	97.4	58-111	0			
Surr: 4-Terphenyl-d14	*9.47*	0	*3.324*	0	*285*	*33-111*	0			*S*

MSD Sample ID: **19111271-01A MSD** Units: **mg/Kg** Analysis Date: **11/20/2019 06:38 A**

Client ID: **MPGI-I80-Soil-06-111519** Run ID: **GC8_191119A** SeqNo: **6070452** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1149	5.0	330.8	1141	2.53	58-111	1464	24.1	30	S
Surr: 4-Terphenyl-d14	*9.647*	0	*3.308*	0	*292*	*33-111*	9.47	*1.86*	*30*	*S*

The following samples were analyzed in this batch: 19111271-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111972.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 7:07 am
Operator : KJB
Sample : 19111271-01A
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:56:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

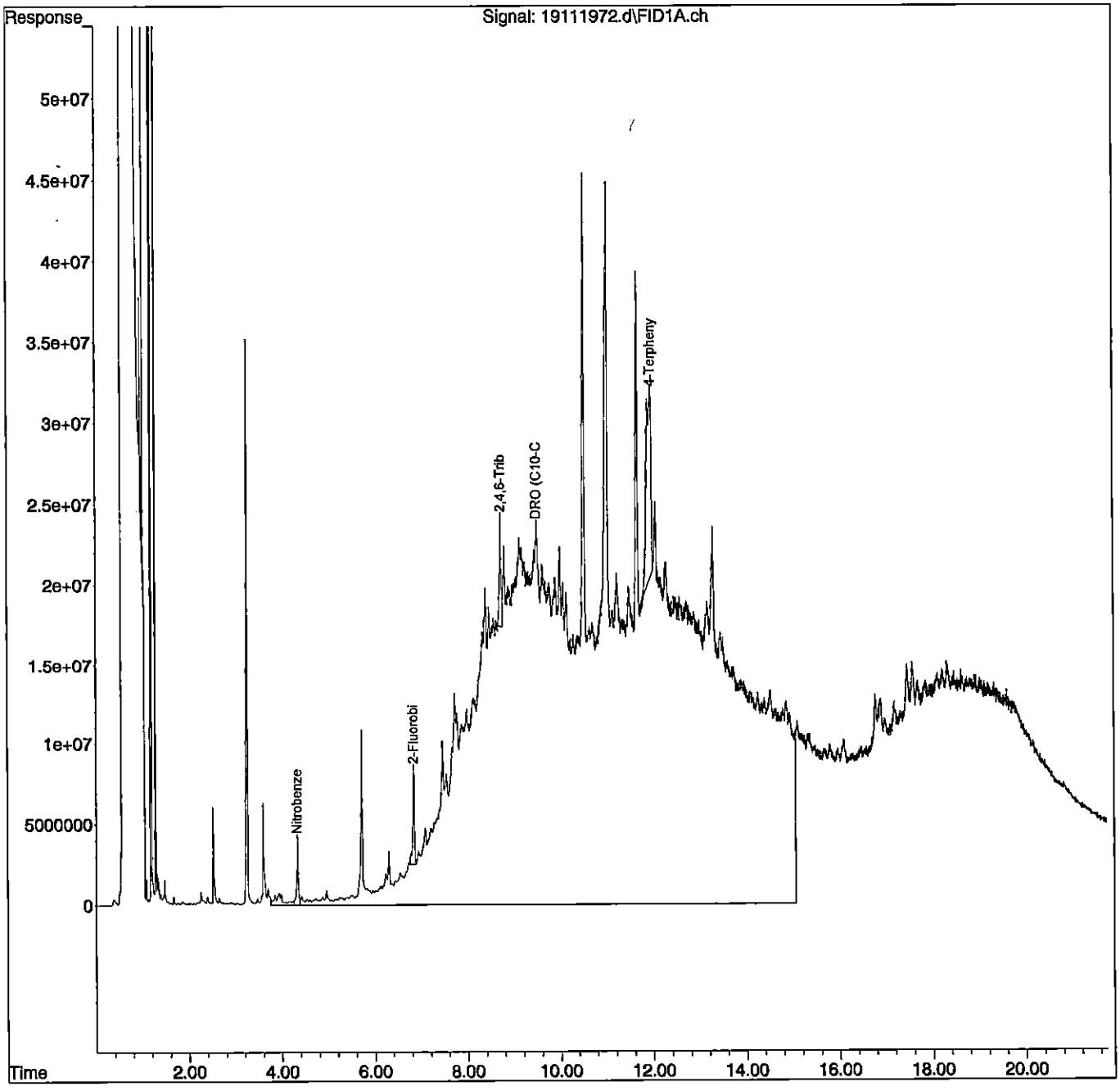
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.326	101046258	7.934	ug/mLm
2) S	2-Fluorobipehenyl	6.836	153276750	43.353	ug/mLm
3) S	2,4,6-Tribromophenol	8.720	188478240	8.235	ug/mLm
4) S	4-Terphenyl-d14	11.957f	859632472	237.462	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-442801248	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-859632472	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	80290384621	17116.915	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-859632472	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-1302433719	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-1302433719	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111972.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 7:07 am
Operator : KJB
Sample : 19111271-01A
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:56:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Method Path : C:\msdchem\1\methods\
Method File : DRO191030M.M
Title :
Last Update : Fri Nov 22 11:19:12 2019
Response Via : Initial Calibration

Calibration Files
50 =30OCT08.d 100 =30OCT10.d 250 =30OCT12.d
500 =30OCT14.d 1000 =30OCT16.d 2500 =30OCT18.d

		Compound	50	100	250	500	1000	2500	Avg		%RSD
1)	S	Nitrobenzene-d5	0.693	0.689	0.578	0.694	0.866	0.794	0.852	E7	34.84
2)	S	2-Fluorobipeh...	0.740	0.847	0.730	0.618	0.622	0.521	0.780	E7	78.81
3)	S	2,4,6-Tribrom...	2.834	2.689	2.135	2.060	2.105	1.920	1.955	E7	31.26
4)	S	4-Terphenyl-d14	4.115	4.613	3.372	3.491	3.834	3.255	3.735	E6	10.59
5)	H	DRO (C10-C20)	5.451	4.576	3.228	3.367	3.741	3.041	3.603	E6	22.09
6)	H	ORO (C20-C34)	5.641	4.847	2.983	2.995	3.597	3.056	3.572	E6	25.89
7)	H	DRO (C10-C28)	7.774	7.510	5.064	4.975	5.327	4.604	5.412	E6	22.12
8)	H	ORO (C28-C40)	5.495	6.590	2.125	1.917	2.072	1.915	2.818	E6	61.11
9)	H	ORO (C20-C40)	9.450	9.571	4.242	3.546	4.426	3.827	5.081	E6	46.30
10)	H	ORO (C28-C35)	3.171	4.198	1.608	1.617	1.816	1.542	2.063	E6	43.38
11)	H	ERO (C8-C40)	7.135	6.809	3.715	3.692	4.127	3.454	4.316	E6	32.80
12)	H	DIESEL (IOWA)	6.129	5.503	4.025	4.025	4.317	3.691	4.258	E6	20.24
13)	H	OIL (IOWA)	1.053	0.996	0.318	0.364	0.384	0.311	0.477	E7	60.74

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method Path : C:\msdchem\1\methods\
Method File : DRO191030M.M
Title :
Last Update : Fri Nov 22 11:19:12 2019
Response Via : Initial Calibration

Calibration Files
50 =30OCT08 100 =30OCT10 250 =30OCT12 500 =30OCT14 1000=30OCT16
2500=30OCT18 5000=30OCT20 10K =30OCT22 50K =30OCT26 25K =30OCT24

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	Nitrobenzene-d5	Lin	-2.3945 e6	1.3037 e7	-----	0.9290
2)	S	2-Fluorobipehenyl	Quad	5.2753 e7	-1.4182 e7	3.8062 e5	0.9866
3)	S	2,4,6-Tribromophenol	Quad	-3.0439 e7	2.8341 e7	-2.1323 e5	0.9533
4)	S	4-Terphenyl-d14	Lin	6.0865 e4	3.6198 e6	-----	0.9994
5)	H	DRO (C10-C20)	Lin	1.2932 e8	3.1148 e6	-----	0.9994
6)	H	ORO (C20-C34)	Lin	9.9434 e7	3.1962 e6	-----	0.9970
7)	H	DRO (C10-C28)	Lin	1.9392 e8	4.6794 e6	-----	0.9997
8)	H	ORO (C28-C40)	Lin	-3.0064 e8	2.0833 e6	-----	0.9992
9)	H	ORO (C20-C40)	Lin	2.9855 e8	3.9539 e6	-----	0.9969
10)	H	ORO (C28-C35)	Lin	-2.7655 e8	1.7320 e6	-----	0.9990
11)	H	ERO (C8-C40)	Lin	4.3462 e8	3.4949 e6	-----	0.9994
12)	H	DIESEL (IOWA)	Lin	1.5862 e8	3.6590 e6	-----	0.9995
13)	H	OIL (IOWA)	Lin	3.7389 e8	3.3590 e6	-----	0.9964

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT04.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:02 pm
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 09:06:20 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

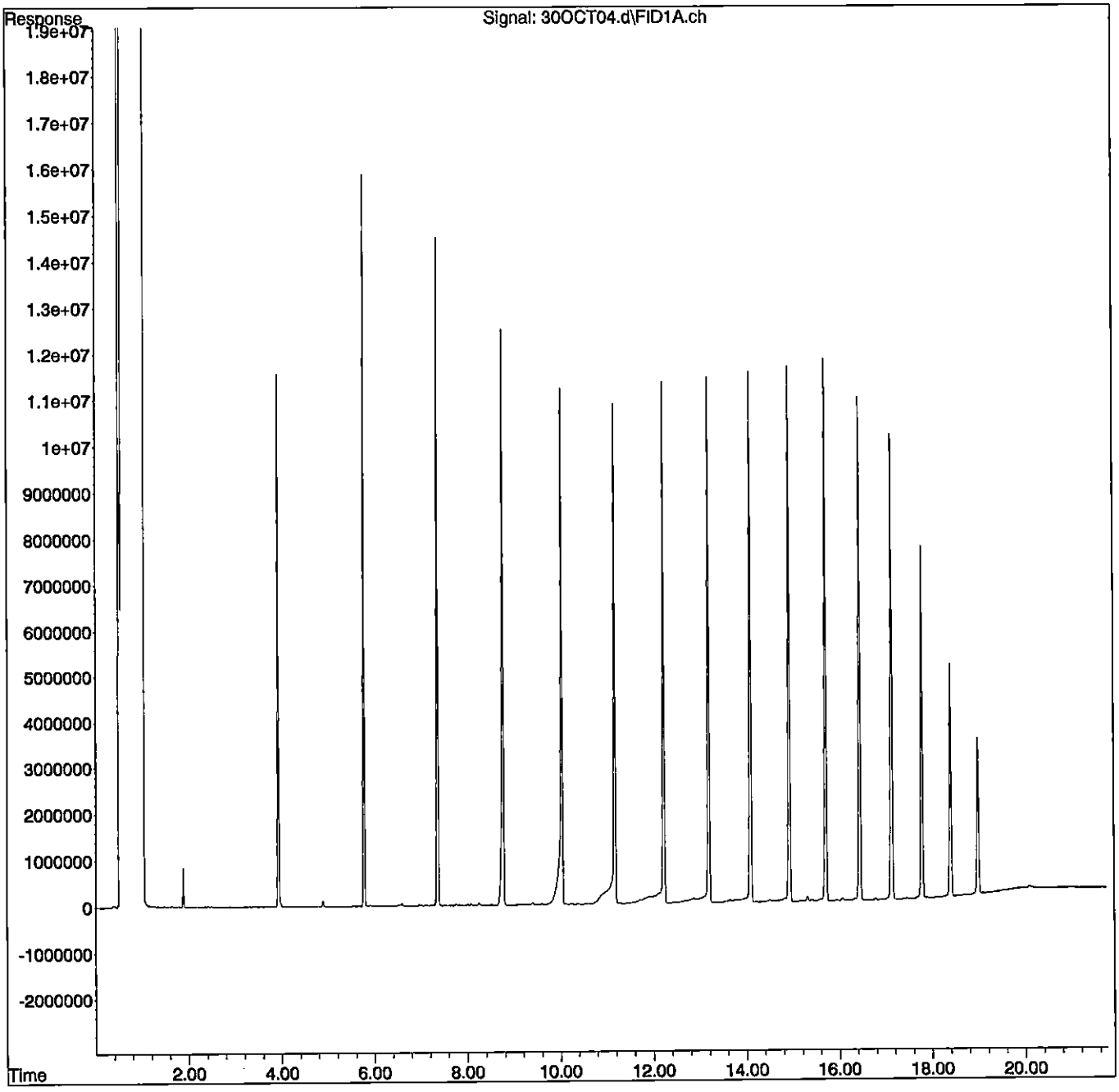
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT04.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:02 pm
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 09:06:20 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT06.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:31 pm
Operator : KJB
Sample : BNA SURROGATE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 13:00:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

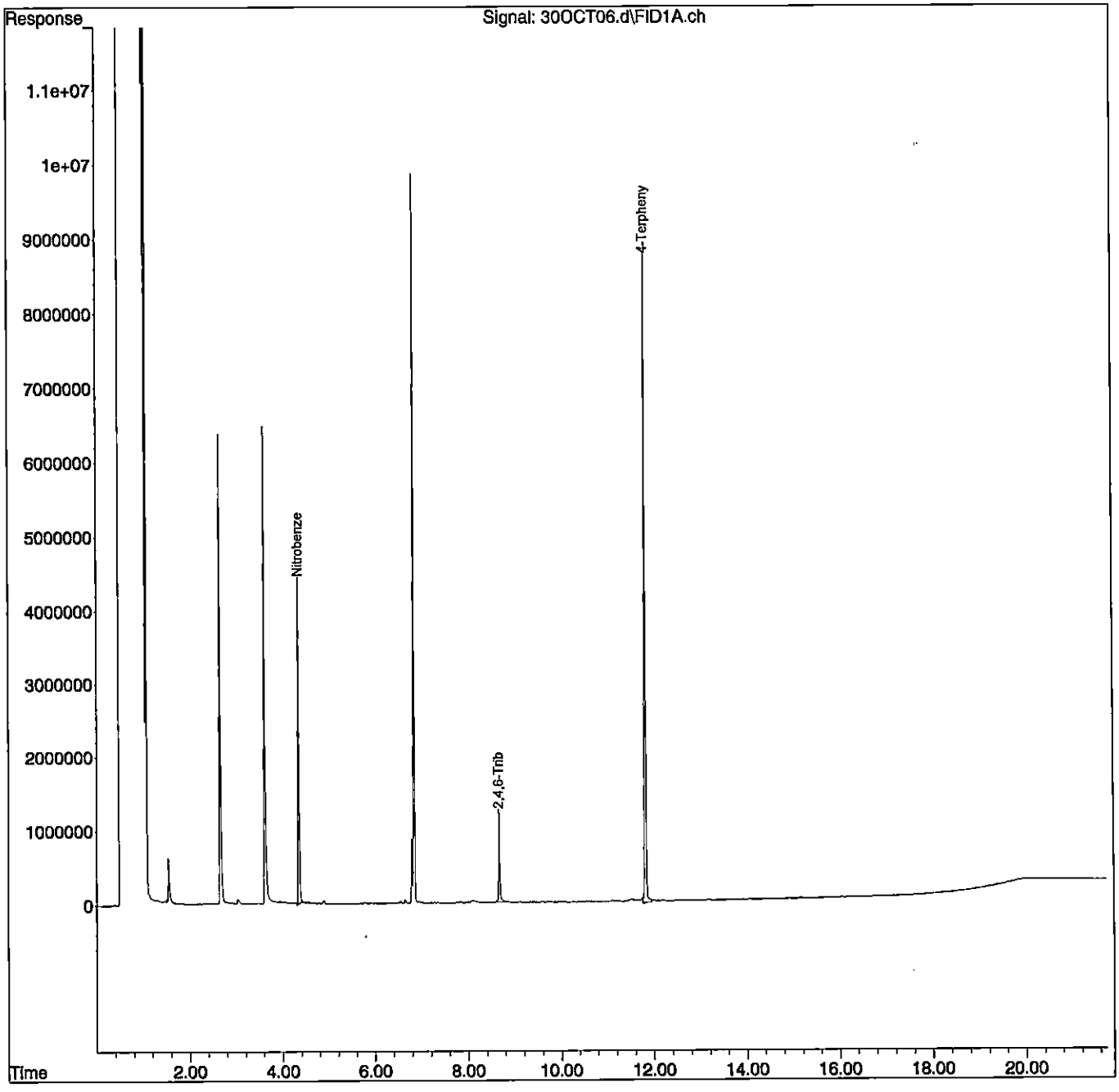
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.348	75166406	10.354	ug/mLm
2) S	2-Fluorobipehenyl	6.839	155466804	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.660	22688792	1.574	ug/mLm
4) S	4-Terphenyl-d14	11.821f	165380733	62.445	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mLd
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT06.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:31 pm
Operator : KJB
Sample : BNA SURROGATE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 13:00:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT08.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:01 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10288A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:18:41 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

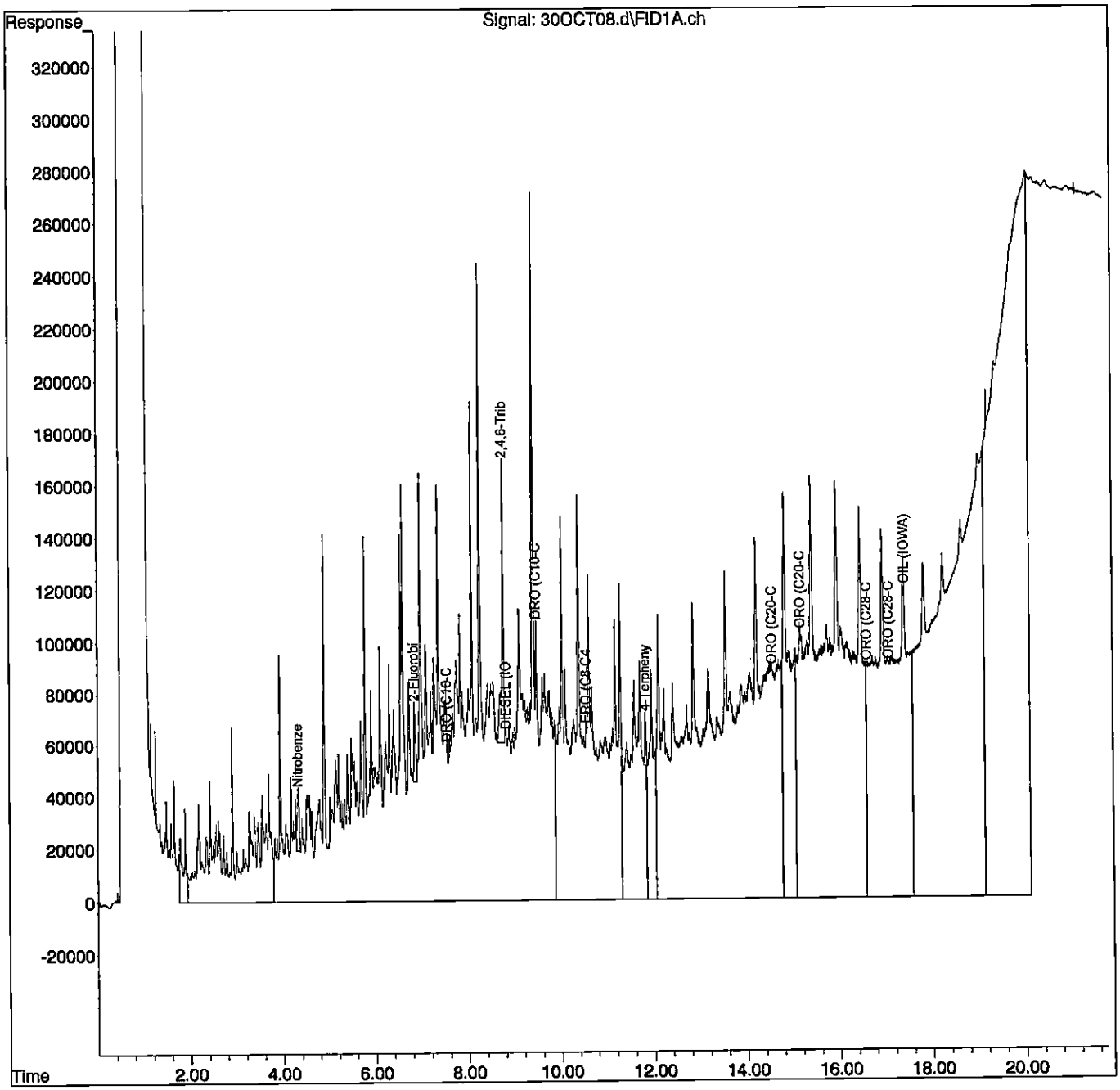
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.317	692554	0.107	ug/mLm
2) S	2-Fluorobipehenyl	6.831	740138	0.588	ug/mLm
3) S	2,4,6-Tribromophenol	8.753	2833915	0.642	ug/mLm
4) S	4-Terphenyl-d14	11.817	411536	0.118	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	272566760	88.866	ug/mL
6) H	ORO (C20-C34)	14.560	282027138	101.493	ug/mL
7) H	DRO (C10-C28)	9.472	388677648	83.453	ug/mL
8) H	ORO (C28-C40)	17.070	286056710	120.609	ug/mL
9) H	ORO (C20-C40)	15.165	472509994	124.068	ug/mL
10) H	ORO (C28-C35)	16.581	158545095	113.961	ug/mL
11) H	ERO (C8-C40)	10.557	713502270	201.046	ug/mL
12) H	DIESEL (IOWA)	8.818	306457160	65.609	ug/mL
13) H	OIL (IOWA)	17.414	526401627	231.923	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT08.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:01 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10288A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:18:41 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT10.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:30 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10288B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

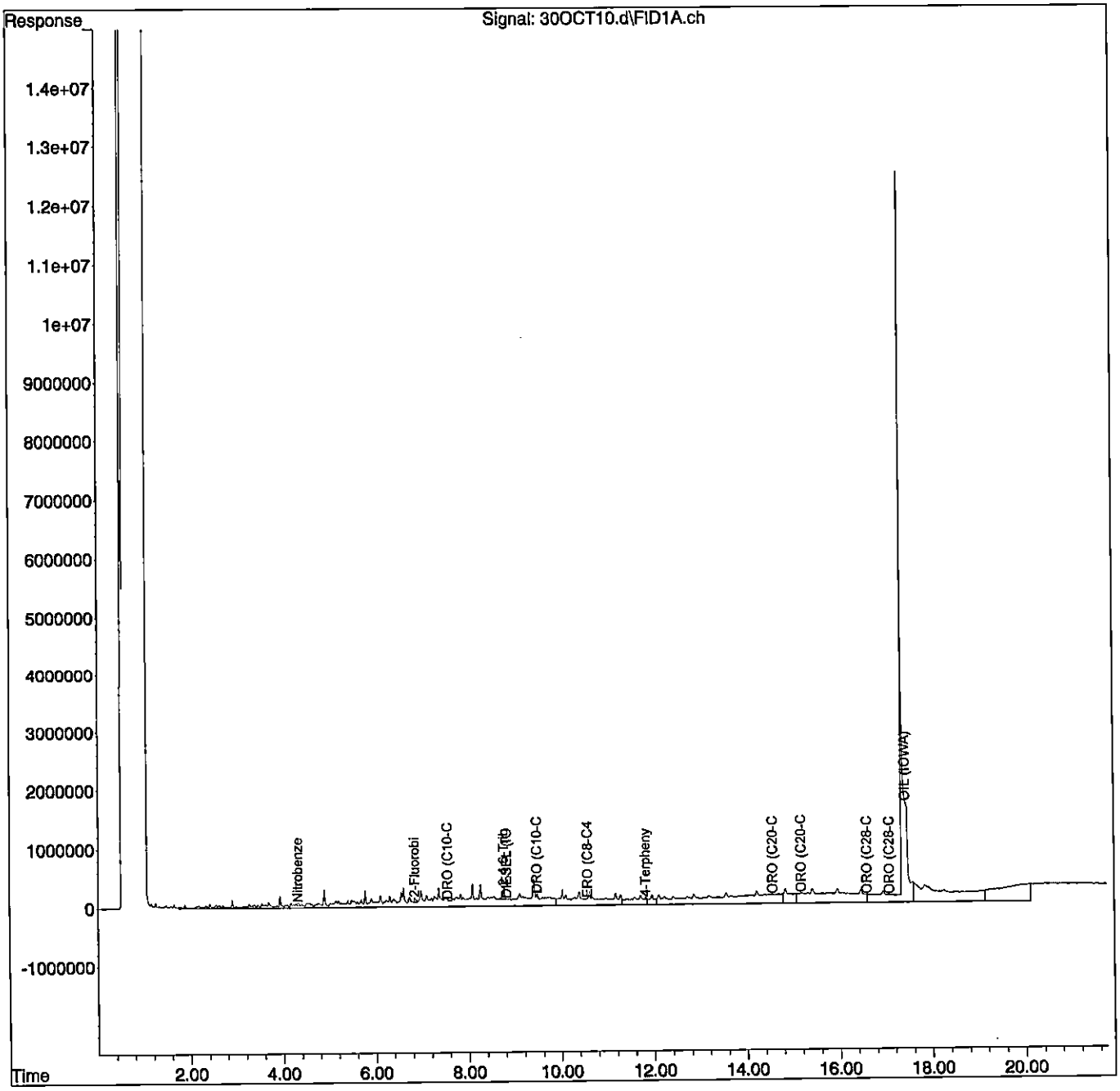
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.314	1377315	0.201	ug/mLm
2) S	2-Fluorobipehenyl	6.832	1693662	0.840	ug/mLm
3) S	2,4,6-Tribromophenol	8.751	5377178	0.761	ug/mLm
4) S	4-Terphenyl-d14	11.811	922590	0.312	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	457624351	147.664	ug/mL
6) H	ORO (C20-C34)	14.560	484699726	173.356	ug/mL
7) H	DRO (C10-C28)	9.472	750996350	159.380	ug/mL
8) H	ORO (C28-C40)	17.070	658424596	288.442	ug/mL
9) H	ORO (C20-C40)	15.165	957141645	251.344	ug/mL
10) H	ORO (C28-C35)	16.581	419768024	297.996	ug/mL
11) H	ERO (C8-C40)	10.557	1361770717	388.132	ug/mL
12) H	DIESEL (IOWA)	8.818	550318807	116.957	ug/mL
13) H	OIL (IOWA)	17.414	996467819	441.813	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT10.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:30 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10288B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT12.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:59 pm
Operator : KJB
Sample : DRO ICAL 250 UG/L
Misc : 100-10288C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:55 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

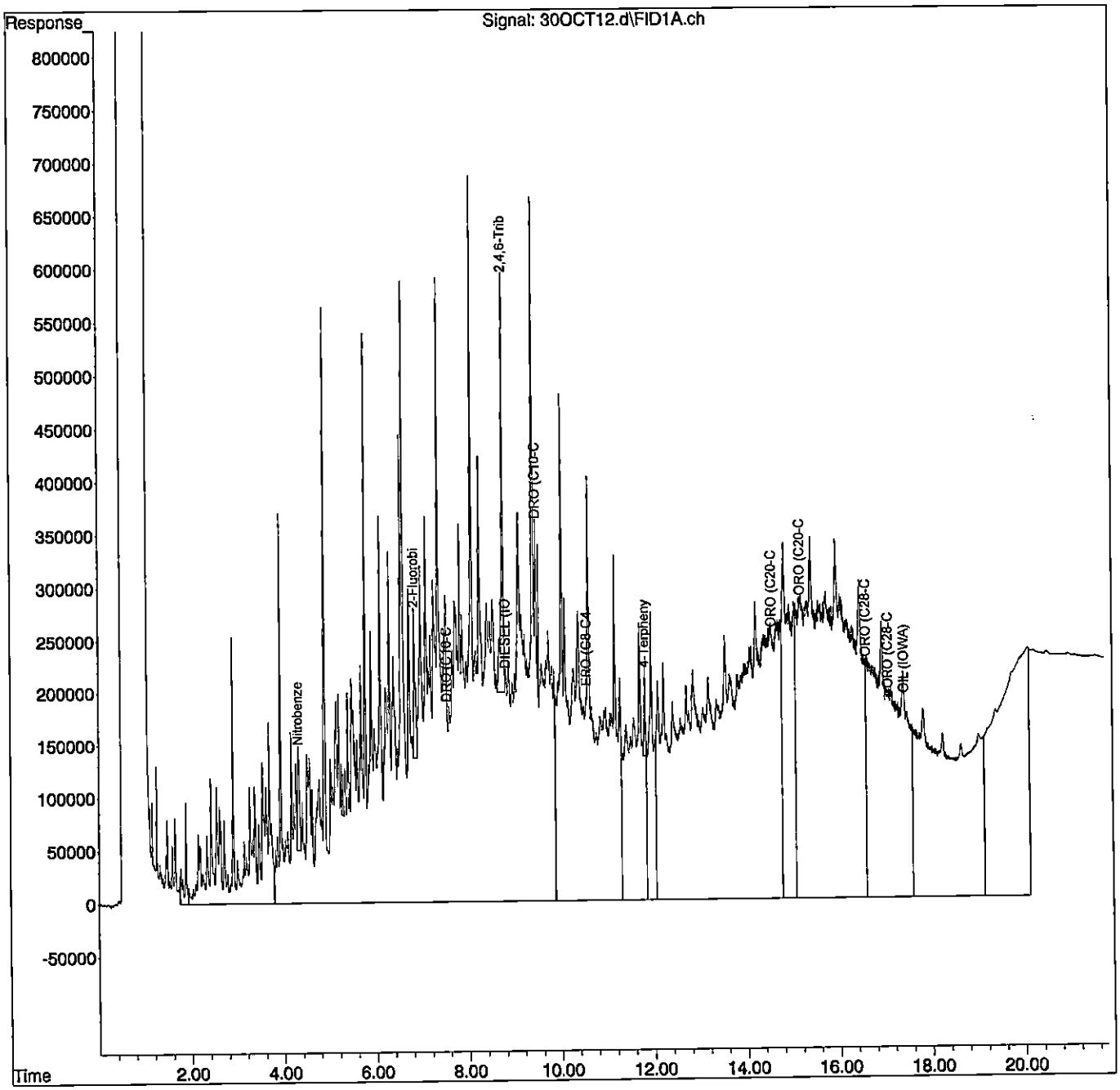
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.313	2892224	0.410	ug/mLm
2) S	2-Fluorobipehenyl	6.830	3648006	1.359	ug/mLm
3) S	2,4,6-Tribromophenol	8.752	10676800	1.009	ug/mLm
4) S	4-Terphenyl-d14	11.811	1685764	0.600	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	806974198	258.663	ug/mL
6) H	ORO (C20-C34)	14.560	745712045	265.906	ug/mL
7) H	DRO (C10-C28)	9.472	1266061913	267.316	ug/mL
8) H	ORO (C28-C40)	17.070	545625385	237.601	ug/mL
9) H	ORO (C20-C40)	15.165	1060400722	278.462	ug/mL
10) H	ORO (C28-C35)	16.581	401883650	285.397	ug/mL
11) H	ERO (C8-C40)	10.557	1857310307	531.141	ug/mL
12) H	DIESEL (IOWA)	8.818	1006161150	212.941	ug/mL
13) H	OIL (IOWA)	17.414	796002526	352.303	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT12.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:59 pm
Operator : KJB
Sample : DRO ICAL 250 UG/L
Misc : 100-10288C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:55 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT14.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:28 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10288D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:20:19 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

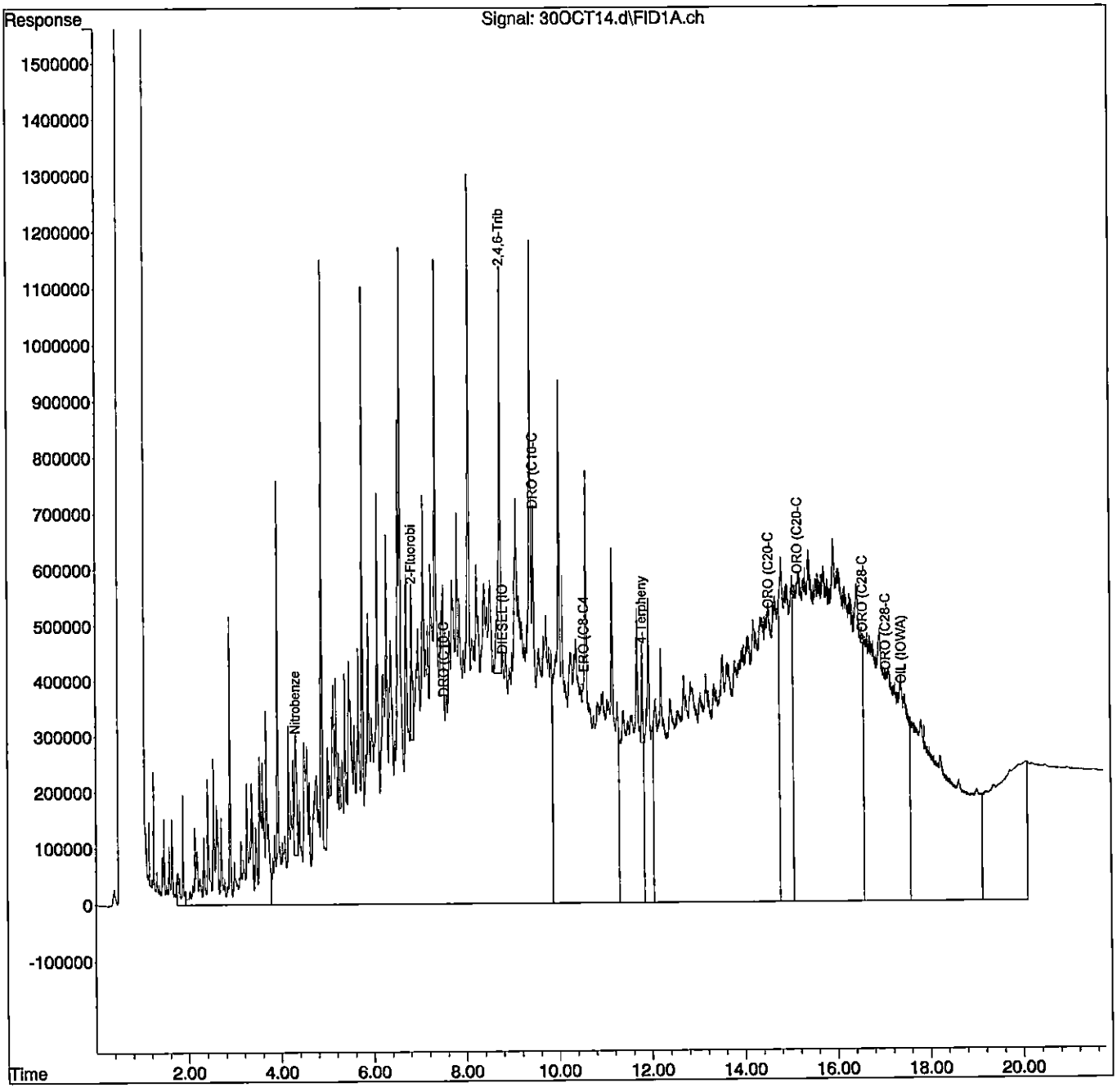
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1)	S Nitrobenzene-d5	4.318	6940727	0.967	ug/mLm
2)	S 2-Fluorobipehenyl	6.830	6183810	2.039	ug/mLm
3)	S 2,4,6-Tribromophenol	8.752	20599901	1.475	ug/mLm
4)	S 4-Terphenyl-d14	11.810	3490949	1.282	ug/mLm
	Target Compounds				
5)	H DRO (C10-C20)	7.548	1683508935	537.163	ug/mL
6)	H ORO (C20-C34)	14.560	1497684790	532.540	ug/mL
7)	H DRO (C10-C28)	9.472	2487634312	523.307	ug/mL
8)	H ORO (C28-C40)	17.070	1059415770	469.176	ug/mL
9)	H ORO (C20-C40)	15.165	1772917928	465.585	ug/mL
10)	H ORO (C28-C35)	16.581	808349855	571.757	ug/mL
11)	H ERO (C8-C40)	10.557	3692311661	1060.709	ug/mL
12)	H DIESEL (IOWA)	8.818	2012326373	424.802	ug/mL
13)	H OIL (IOWA)	17.414	1820345762	809.685	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT14.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:28 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10288D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:20:19 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT16.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:57 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10288E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:09:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

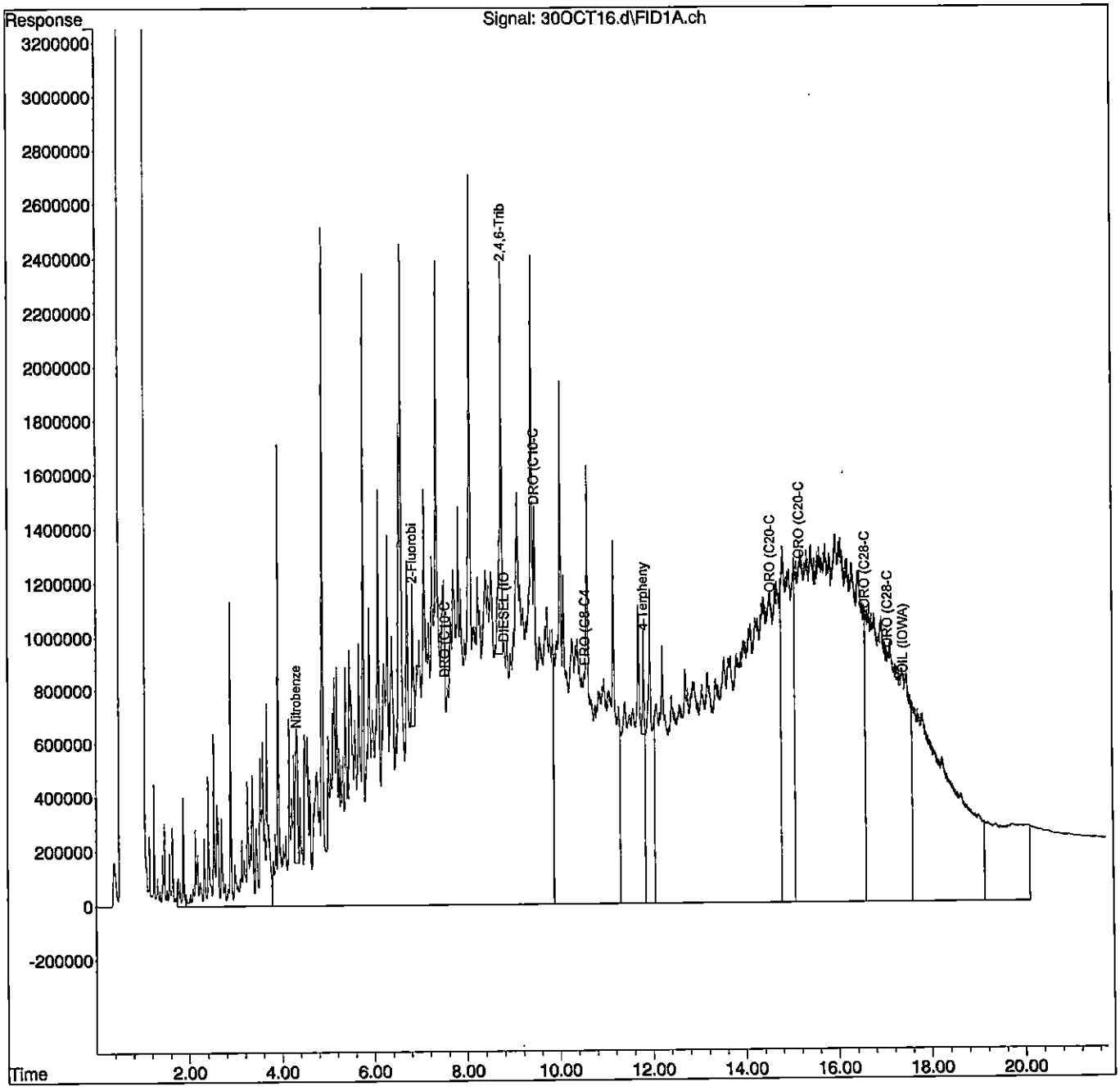
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.322	17320346	2.395	ug/mLm
2) S	2-Fluorobipehenyl	6.830	12444345	3.745	ug/mLm
3) S	2,4,6-Tribromophenol	8.755	42090428	2.494	ug/mLm
4) S	4-Terphenyl-d14	11.811	7668164	2.860	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	3741433600	1191.025	ug/mL
6) H	ORO (C20-C34)	14.560	3597453513	1277.075	ug/mL
7) H	DRO (C10-C28)	9.472	5327440820	1118.412	ug/mL
8) H	ORO (C28-C40)	17.070	2071852618	925.499	ug/mL
9) H	ORO (C20-C40)	15.165	4425760140	1162.283	ug/mL
10) H	ORO (C28-C35)	16.581	1816441068	1281.971	ug/mL
11) H	ERO (C8-C40)	10.557	8254363859	2377.285	ug/mL
12) H	DIESEL (IOWA)	8.818	4317363726	910.158	ug/mL
13) H	OIL (IOWA)	17.414	3837339290	1710.296	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT16.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:57 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10288E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:09:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT18.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:26 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10288F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:17:12 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

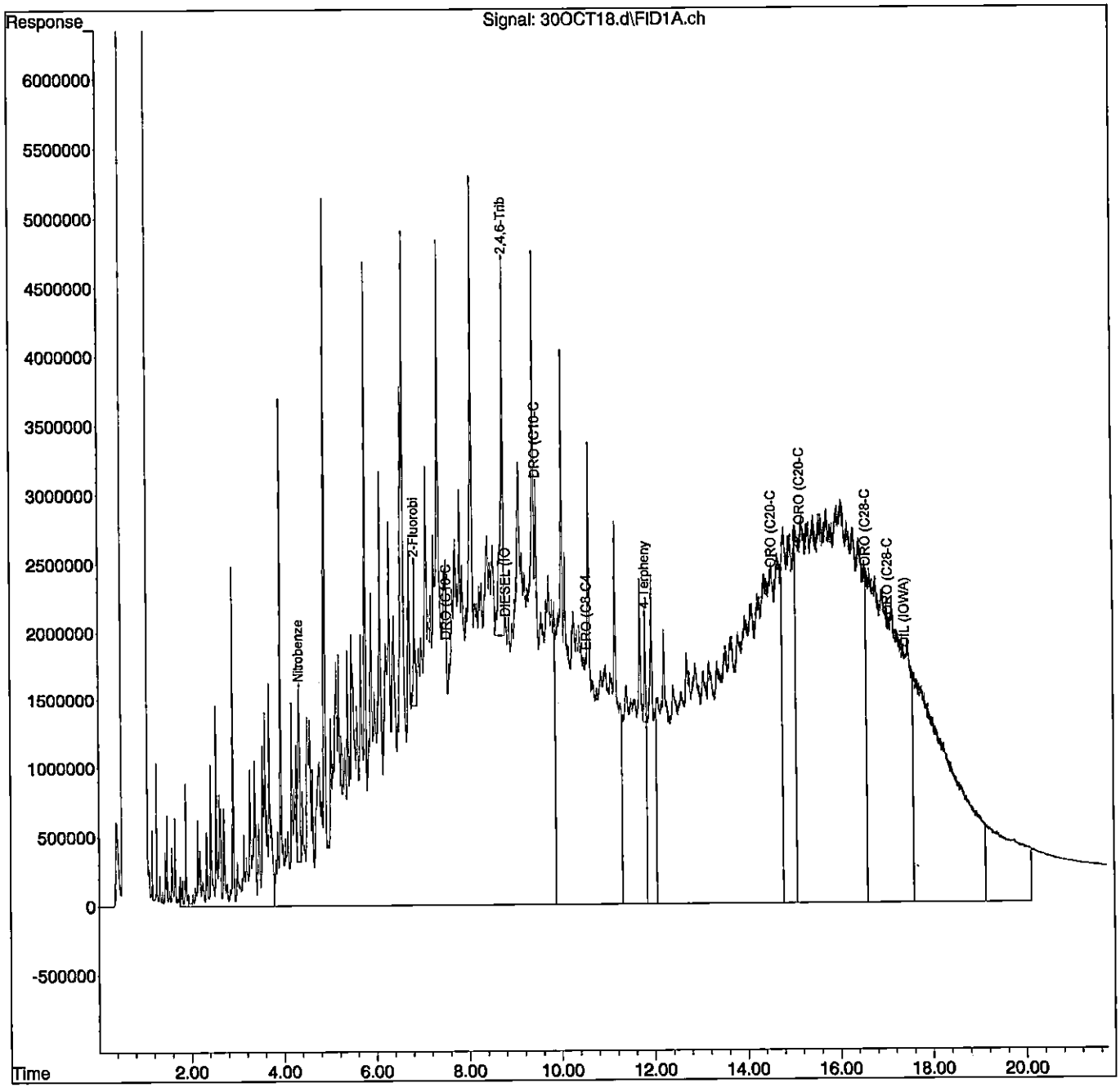
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.335	39696898	5.474	ug/mLm
2) S	2-Fluorobipehenyl	6.835	26049468	7.612	ug/mLm
3) S	2,4,6-Tribromophenol	8.760	95999853	5.106	ug/mLm
4) S	4-Terphenyl-d14	11.814	16273604	6.111	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	7602685829	2417.857	ug/mL
6) H	ORO (C20-C34)	14.560	7638779978	2710.046	ug/mL
7) H	DRO (C10-C28)	9.472	11509689451	2413.953	ug/mL
8) H	ORO (C28-C40)	17.070	4788127507	2149.771	ug/mL
9) H	ORO (C20-C40)	15.165	9567554007	2512.635	ug/mL
10) H	ORO (C28-C35)	16.581	3856166914	2718.985	ug/mL
11) H	ERO (C8-C40)	10.557	17271853551	4979.667	ug/mL
12) H	DIESEL (IOWA)	8.818	9227835662	1944.122	ug/mL
13) H	OIL (IOWA)	17.414	7778108821	3469.897	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT18.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:26 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10288F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:17:12 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT20.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:55 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10288G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:40:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

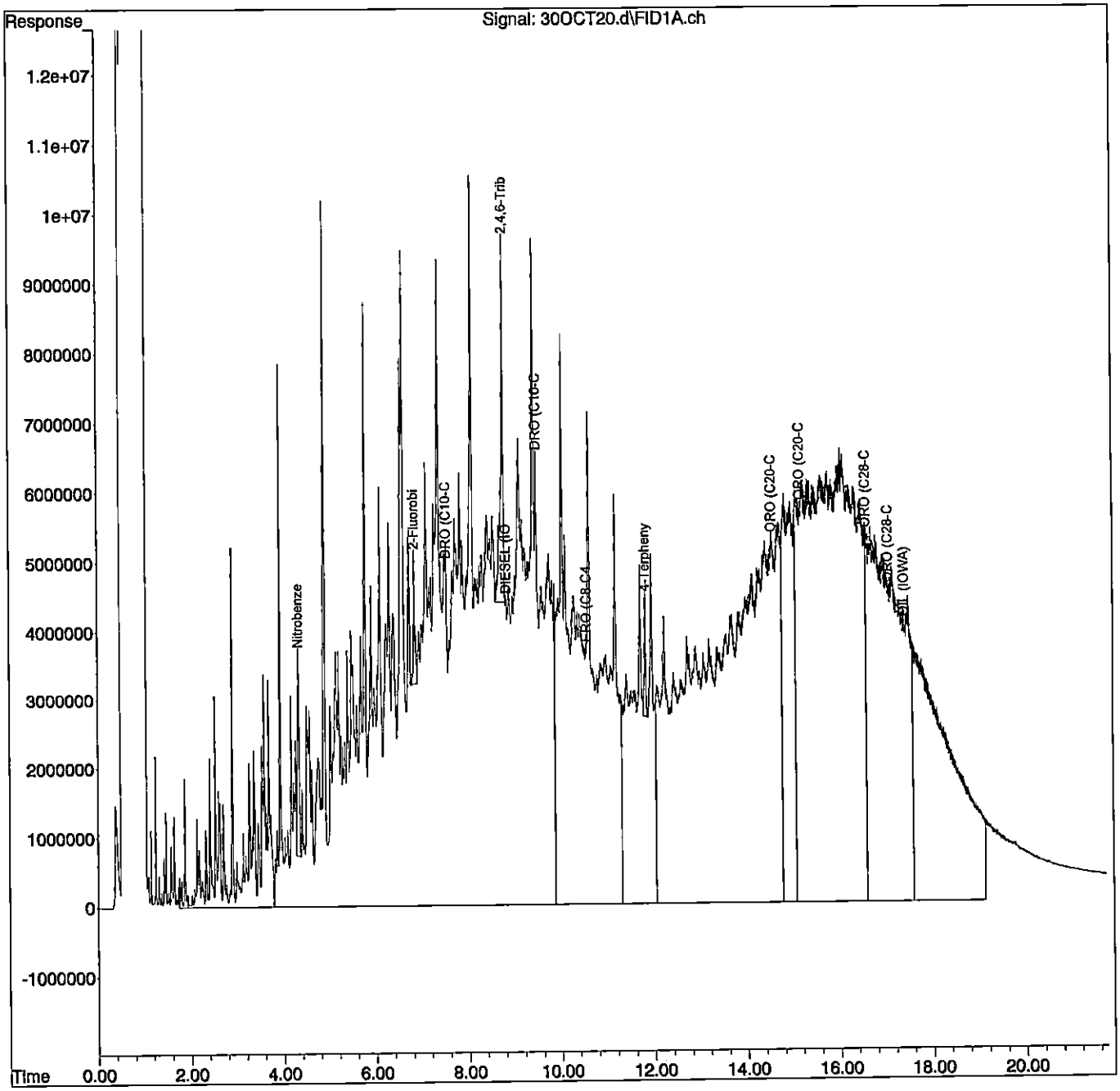
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	Nitrobenzene-d5	4.333	78660816	10.835	ug/mLm
2)	S	2-Fluorobipehenyl	6.842	49514409	14.900	ug/mLm
3)	S	2,4,6-Tribromophenol	8.771	173960056	9.039	ug/mLm
4)	S	4-Terphenyl-d14	11.823	38389950	14.467	ug/mLm
Target Compounds						
5)	H	DRO (C10-C20)	7.548	15959321728	5073.003	ug/mL
6)	H	ORO (C20-C34)	14.560	16553519603	5871.029	ug/mL
7)	H	DRO (C10-C28)	9.472	23865677954	5003.252	ug/mL
8)	H	ORO (C28-C40)	17.070	10608892516	4773.292	ug/mL
9)	H	ORO (C20-C40)	15.165	20803426454	5463.433	ug/mL
10)	H	ORO (C28-C35)	16.581	8745864758	6163.843	ug/mL
11)	H	ERO (C8-C40)	10.557	36964204271	10662.738	ug/mL
12)	H	DIESEL (IOWA)	8.818	19609965826	4130.215	ug/mL
13)	H	OIL (IOWA)	17.414	17590906733	7851.427	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT20.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:55 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10288G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:40:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT22.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:25 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10288H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:24:17 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

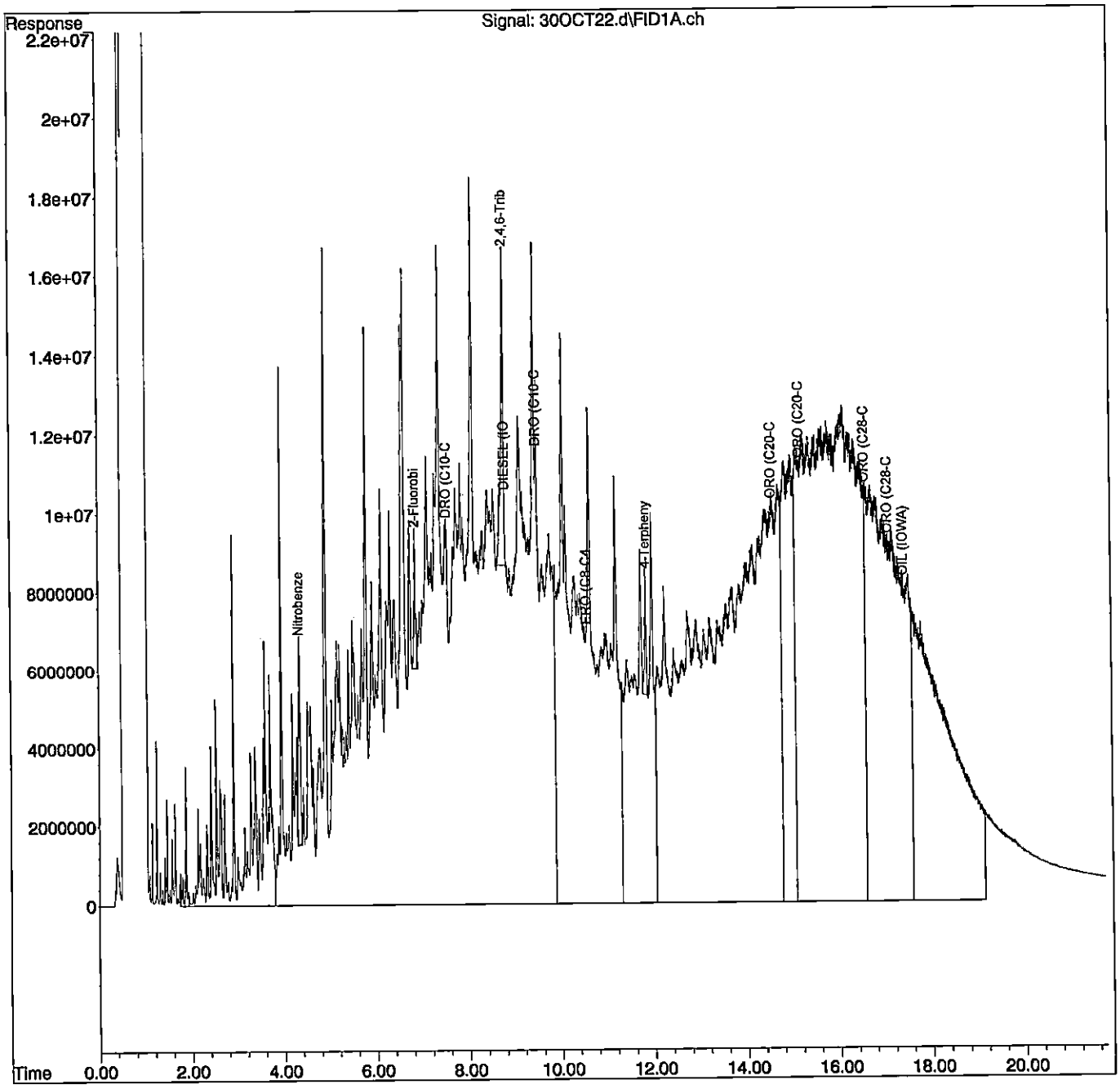
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.339	153137709	21.082 ug/mLm
2) S	2-Fluorobipehenyl	6.857	92824704	31.728 ug/mLm
3) S	2,4,6-Tribromophenol	8.781	295190513	15.587 ug/mLm
4) S	4-Terphenyl-d14	11.835	71381707	26.931 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	31866746709	10127.253 ug/mL
6) H	ORO (C20-C34)	14.560	29054299470	10303.548 ug/mL
7) H	DRO (C10-C28)	9.472	46947519672	9840.243 ug/mL
8) H	ORO (C28-C40)	17.070	18099435567	8149.410 ug/mL
9) H	ORO (C20-C40)	15.165	35035084274	9200.993 ug/mL
10) H	ORO (C28-C35)	16.581	14604864176	10291.587 ug/mL
11) H	ERO (C8-C40)	10.557	70415065161	20316.416 ug/mL
12) H	DIESEL (IOWA)	8.818	36604135232	7708.559 ug/mL
13) H	OIL (IOWA)	17.414	31916967894	14248.183 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT22.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:25 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10288H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:24:17 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT24.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:54 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10288I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:42:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

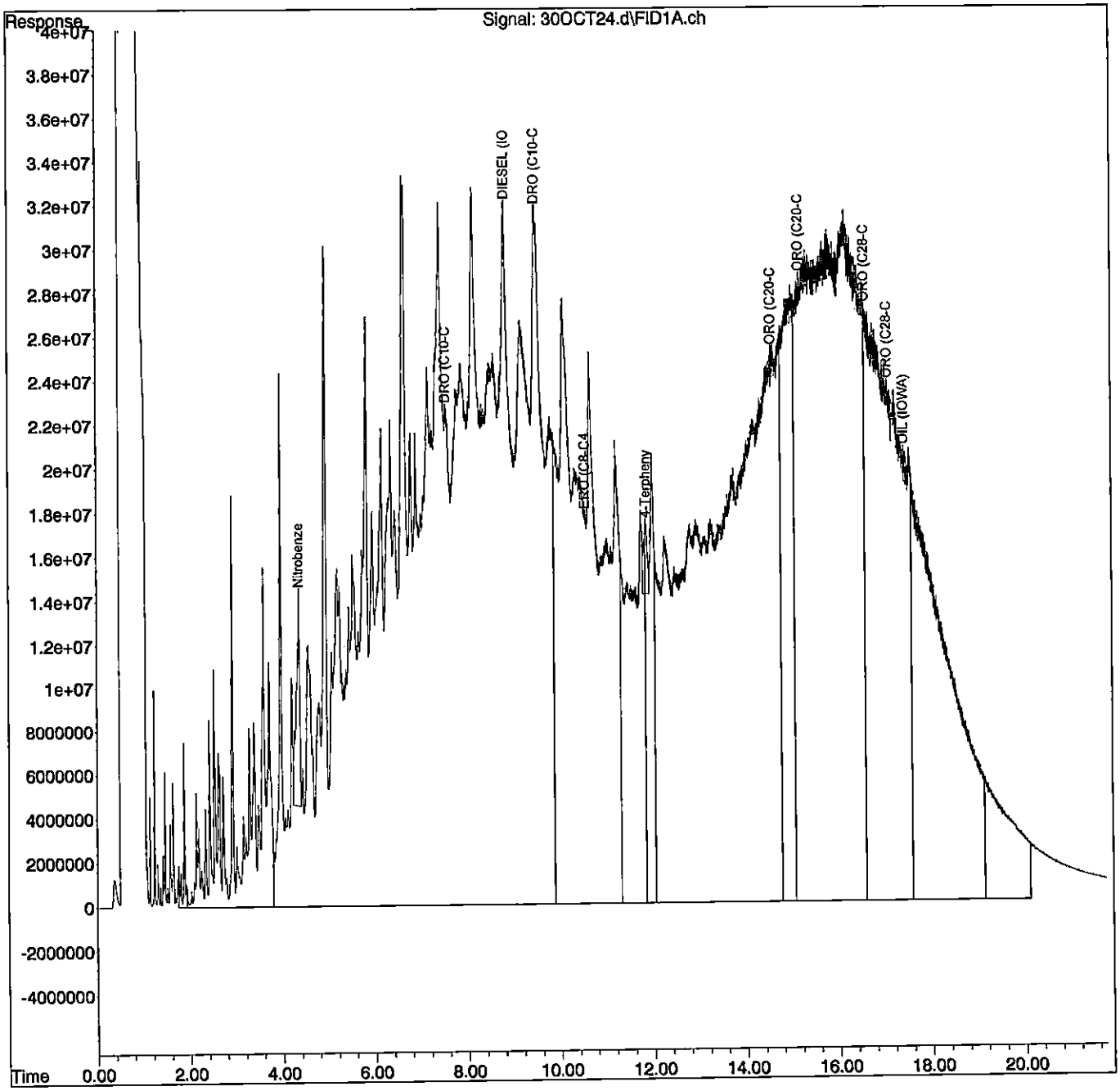
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.361	513730181	70.698	ug/mLm
2) S	2-Fluorobipehenyl	6.791	146460073	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.822	972844493	BelowCal	ug/mLm
4) S	4-Terphenyl-d14	11.857	182172324	68.789	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	79423264261	25237.338	ug/mL
6) H	ORO (C20-C34)	14.560	76228556993	27030.569	ug/mL
7) H	DRO (C10-C28)	9.472	1.18572e+011	24849.710	ug/mL
8) H	ORO (C28-C40)	17.070	50958220953	22959.439	ug/mL
9) H	ORO (C20-C40)	15.165	1.02185e+011	26836.096	ug/mL
10) H	ORO (C28-C35)	16.581	43275911937	30490.724	ug/mL
11) H	ERO (C8-C40)	10.557	1.76896e+011	51046.029	ug/mL
12) H	DIESEL (IOWA)	8.818	92007978916	19374.563	ug/mL
13) H	OIL (IOWA)	17.414	81035663080	36180.263	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT24.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:54 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10288I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:42:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT26.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:23 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10288J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:31:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

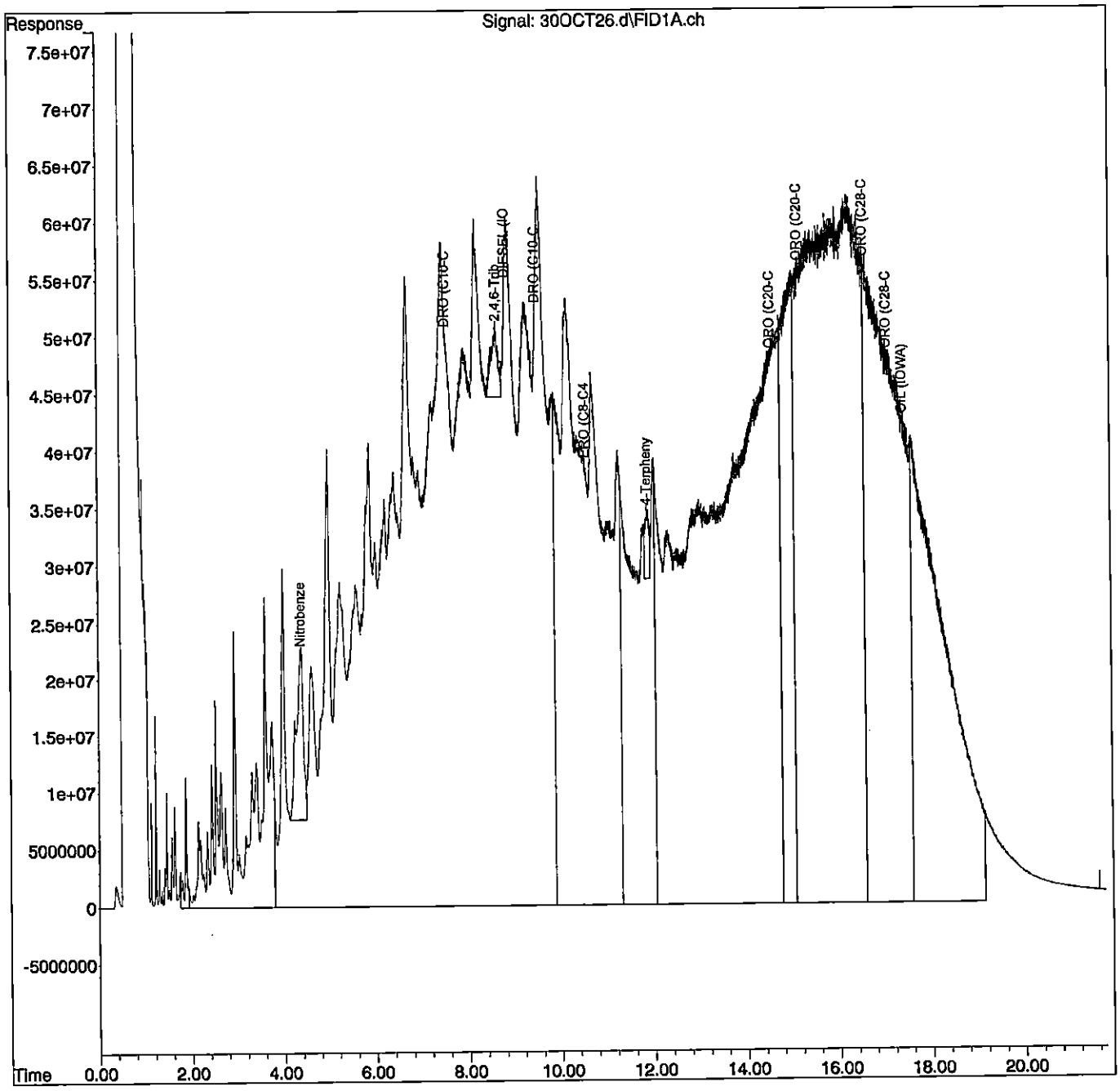
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.378	1623050884	223.333	ug/mLm
2) S	2-Fluorobipehenyl	6.693	2469964512	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.631	648363811	39.624	ug/mLm
4) S	4-Terphenyl-d14	11.875	361636781	136.591	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	1.53513e+011	48777.661	ug/mL
6) H	ORO (C20-C34)	14.560	1.66633e+011	59086.213	ug/mL
7) H	DRO (C10-C28)	9.472	2.32557e+011	48736.172	ug/mL
8) H	ORO (C28-C40)	17.070	1.0471e+011	47186.151	ug/mL
9) H	ORO (C20-C40)	15.165	1.99958e+011	52513.514	ug/mL
10) H	ORO (C28-C35)	16.581	86644405896	61044.409	ug/mL
11) H	ERO (C8-C40)	10.557	3.46766e+011	100069.291	ug/mL
12) H	DIESEL (IOWA)	8.818	1.81357e+011	38188.152	ug/mL
13) H	OIL (IOWA)	17.414	1.74529e+011	77926.035	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT26.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:23 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10288J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:31:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT28.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:52 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10288K
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:46:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:26 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

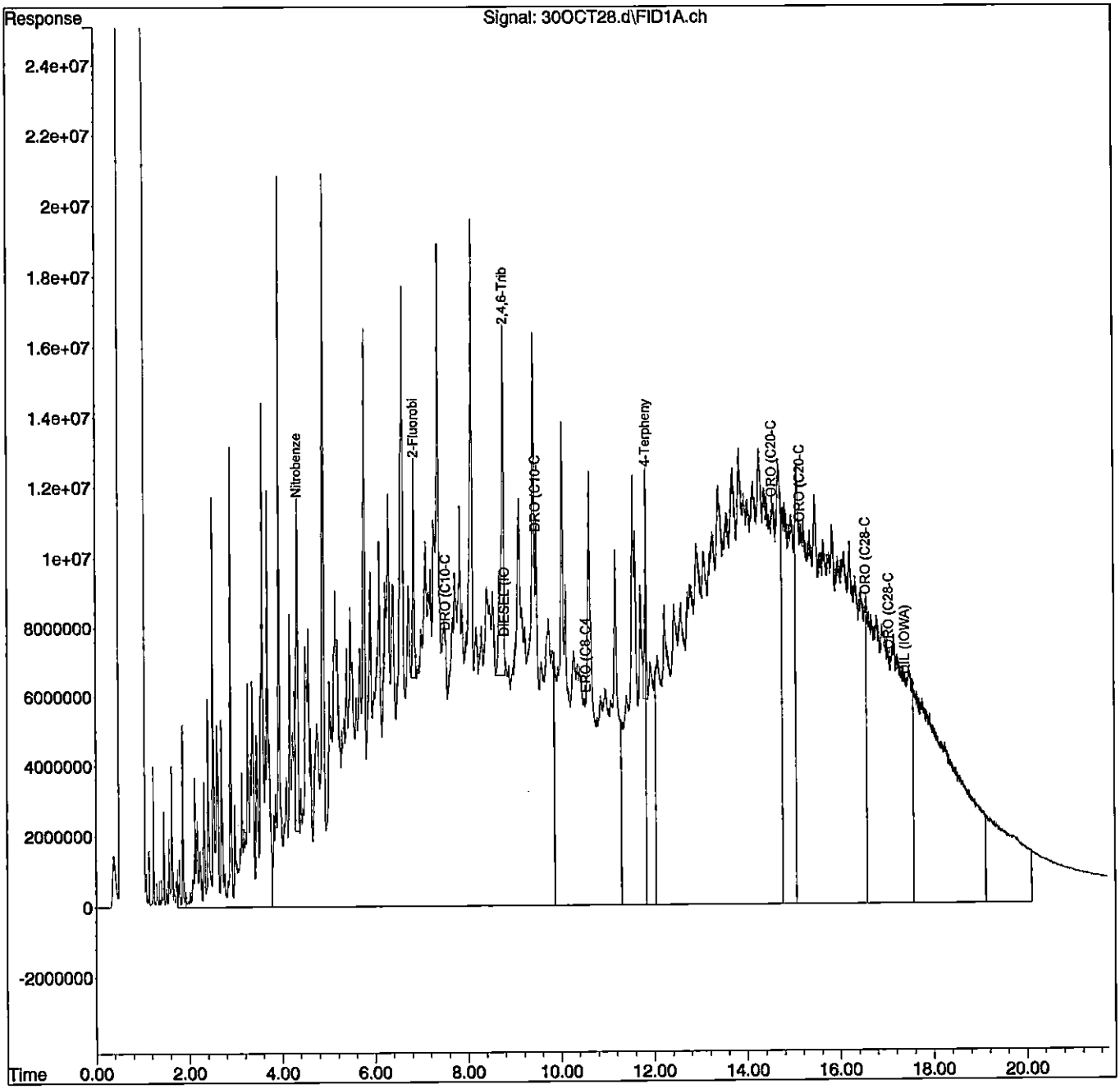
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.341	264106184	20.441 ug/mLm
2) S	2-Fluorobipehenyl	6.860	143292757	42.816 ug/mLm
3) S	2,4,6-Tribromophenol	8.780	381775820	16.624 ug/mLm
4) S	4-Terphenyl-d14	11.845	155390653	42.911 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	31041047955	9924.267 ug/mL
6) H	ORO (C20-C34)	14.560	32300202545	10074.692 ug/mL
7) H	DRO (C10-C28)	9.472	48063641238	10229.939 ug/mL
8) H	ORO (C28-C40)	17.070	16555511769	8090.979 ug/mL
9) H	ORO (C20-C40)	15.165	42173711652	10590.735 ug/mL
10) H	ORO (C28-C35)	16.581	13663837718	8048.876 ug/mL
11) H	ERO (C8-C40)	10.557	72049595207	20491.003 ug/mL
12) H	DIESEL (IOWA)	8.818	37331335770	10159.148 ug/mL
13) H	OIL (IOWA)	17.414	31853351554	9371.722 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT28.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:52 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10288K
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:46:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:26 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Oct 30 1731 Sequence Log

Starting sequence Wed Oct 30 17:31:21 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191030.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191030\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Comment: 'DUAL SYSTEM, UNLINKED'				
2)	Unlinked: 'UNLINKED'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191030.SEC\				
3)	RearSamp	1	30OCT01	LVID4B	DRLVI DIST
This computer is now swap bound.					
4)	Sample	10	30OCT02	LVID4B	RINSE
5)	RearSamp	3	30OCT03	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
6)	Sample	2	30OCT04	LVID4B	DRO DIST
7)	RearSamp	3	30OCT05	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
8)	Sample	11	30OCT06	LVID4B	BNA SURROGATE
9)	RearSamp	51	30OCT07	LVID4B	DBLKW1-144848
This computer is now swap bound.					
10)	Sample	12	30OCT08	LVID4B	DRO ICAL 50 UG/L
11)	RearSamp	52	30OCT09	LVID4B	DLCSW1-144848
This computer is now swap bound.					
12)	Sample	13	30OCT10	LVID4B	DRO ICAL 100 UG/L
13)	RearSamp	53	30OCT11	LVID4B	DRLVSW1-144848
This computer is now swap bound.					
14)	Sample	14	30OCT12	LVID4B	DRO ICAL 250 UG/L
15)	RearSamp	54	30OCT13	LVID4B	19102158-10B
This computer is now swap bound.					
16)	Sample	15	30OCT14	LVID4B	DRO ICAL 500 UG/L
17)	RearSamp	55	30OCT15	LVID4B	19102158-10B MS
This computer is now swap bound.					
18)	Sample	16	30OCT16	LVID4B	DRO ICAL 1000 UG/L
19)	RearSamp	56	30OCT17	LVID4B	19102158-10B MSD
This computer is now swap bound.					
20)	Sample	17	30OCT18	LVID4B	DRO ICAL 2500 UG/L
21)	RearSamp	57	30OCT19	LVID4B	19102158-11B
This computer is now swap bound.					
22)	Sample	18	30OCT20	LVID4B	DRO ICAL 5000 UG/L
23)	RearSamp	58	30OCT21	LVID4B	19102158-12B
This computer is now swap bound.					
24)	Sample	19	30OCT22	LVID4B	DRO ICAL 10,000 UG/L
25)	RearSamp	59	30OCT23	LVID4B	19102158-13B
This computer is now swap bound.					
26)	Sample	20	30OCT24	LVID4B	DRO ICAL 25,000 UG/L
27)	RearSamp	60	30OCT25	LVID4B	19102158-14B
This computer is now swap bound.					
28)	Sample	21	30OCT26	LVID4B	DRO ICAL 50,000 UG/L
29)	RearSamp	3	30OCT27	LVID4B	DRLVI CCV 500 UG/ML

2019 Oct 30 1731 Sequence Log

This computer is now swap bound.
30) Sample 22 30OCT28 LVID4B DRO ICV 10,000 UG/L
31) RearSamp 61 30OCT29 LVID4B 19102158-15B
This computer is now swap bound.
32) Sample 10 30OCT30 LVID4B RINSE
33) RearSamp 62 30OCT31 LVID4B 19102084-01C
This computer is now swap bound.
34) Sample 10 30OCT32 LVID4B RINSE
35) RearSamp 63 30OCT33 LVID4B 19102084-02C
This computer is now swap bound.
36) Sample 10 30OCT34 LVID4B RINSE
37) RearSamp 64 30OCT35 LVID4B 19102196-05B
This computer is now swap bound.
38) Sample 10 30OCT36 LVID4B RINSE
39) RearSamp 65 30OCT37 LVID4B 19102196-06B
This computer is now swap bound.
40) Sample 10 30OCT38 LVID4B RINSE
41) RearSamp 66 30OCT39 LVID4B 19102298-01A
This computer is now swap bound.
42) Sample 10 30OCT40 LVID4B RINSE
43) RearSamp 3 30OCT41 LVID4B DRLVI CCV 500 UG/ML
This computer is now swap bound.
44) Sample 10 30OCT42 LVID4B RINSE

Sequence completed Thu Oct 31 03:39:20 2019

C:\MSDCHEM\1\DATA\GC8-191030\2019 Oct 30 1731 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191030\2019 Oct 30 1731 Sequence Log .LOG

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111956.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 3:14 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:49:13 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	10.908	45.5#	120	0.00
2	S	2-Fluorobipehenyl	20.000	41.249	-106.2#	116	0.02
3	S	2,4,6-Tribromophenol	20.000	14.566	27.2#	106	0.09
4	S	4-Terphenyl-d14	20.000	19.511	2.4	120	0.02
5	H	DRO (C10-C20)	10000.000	-231.681	102.3#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-53.226	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	11436.593	-14.4	113	0.00
8	H	ORO (C28-C40)	10000.000	10409.893	-4.1	102	-0.07
9	H	ORO (C20-C40)	10000.000	-93.384	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	-314.058	101.6#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-224.545	102.2#	0	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-231.681	102.3#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-53.226	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-93.384	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
11	H	ERO (C8-C40)	20000.000	-314.058	101.6#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-224.545	102.2#	0	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111956.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 3:14 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:49:13 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	6.168	6.991 E6	-13.3	120	0.00
2	S	2-Fluorobipehenyl	5.096	5.768 E6	-13.2	116	0.02
3	S	2,4,6-Tribromophenol	17.759	16.856 E6	5.1	106	0.09
4	S	4-Terphenyl-d14	2.178	3.534 E6	-62.3#	120	0.02
5	H	DRO (C10-C20)	3.360	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000 E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	4.489	5.371 E6	-19.6	113	0.00
8	H	ORO (C28-C40)	1.698	2.139 E6	-26.0#	102	-0.07
9	H	ORO (C20-C40)	2.891	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	3.360	0.000 E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000	0.0	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.360	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	2.891	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	1.377	0.000 E6	100.0#	0#	0.00
11	H	ERO (C8-C40)	3.360	0.000 E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000	0.0	0#	0.00
13	H	OIL (IOWA)	0.000	0.000	0.0	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111956.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 3:14 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:49:13 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

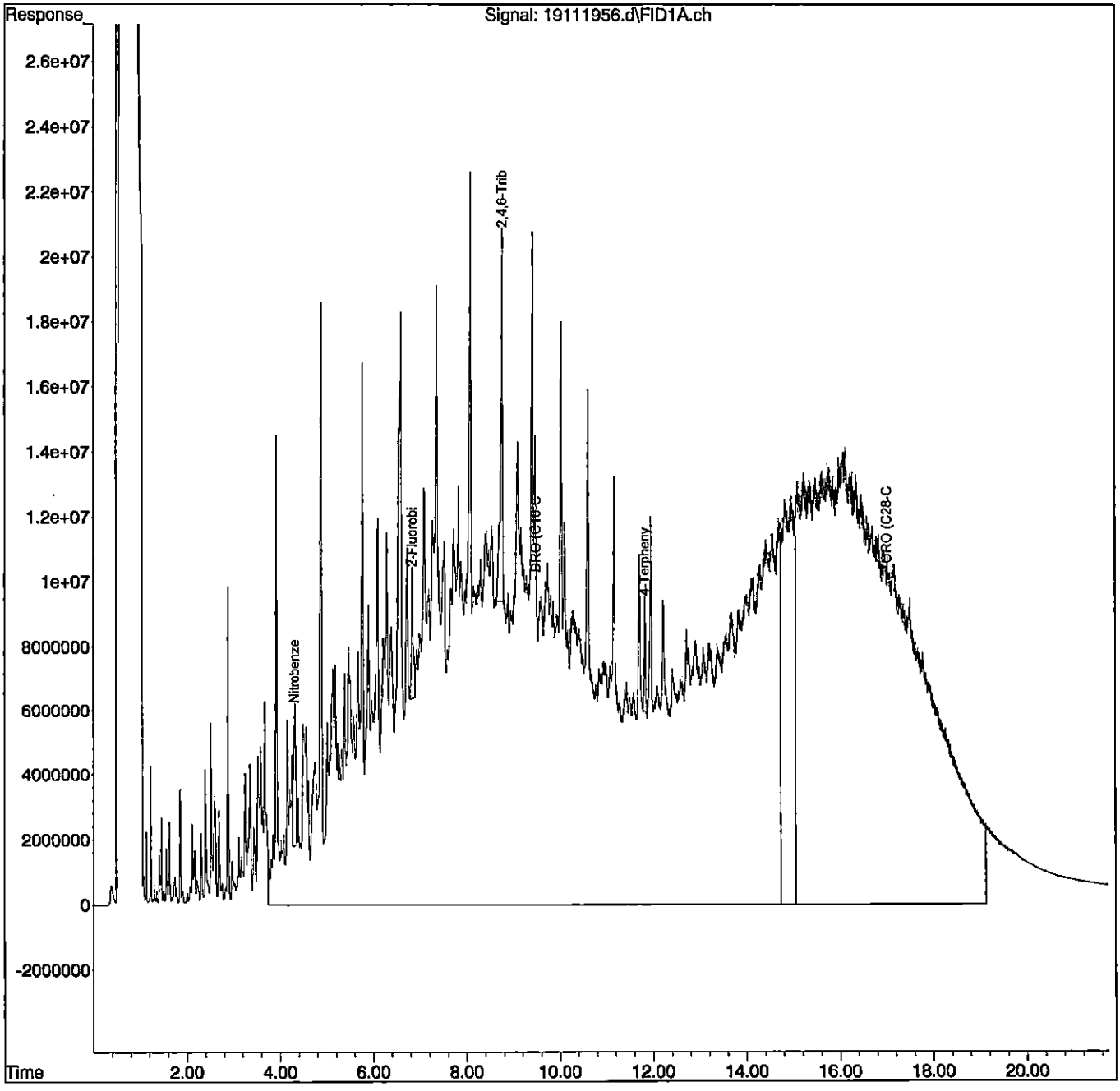
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.316	139816351	10.908	ug/mLm
2) S	2-Fluorobipehenyl	6.839	115368932	41.249	ug/mLm
3) S	2,4,6-Tribromophenol	8.763	337125433	14.566	ug/mLm
4) S	4-Terphenyl-d14	11.822	70686013	19.511	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-592310716	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-70686013	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	53710028833	11436.593	ug/mL
8) H	ORO (C28-C40)	17.000	21386564325	10409.893	ug/mL
9) H	ORO (C20-C40)	15.165	-70686013	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-662996729	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-662996729	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111956.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 3:14 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:49:13 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111984.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 10:02 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 12:52:23 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	11.478	42.6#	127	0.00
2	S	2-Fluorobipehenyl	20.000	41.096	-105.5#	113	0.03
3	S	2,4,6-Tribromophenol	20.000	15.541	22.3#	113	0.09
4	S	4-Terphenyl-d14	20.000	20.371	-1.9	125	0.03
5	H	DRO (C10-C20)	10000.000	-240.089	102.4#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-54.200	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	11798.099	-18.0	116	0.00
8	H	ORO (C28-C40)	10000.000	11955.659	-19.6	117	-0.07
9	H	ORO (C20-C40)	10000.000	-94.171	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	-322.442	101.6#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-232.553	102.3#	0	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-240.089	102.4#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-54.200	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-94.171	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
11	H	ERO (C8-C40)	20000.000	-322.442	101.6#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-232.553	102.3#	0	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111984.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 10:02 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 12:52:23 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF		%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	6.168	7.363	E6	-19.4	127	0.00
2	S	2-Fluorobipehenyl	5.096	5.637	E6	-10.6	113	0.03
3	S	2,4,6-Tribromophenol	17.759	17.925	E6	-0.9	113	0.09
4	S	4-Terphenyl-d14	2.178	3.690	E6	-69.4#	125	0.03
5	H	DRO (C10-C20)	3.360	0.000	E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000	E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	4.489	5.540	E6	-23.4#	116	0.00
8	H	ORO (C28-C40)	1.698	2.461	E6	-44.9#	117	-0.07
9	H	ORO (C20-C40)	2.891	0.000	E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	3.360	0.000	E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000		0.0	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.360	0.000	E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000	E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	2.891	0.000	E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	1.377	0.000	E6	100.0#	0#	0.00
11	H	ERO (C8-C40)	3.360	0.000	E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000		0.0	0#	0.00
13	H	OIL (IOWA)	0.000	0.000		0.0	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111984.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 10:02 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 12:52:23 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

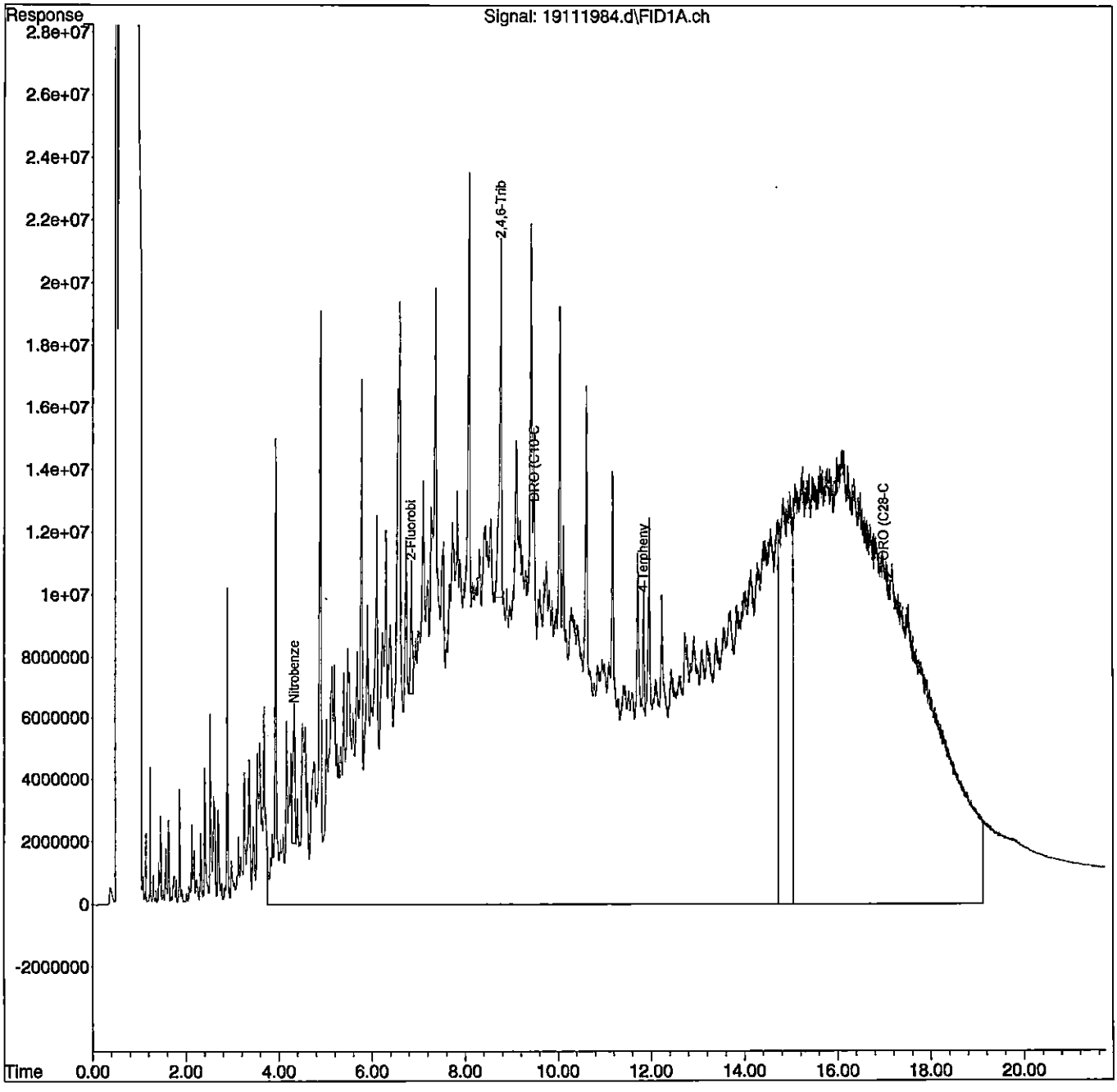
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.327	147251417	11.478	ug/mLm
2) S	2-Fluorobipehenyl	6.845	112746628	41.096	ug/mLm
3) S	2,4,6-Tribromophenol	8.770	358501282	15.541	ug/mLm
4) S	4-Terphenyl-d14	11.837	73799300	20.371	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-618499328	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-73799300	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	55401651631	11798.099	ug/mL
8) H	ORO (C28-C40)	17.000	24606899286	11955.659	ug/mL
9) H	ORO (C20-C40)	15.165	-73799300	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-692298627	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-692298627	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111984.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 10:02 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 12:52:23 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111902.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:07 pm
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:23:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

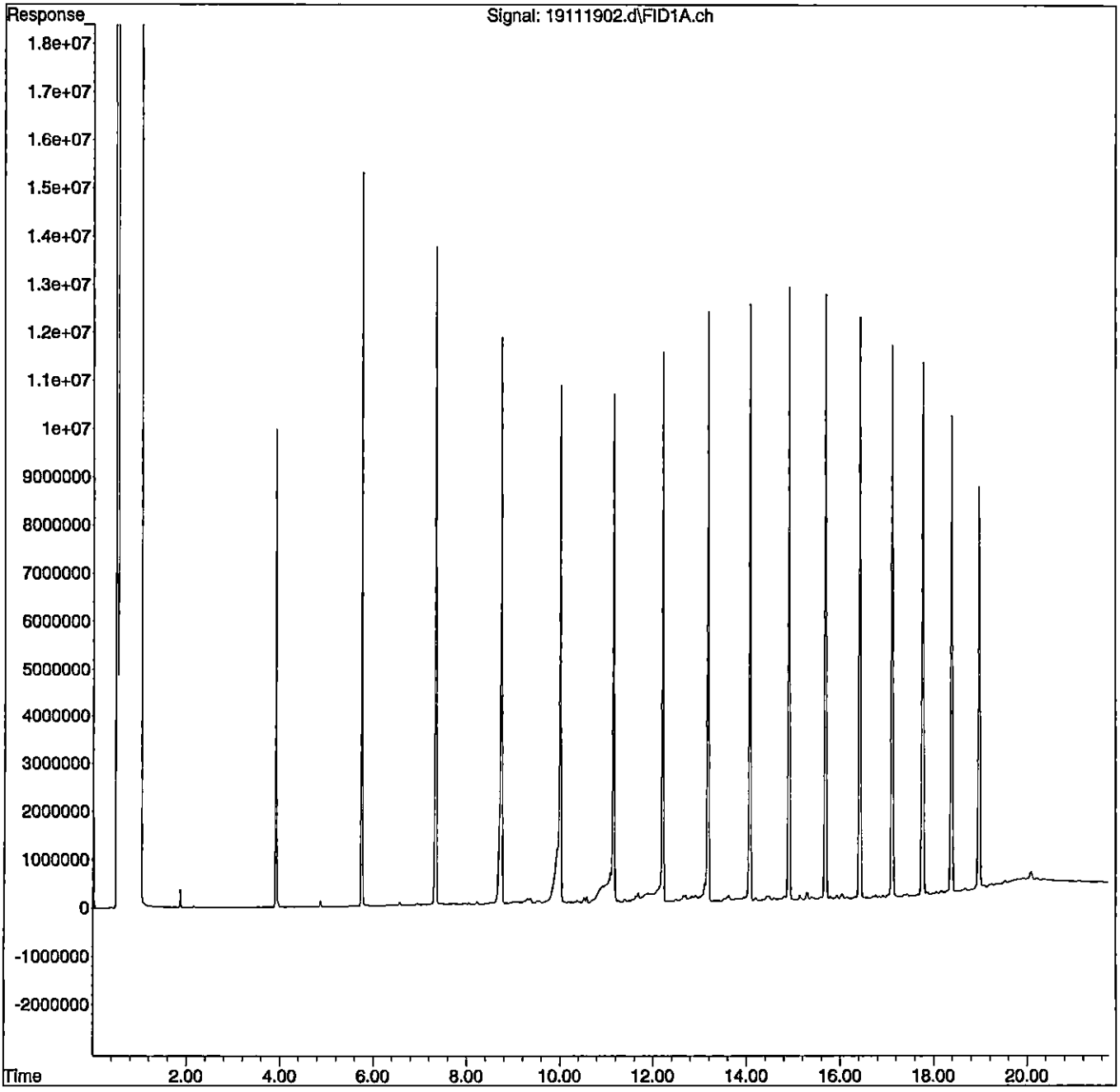
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111902.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:07 pm
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:23:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111964.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 5:11 am
Operator : KJB
Sample : Dblks1-14756
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:52:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

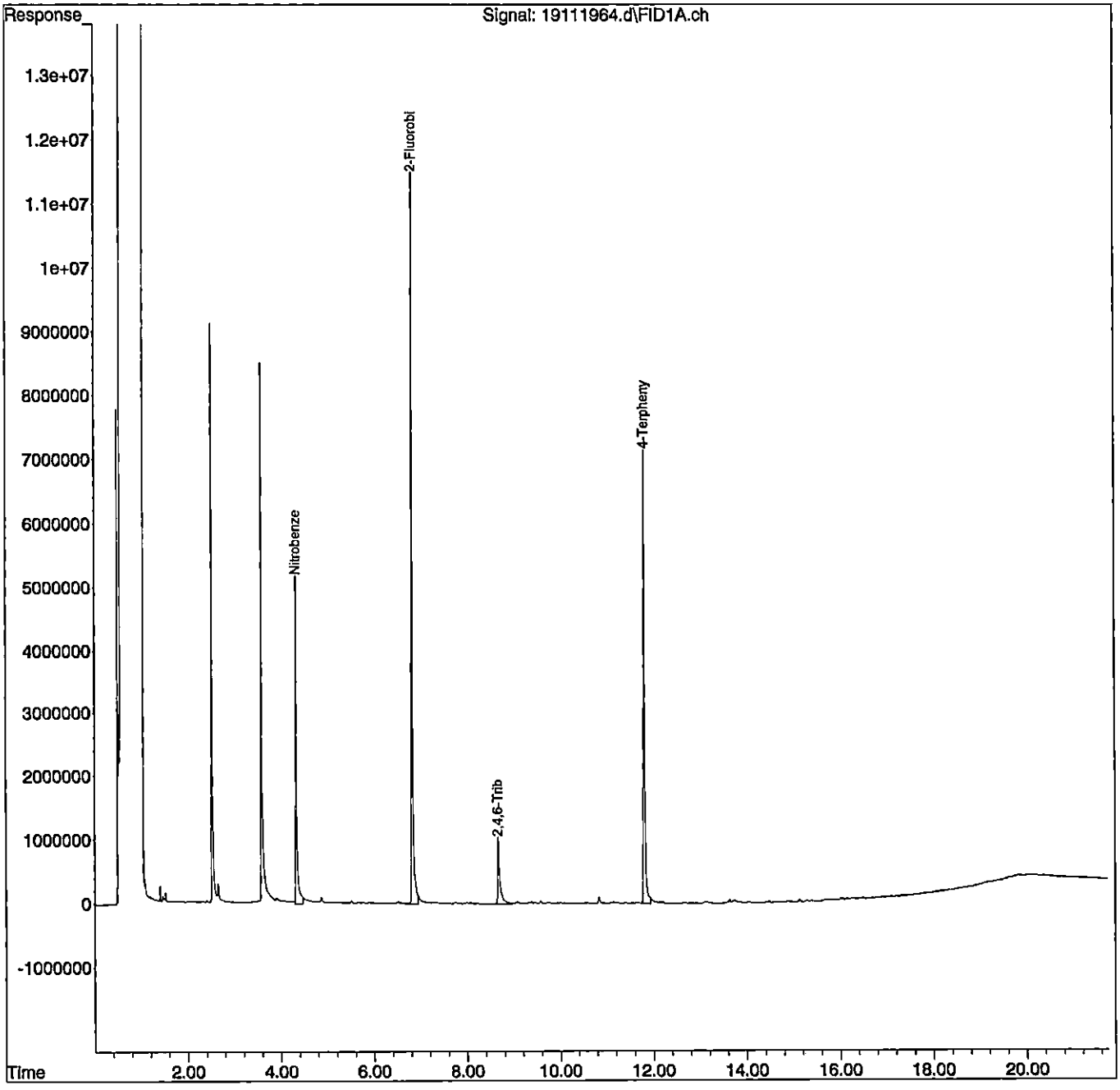
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.322	91543970	7.205	ug/mLm
2) S	2-Fluorobipehenyl	6.822	200806585	45.761	ug/mLm
3) S	2,4,6-Tribromophenol	8.659	36003383	2.387	ug/mLm
4) S	4-Terphenyl-d14	11.809	153810085	42.474	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-328353938	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-153810085	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	-482164023	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-153810085	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-482164023	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-482164023	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111964.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 5:11 am
Operator : KJB
Sample : Dblks1-14756
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:52:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111966.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 5:40 am
Operator : KJB
Sample : DLCSS1-14756
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 10:11:02 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

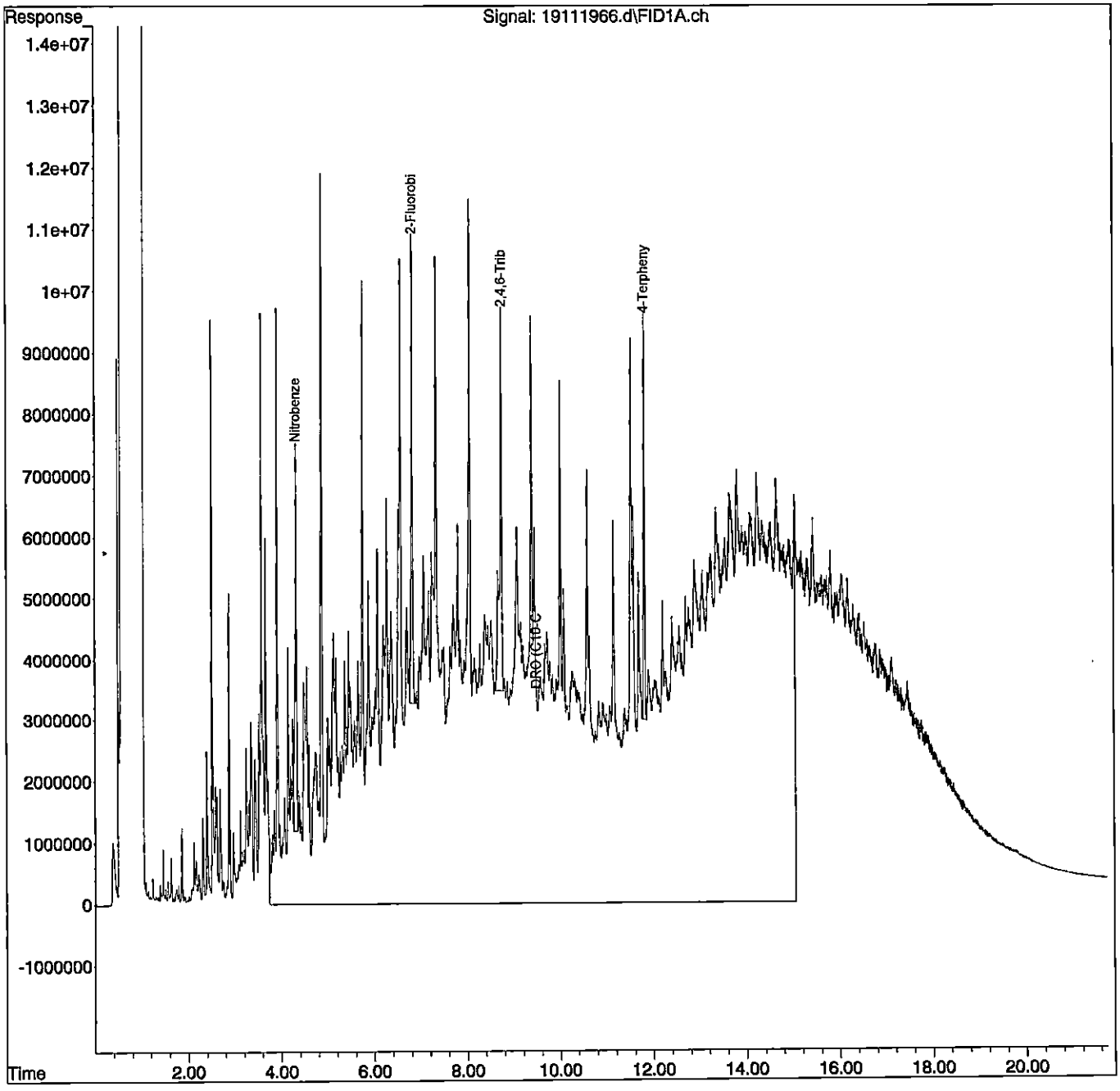
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.323	144792932	11.290	ug/mLm
2) S	2-Fluorobipehenyl	6.827	151636769	43.265	ug/mLm
3) S	2,4,6-Tribromophenol	8.749	197971198	8.618	ug/mLm
4) S	4-Terphenyl-d14	11.814	127783242	35.284	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-494400900	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-127783242	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	26167170123	5550.581	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-127783242	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-622184142	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-622184142	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111966.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 5:40 am
Operator : KJB
Sample : DLCSS1-14756
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 10:11:02 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111968.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 6:09 am
Operator : KJB
Sample : 19111271-01A MS
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:54:50 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

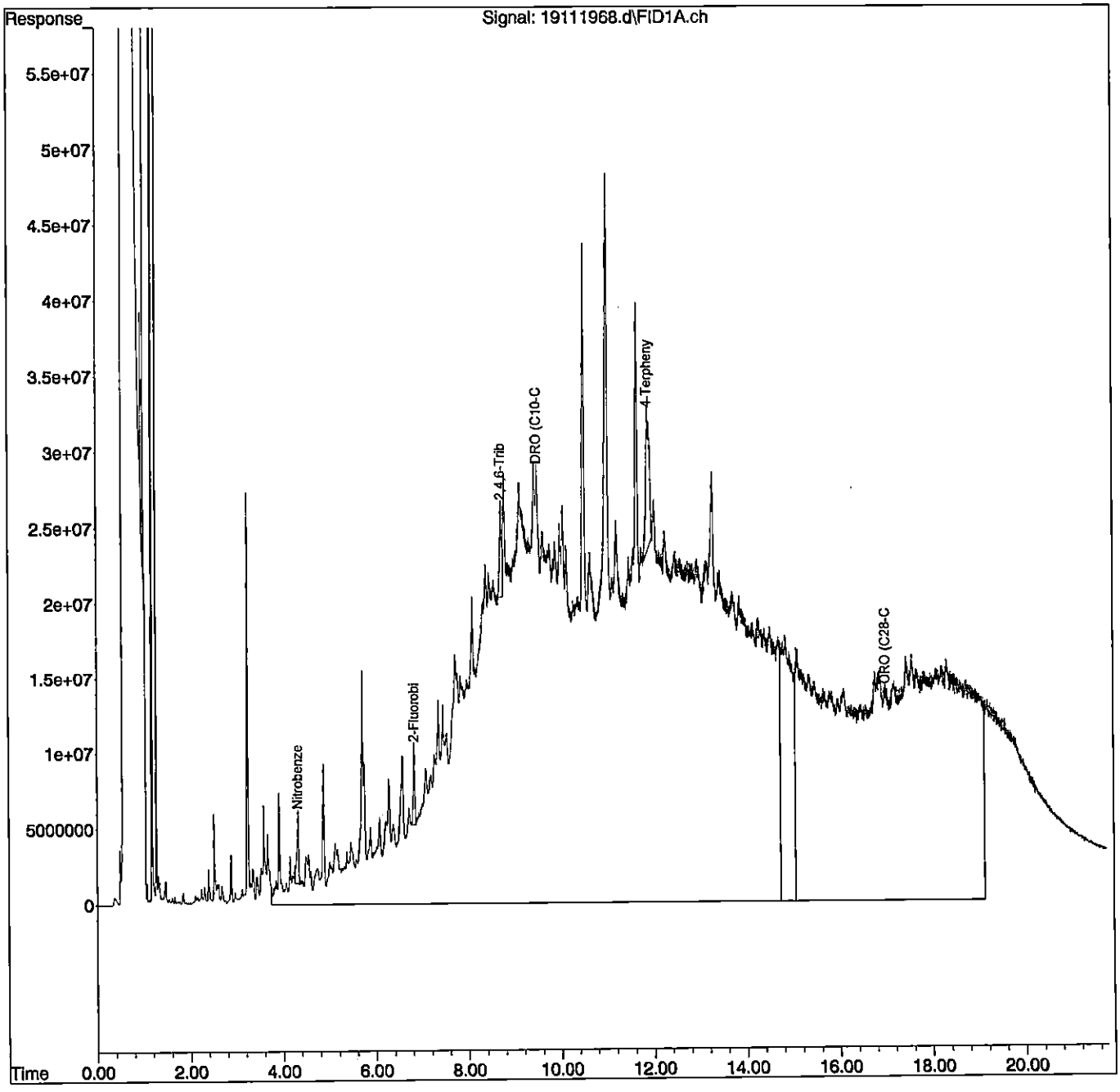
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.326	128343582	10.028	ug/mLm
2) S	2-Fluorobipehenyl	6.840	123743891	41.730	ug/mLm
3) S	2,4,6-Tribromophenol	8.724	227453015	9.826	ug/mLm
4) S	4-Terphenyl-d14	11.889	515192914	142.308	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-479540487	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-515192914	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	1.03178e+011	22008.071	ug/mL
8) H	ORO (C28-C40)	17.000	36937937911	17874.578	ug/mL
9) H	ORO (C20-C40)	15.165	-515192914	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-994733401	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-994733401	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111968.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 6:09 am
Operator : KJB
Sample : 19111271-01A MS
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:54:50 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111970.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 6:38 am
Operator : KJB
Sample : 19111271-01A MSD
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:55:45 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

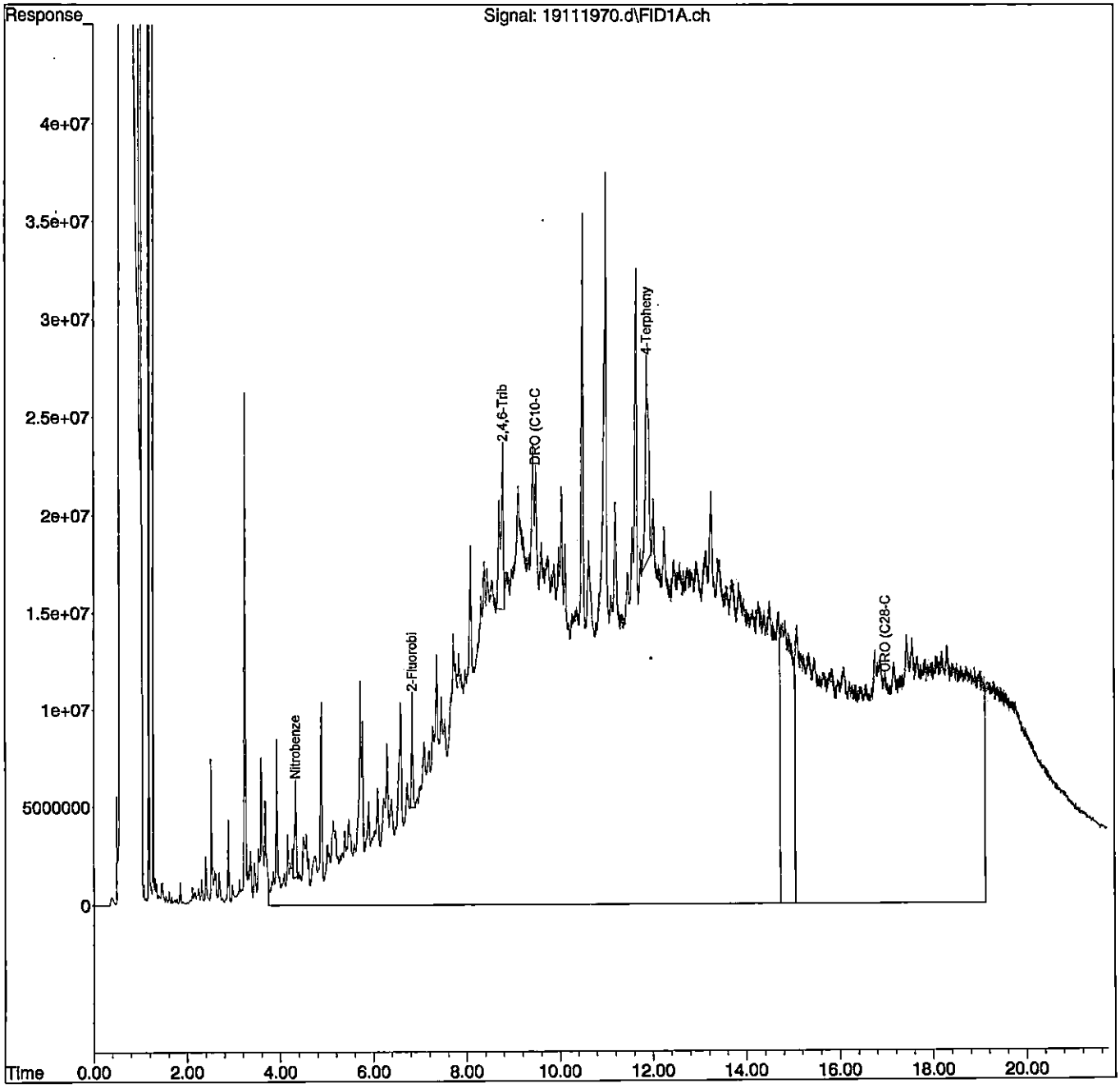
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.328	133824500	10.448	ug/mLm
2) S	2-Fluorobipehenyl	6.842	126512874	41.887	ug/mLm
3) S	2,4,6-Tribromophenol	8.789	401001269	17.537	ug/mLm
4) S	4-Terphenyl-d14	11.876	527306015	145.654	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-661338643	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-527306015	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	81373552449	17348.392	ug/mL
8) H	ORO (C28-C40)	17.000	28385014307	13769.160	ug/mL
9) H	ORO (C20-C40)	15.165	-527306015	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-1188644658	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-1188644658	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111970.d
Signal(s) : FID1A.ch
Acq On : 20 Nov 2019 6:38 am
Operator : KJB
Sample : 19111271-01A MSD
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:55:45 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Nov 19 1405 Sequence Log

Starting sequence Tue Nov 19 14:05:07 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191119.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191119\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Comment: 'DUAL SYSTEM, UNLINKED'				
2)	Unlinked: 'UNLINKED'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191119.SEC\				
3)	RearSamp	1	19111901	LVID4B	DRLVI DIST
This computer is now swap bound.					
4)	Sample	2	19111902	LVID4B	DRO DIST
5)	RearSamp	3	19111903	LVID4B	DRLVI CCV 10,000 UG/ML
This computer is now swap bound.					
6)	Sample	4	19111904	LVID4B	DRO CCV 10,000 UG/ML
7)	RearSamp	3	19111905	LVID4B	DRLVI CCV 10,000 UG/ML
This computer is now swap bound.					
8)	Sample	4	19111906	LVID4B	DRO CCV 10,000 UG/ML
9)	RearSamp	51	19111907	LVID4B	DBLKW2-145706
This computer is now swap bound.					
10)	Sample	11	19111908	LVID4B	DBLKS1-145699
11)	RearSamp	52	19111909	LVID4B	DRLVSW1-145706
This computer is now swap bound.					
12)	Sample	12	19111910	LVID4B	DLCSS1-145699
13)	RearSamp	53	19111911	LVID4B	DLCSW1-145706
This computer is now swap bound.					
14)	Sample	13	19111912	LVID4B	19111162-01A MS
15)	RearSamp	54	19111913	LVID4B	19111091-22D MS
This computer is now swap bound.					
16)	Sample	101	19111914	LVID4B	DBLKS1-145838
17)	RearSamp	10	19111915	LVID4B	RINSE
This computer is now swap bound.					
18)	Sample	102	19111916	LVID4B	DLCSS1-145838
19)	RearSamp	10	19111917	LVID4B	RINSE
This computer is now swap bound.					
20)	Sample	103	19111918	LVID4B	19111428-02A MS
21)	RearSamp	10	19111919	LVID4B	RINSE
This computer is now swap bound.					
22)	Sample	104	19111920	LVID4B	19111428-02A MSD
23)	RearSamp	10	19111921	LVID4B	RINSE
This computer is now swap bound.					
24)	Sample	105	19111922	LVID4B	19111428-02A
25)	RearSamp	10	19111923	LVID4B	RINSE
This computer is now swap bound.					

2019 Nov 19 1405 Sequence Log

26) Sample 106 19111924 LVID4B 19111405-01A
27) RearSamp 10 19111925 LVID4B RINSE

This computer is now swap bound.
28) Sample 107 19111926 LVID4B 19111405-02A
29) RearSamp 10 19111927 LVID4B RINSE

This computer is now swap bound.
30) Sample 108 19111928 LVID4B 19111405-03A
31) RearSamp 10 19111929 LVID4B RINSE

This computer is now swap bound.
32) Sample 109 19111930 LVID4B 19111428-01A
33) RearSamp 10 19111931 LVID4B RINSE

This computer is now swap bound.
34) Sample 4 19111932 LVID4B DRO CCV 10,000 UG/ML
35) RearSamp 3 19111933 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
36) Sample 14 19111934 LVID4B 19111162-01A MSD
37) RearSamp 55 19111935 LVID4B 19111091-22D MSD
This computer is now swap bound.
38) Sample 15 19111936 LVID4B 19111162-01A
39) RearSamp 56 19111937 LVID4B 19111091-22D
This computer is now swap bound.
40) Sample 16 19111938 LVID4B 19110931-03A
41) RearSamp 57 19111939 LVID4B 19111091-15D
This computer is now swap bound.
42) Sample 17 19111940 LVID4B 19110931-04A
43) RearSamp 58 19111941 LVID4B 19111091-16D
This computer is now swap bound.
44) Sample 18 19111942 LVID4B 19110931-05A
45) RearSamp 59 19111943 LVID4B 19111091-17D
This computer is now swap bound.
46) Sample 19 19111944 LVID4B 19110931-06A
47) RearSamp 60 19111945 LVID4B 19111091-18D
This computer is now swap bound.
48) Sample 20 19111946 LVID4B 19110931-07A
49) RearSamp 31 19111947 LVID4B 19111091-19D
This computer is now swap bound.
50) Sample 21 19111948 LVID4B 19111130-01A DF10
51) RearSamp 62 19111949 LVID4B 19111091-20D
This computer is now swap bound.
52) Sample 22 19111950 LVID4B 19111114-01A DF10
53) RearSamp 63 19111951 LVID4B 19111091-21D
This computer is now swap bound.
54) Sample 23 19111952 LVID4B 19111162-02A
55) RearSamp 64 19111953 LVID4B 19111091-23D
This computer is now swap bound.
56) Sample 24 19111954 LVID4B 19111162-03A
57) RearSamp 65 19111955 LVID4B 19111085-01B
This computer is now swap bound.
58) Sample 4 19111956 LVID4B DRO CCV 10,000 UG/ML
59) RearSamp 3 19111957 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
60) Sample 4 19111958 LVID4B DRO CCV 10,000 UG/ML

2019 Nov 19 1405 Sequence Log

61) RearSamp 3 19111959 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
62) Sample 25 19111960 LVID4B 19111164-01A
63) RearSamp 66 19111961 LVID4B 19111085-02B
This computer is now swap bound.
64) Sample 26 19111962 LVID4B 19111164-02A
65) RearSamp 67 19111963 LVID4B 19111085-03B
This computer is now swap bound.
66) Sample 27 19111964 LVID4B Dblks1-14756
67) RearSamp 68 19111965 LVID4B 19111085-04B
This computer is now swap bound.
68) Sample 28 19111966 LVID4B DLCSS1-14756
69) RearSamp 69 19111967 LVID4B 19111085-05B
This computer is now swap bound.
70) Sample 29 19111968 LVID4B 19111271-01A MS
71) RearSamp 70 19111969 LVID4B 19111085-06B
This computer is now swap bound.
72) Sample 30 19111970 LVID4B 19111271-01A MSD
73) RearSamp 3 19111971 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
74) Sample 31 19111972 LVID4B 19111271-01A
75) RearSamp 3 19111973 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
76) Sample 32 19111974 LVID4B 19111193-01A
77) RearSamp 10 19111975 LVID4B RINSE

This computer is now swap bound.
78) Sample 33 19111976 LVID4B 19111193-02A
79) RearSamp 10 19111977 LVID4B RINSE

This computer is now swap bound.
80) Sample 34 19111978 LVID4B 19111193-03A
81) RearSamp 10 19111979 LVID4B RINSE

This computer is now swap bound.
82) Sample 35 19111980 LVID4B 19111193-04A
83) RearSamp 10 19111981 LVID4B RINSE

This computer is now swap bound.
84) Sample 36 19111982 LVID4B 19111272-01A DF10
85) RearSamp 10 19111983 LVID4B RINSE

This computer is now swap bound.
86) Sample 4 19111984 LVID4B DRO CCV 10,000 UG/ML
87) RearSamp 10 19111985 LVID4B RINSE

This computer is now swap bound.
88) Sample 4 19111986 LVID4B DRO CCV 10,000 UG/ML
89) RearSamp 10 19111987 LVID4B RINSE

This computer is now swap bound.
90) Sample 37 19111988 LVID4B 19111285-01A
91) RearSamp 10 19111989 LVID4B RINSE

This computer is now swap bound.
92) Sample 38 19111990 LVID4B 19111285-02A

2019 Nov 19 1405 Sequence Log

93) RearSamp 10 19111991 LVID4B RINSE

This computer is now swap bound.
94) Sample 39 19111992 LVID4B 19111285-03A
95) RearSamp 10 19111993 LVID4B RINSE

This computer is now swap bound.
96) Sample 40 19111994 LVID4B 19111285-04A
97) RearSamp 10 19111995 LVID4B RINSE

This computer is now swap bound.
98) Sample 41 19111996 LVID4B 1911185-05A
99) RearSamp 10 19111997 LVID4B RINSE

This computer is now swap bound.
100) Sample 4 19111998 LVID4B DRO CCV 10,000 UG/ML
101) RearSamp 10 19111999 LVID4B RINSE

This computer is now swap bound.
102) Sample 4 91119100 LVID4B DRO CCV 10,000 UG/ML
103) RearSamp 10 91119101 LVID4B RINSE

This computer is now swap bound.
104) Sample 42 91119102 LVID4B BLK 1
105) RearSamp 10 91119103 LVID4B RINSE

This computer is now swap bound.
106) Sample 43 91119104 LVID4B BLK2
107) RearSamp 10 91119105 LVID4B RINSE

This computer is now swap bound.
108) Sample 44 91119106 LVID4B BLK3
109) RearSamp 10 91119107 LVID4B RINSE

This computer is now swap bound.
110) Sample 45 91119108 LVID4B LCS1
111) RearSamp 10 91119109 LVID4B RINSE

This computer is now swap bound.
112) Sample 46 91119110 LVID4B LCS2
113) RearSamp 10 91119111 LVID4B RINSE

This computer is now swap bound.
114) Sample 47 91119112 LVID4B LCS3
115) RearSamp 10 91119113 LVID4B RINSE

This computer is now swap bound.
116) Sample 48 91119114 LVID4B POST BLK1

Sequence completed Wed Nov 20 17:41:05 2019

C:\MSDCHEM\1\DATA\GC8-191119\2019 Nov 19 1405 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191119\2019 Nov 19 1405 Sequence Log .LOG

ALS Group, USA

PREP BATCH REPORT

Batch ID: **145756** Prep Code: **DRO_3550_S**

Start Date: **11/18/2019 8:49:38 AM** End Date: **11/18/2019 4:29:55 PM**

Technician: **Matthew Krause**

InitSamp Wt/Vol: 15 g
FinSampVol: 1 mL
OriginalFac: 66.6667
PrepUnitFac: 1000

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
19111193-01A	Soil		15.227		0	1	65.6728
19111193-02A	Soil		15.661		0	1	63.8529
19111193-03A	Soil		15.22		0	1	65.703
19111193-04A	Soil		15.524		0	1	64.4164
19111271-01A	Soil		15.006		0	1	66.64
19111271-01A MS	Soil		15.028		0	1	66.5425
19111271-01A MS	Soil		15.098		0	1	66.2339
19111272-01A ISM	Sludge		5.285		0	1.5	283.822
19111285-01A			15.101		0	1	66.2208
19111285-02A			15.461		0	1	64.6789
19111285-03A			15.23		0	1	65.6599
19111285-04A			15.06		0	1	66.4011
19111285-05A			15.077		0	1	66.3262
DBLKS1-145756			15		0	1	66.6667
DLCSS1-145756			15		0	1	66.6667

Notes: *500uL Surrogate (3081-155-7) added to all samples. 500 uL DRO Spike (400-0112) added to QC. DCM (3081-153-2). Hydromatrix, H102919. Sodium Sulfate S111119. Balance 5. All extractions are B1/E1 unless otherwise noted.*

Inorganic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Wet Chemistry

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-I80-Soil-06-111519

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19111271

Matrix: Soil Lab Sample ID: 19111271-01A

Level (low/med): LOW Date Received: 11/16/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	27			

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.

Work Order: 19111271

Project: Joliet Fire

QC BATCH REPORT

Batch ID: **R275660** Instrument ID **MOIST** Method: **SW3550C**

MBLK	Sample ID: **WBLKS-R275660**				Units: **% of sample**		Analysis Date: **11/18/2019 11:40 A**			
Client ID:	Run ID: **MOIST_191118A**				SeqNo: **6066780**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS	Sample ID: **LCS-R275660**				Units: **% of sample**		Analysis Date: **11/18/2019 11:40 A**			
Client ID:	Run ID: **MOIST_191118A**				SeqNo: **6066779**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP	Sample ID: **19111245-06B DUP**				Units: **% of sample**		Analysis Date: **11/18/2019 11:40 A**			
Client ID:	Run ID: **MOIST_191118A**				SeqNo: **6066774**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.73	0.10	0	0	0	0-0	9.8	0.717	10	

DUP	Sample ID: **19111245-07B DUP**				Units: **% of sample**		Analysis Date: **11/18/2019 11:40 A**			
Client ID:	Run ID: **MOIST_191118A**				SeqNo: **6066776**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.49	0.10	0	0	0	0-0	10.04	4.38	10	

The following samples were analyzed in this batch: 19111271-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Moisture

Analyst:	KT	Date/Time In:	11/18/19 11:40 AM	Temp In Deg C:	103
Review By:		Date/Time Out:	11/19/19 8:14 AM	Temp Out Deg C:	105.1
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_191118A	Sand BPL:	2049-184-4
SOP:	HN-WC-018	Balance ID:	6	Oven ID:	9

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.145	0	1.1450				1.1453	0.03	0.03	Moisture
LCS		LCS	LCS	1.1424	0	8.1704				9.3129	100.00	100.00	Moisture
19111245-06B	1	SAMP	K1	1.1398	0	8.0374				8.3893	90.20	9.80	Moisture
19111245-06B DUP	1	DUP	K2	1.1339	0	8.0401				8.3919	90.27	9.73	Moisture
19111245-01B	1	SAMP	K3	1.1441	0	8.0763				8.2515	88.00	12.00	Moisture
19111245-02B	1	SAMP	K4	1.1361	0	7.1139				7.2912	86.52	13.48	Moisture
19110611-18B	1	SAMP	K5	1.131	0	9.0023				9.104	88.57	11.43	Moisture
19111245-04B	1	SAMP	K6	1.1297	0	7.4298				7.5248	86.07	13.93	Moisture
19111245-03B	1	SAMP	K7	1.1375	0	7.0675				7.2596	86.62	13.38	Moisture
19111245-05B	1	SAMP	K8	1.147	0	8.529				8.45	85.63	14.37	Moisture
19111245-08B	1	SAMP	K9	1.1452	0	7.8485				7.497	80.93	19.07	Moisture
19111271-01A	1	SAMP	K10	1.1522	0	6.568				5.9697	73.35	26.65	Moisture
19110611-17B	1	SAMP	K11	1.1505	0	9.8076				9.7915	88.11	11.89	Moisture
19111245-07B	1	SAMP	K12	1.1296	0	7.9876				8.3154	89.96	10.04	Moisture
19111245-07B DUP	1	DUP	K13	1.147	0	7.9845				8.2938	89.51	10.49	Moisture
19110611-19B	1	SAMP	K14	1.1436	0	9.5565				9.6687	89.21	10.79	Moisture
19110611-20B	1	SAMP	K15	1.1398	0	8.1562				8.199	86.55	13.45	Moisture
19110611-21B	1	SAMP	K16	1.1462	0	7.8961				6.6876	70.18	29.82	Moisture
19110611-25B	1	SAMP	K17	1.1354	0	5.9358				5.8268	79.04	20.96	Moisture
19110611-23B	1	SAMP	K18	1.1525	0	7.9243				7.4612	79.61	20.39	Moisture
19110611-24B	1	SAMP	K19	1.1521	0	6.6885				7.2175	90.68	9.32	Moisture
19110611-26B	1	SAMP	K20	1.1472	0	8.3531				7.8696	80.48	19.52	Moisture
19111203-01A	1	SAMP	K21	1.1526	0	7.9851				7.6631	81.53	18.47	Moisture
19110611-22B	1	SAMP	K22	1.1506	0	8.8357				9.3107	92.35	7.65	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/19/2019 10:00	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

Copyright ALS Environmental, 2019

Section IV

ATTACHMENTS

-Previously Issued Report(s)

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

20-Nov-2019

Andre Baker
Tetra Tech EM Inc.
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

Re: **Joliet Fire** Work Order: **19111271**

Dear Andre,

ALS Environmental received 1 sample on 16-Nov-2019 09:45 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 9.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 20-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: **19111271**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19111271-01	MPGI-I80-Soil-06-111519	Soil		11/15/2019 10:00	11/16/2019 09:45	☐

ALS Group, USA

Date: 20-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: 19111271

Case Narrative

Samples for the above noted Work Order were received on 11/16/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:

Batch 145756, Method DRO_8015_S, Sample 19111271-01A: DRO surrogate recovery high due to matrix interference.

Batch 145756, Method DRO_8015_S, Sample 19111271-01A MS/MSD: DRO surrogate recovery high in parent sample and MS/MSD due to matrix interference.

Batch 145756, Method DRO_8015_S, Sample 19111271-01A MSD: The MSD recovery was outside of the control limit for DRO. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required.

Batch 145756, Method DRO_8015_S, Sample DLCSS1-145756: The LCS recovery was above the upper control limit for DRO. The sample results for this batch may be biased high.

Wet Chemistry:
No other deviations or anomalies were noted.

Client: Tetra Tech EM Inc.
Project: Joliet Fire
WorkOrder: **19111271**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group, USA

Date: *20-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Sample ID: MPGI-I80-Soil-06-111519
Collection Date: 11/15/2019 10:00 AM

Work Order: 19111271
Lab ID: 19111271-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/18/19		Analyst: **BCM**
DRO (C10-C28)	**1,600**		**3.9**	**6.8**	**mg/Kg-dry**	1	11/20/2019 07:07
Surr: 4-Terphenyl-d14	*475*	S		*33-111*	*%REC*	1	11/20/2019 07:07
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**27**		**0.10**	**0.10**	**% of sample**	1	11/18/2019 11:40

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 20-Nov-19

Client: Tetra Tech EM Inc.

Work Order: 19111271

Project: Joliet Fire

QC BATCH REPORT

Batch ID: **145756** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-145756-145756** Units: **mg/Kg** Analysis Date: **11/20/2019 05:11 A**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070447** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.831*	0	*3.33*	0	*85*	*33-111*	0			

LCS Sample ID: **DLCSS1-145756-145756** Units: **mg/Kg** Analysis Date: **11/20/2019 05:40 A**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070532** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	370	5.0	333	0	111	58-111	0			S
Surr: 4-Terphenyl-d14	*2.352*	0	*3.33*	0	*70.6*	*33-111*	0			

MS Sample ID: **19111271-01A MS** Units: **mg/Kg** Analysis Date: **11/20/2019 06:09 A**

Client ID: **MPGI-I80-Soil-06-111519** Run ID: **GC8_191119A** SeqNo: **6070450** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1464	5.0	332.4	1141	97.4	58-111	0			
Surr: 4-Terphenyl-d14	*9.47*	0	*3.324*	0	*285*	*33-111*	0			*S*

MSD Sample ID: **19111271-01A MSD** Units: **mg/Kg** Analysis Date: **11/20/2019 06:38 A**

Client ID: **MPGI-I80-Soil-06-111519** Run ID: **GC8_191119A** SeqNo: **6070452** Prep Date: **11/18/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	1149	5.0	330.8	1141	2.53	58-111	1464	24.1	30	S
Surr: 4-Terphenyl-d14	*9.647*	0	*3.308*	0	*292*	*33-111*	9.47	*1.86*	*30*	*S*

The following samples were analyzed in this batch: 19111271-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19111271
Project: Joliet Fire

QC BATCH REPORT

Batch ID: **R275660** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R275660** Units: **% of sample** Analysis Date: **11/18/2019 11:40 A**
Client ID: Run ID: **MOIST_191118A** SeqNo: **6066780** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R275660** Units: **% of sample** Analysis Date: **11/18/2019 11:40 A**
Client ID: Run ID: **MOIST_191118A** SeqNo: **6066779** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19111245-06B DUP** Units: **% of sample** Analysis Date: **11/18/2019 11:40 A**
Client ID: Run ID: **MOIST_191118A** SeqNo: **6066774** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.73	0.10	0	0	0	0-0	9.8	0.717	10	

DUP Sample ID: **19111245-07B DUP** Units: **% of sample** Analysis Date: **11/18/2019 11:40 A**
Client ID: Run ID: **MOIST_191118A** SeqNo: **6066776** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.49	0.10	0	0	0	0-0	10.04	4.38	10	

The following samples were analyzed in this batch: 19111271-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

1911271

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE: [illegible]		X Non Standard or urgent TAT (List due date): 24 Hr TAT
PROJECT: 103x903100690002aj001	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7
ORDER NUMBER: ALS-1 Mod. 1		OF: 1 2 3 4 5 6 7
PROJECT MANAGER: Andre Baker	CONTACT PH: 6303793748	
SAMPLER: Brendan Martin	SAMPLER MOBILE:	
COC emailed to ALS? (YES)	EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com, Brendan.martin@tetratech.com		
Email Invoice to (will default to PM if no other addresses are listed):		

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comment:			

RELINQUISHED BY: Brendan Martin	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME: 11/15/19 1400 Brendan Martin	DATE/TIME: FED EX	DATE/TIME: FED EX	DATE/TIME: 11/16/19 0945

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SR2 3.2°C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO/SW8660 8015	Percent Solids							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MPGI-I60-Soil-06-111519	11/15/19, 1000	Soil	None	2	X	X							Extra container for MS/MSD
				TOTAL	2									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Blaulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

2

ALS Group, USA

Sample Receipt Checklist

Client Name: **TETRATECH-EM-CHI** Date/Time Received: **16-Nov-19 09:45**

Work Order: **19111271** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 16-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 20-Nov-19 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.2/3.2 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/16/2019 11:09:57 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order: 19111428

Project Name:

Joliet Fire

Tetra Tech EM Inc.

Andre Baker
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

09-Dec-2019

Certificate No: IL: 200076

Contents

Section I: Case Narrative

Section II: Sample Receipt

Section III: Analytical Data

Section IV: Attachments

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

Section I

CASE NARRATIVE

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: 19111428

Case Narrative

Samples for the above noted Work Order were received on 11/19/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

Section II

SAMPLE RECEIPT

-Sample Summary

-Shipping Documents*

-Chain of Custody

-Receipt Checklist

(* = As applicable)

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: **19111428**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19111428-01	MPGI-PP-Soil-01-111819	Soil		11/18/2019 11:00	11/19/2019 10:00	☐
19111428-02	MPGI-PP-Soil-02-111819	Soil		11/18/2019 11:02	11/19/2019 10:00	☐

19111428

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:		X Non Standard or urgent TAT (List due date): 24 Hr TAT
PROJECT: 103x903100690002aj001	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7
ORDER NUMBER: ALS-1 Mod. 2		
PROJECT MANAGER: Andre Baker	CONTACT PH: 6303793749	
SAMPLER: Brendan Martin	SAMPLER MOBILE:	
COC emailed to ALS? (NO)	EDD FORMAT (or default):	
Email Reports to Andre.baker@tetratech.com, Brendan.martin@tetratech.com		
Email Invoice to (will default to PM if no other addresses are listed):		

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Brendan Martin	FED EX	FED EX	
DATE/TIME: 11/18/19 1450	DATE/TIME:	DATE/TIME:	DATE/TIME: 11/19/19 1000

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: 8R2 3.4°C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO/SW8015	Percent Solids							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MPGI-PP-Soil-01 11/18/19 AM	11/18/19, 1100	Soil	None	1	X	X							
2	MPGI-PP-Soil-02 11/18/19 AM	11/18/19, 1102	Soil	None	2	X	X							Extra container for MS/MSD
				TOTAL	3									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Group, USA

Sample Receipt Checklist

Client Name: ***TETRATECH-EM-CHI*** Date/Time Received: ***19-Nov-19 10:00***

Work Order: ***19111428*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 19-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 19-Nov-19 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.4/3.4 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2019 1:40:16 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Section III

Analytical Data

-Analysis Data Sheet

-QC Summary

-QC Batch Report

-Summary Forms (if applicable)

-Raw Data

Raw Data Format

Organic Ordering

-Field Sample Data

-Calibration Data

-Initial

-Continuing

-Instrument QC Data (BFB, DFTPP, etc. as applicable)

-QC Data

-Sequence Logs

-Extraction Logs

Inorganic Ordering

-Instrument Data

-Digestion/Preparation Data

-Calculation Data (if applicable)

Organic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

GC
Semi-Volatile Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Diesel Range Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-PP-Soil-01-111819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19111428

Matrix: Soil Lab Sample ID: 19111428-01A

Sample wt/vol: 15.24 (g/mL) g Lab File ID:

% Moisture: not dec. 17 Date Received: 11/19/2019

Extraction Type: Date Extracted 11/19/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/19/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	5.9	U

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-PP-Soil-02-111819

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19111428

Matrix: Soil Lab Sample ID: 19111428-02A

Sample wt/vol: 15.00 (g/mL) g Lab File ID:

% Moisture: not dec. 31 Date Received: 11/19/2019

Extraction Type: Date Extracted 11/19/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/19/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	17	

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.

Work Order: 19111428

Project: Joliet Fire

QC BATCH REPORT

Batch ID: **145838** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-145838-145838** Units: **mg/Kg** Analysis Date: **11/19/2019 05:02 P**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070431** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.371*	0	*3.33*	0	*71.2*	*33-111*	0			

LCS Sample ID: **DLCSS1-145838-145838** Units: **mg/Kg** Analysis Date: **11/19/2019 05:31 P**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070432** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	354.3	5.0	333	0	106	58-111	0			
Surr: 4-Terphenyl-d14	*2.173*	0	*3.33*	0	*65.2*	*33-111*	0			

MS Sample ID: **19111428-02A MS** Units: **mg/Kg** Analysis Date: **11/19/2019 06:00 P**

Client ID: **MPGI-PP-Soil-02-111819** Run ID: **GC8_191119A** SeqNo: **6070433** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	369.5	5.0	332.2	11.57	108	58-111	0			
Surr: 4-Terphenyl-d14	*1.989*	0	*3.322*	0	*59.9*	*33-111*	0			

MSD Sample ID: **19111428-02A MSD** Units: **mg/Kg** Analysis Date: **11/19/2019 06:29 P**

Client ID: **MPGI-PP-Soil-02-111819** Run ID: **GC8_191119A** SeqNo: **6070434** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	352.3	4.9	329.3	11.57	103	58-111	369.5	4.77	30	
Surr: 4-Terphenyl-d14	*1.936*	0	*3.293*	0	*58.8*	*33-111*	1.989	*2.7*	*30*	

The following samples were analyzed in this batch:

19111428-01A	19111428-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111930.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 8:55 pm
Operator : KJB
Sample : 19111428-01A
Misc :
ALS Vial : 109 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:40:06 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

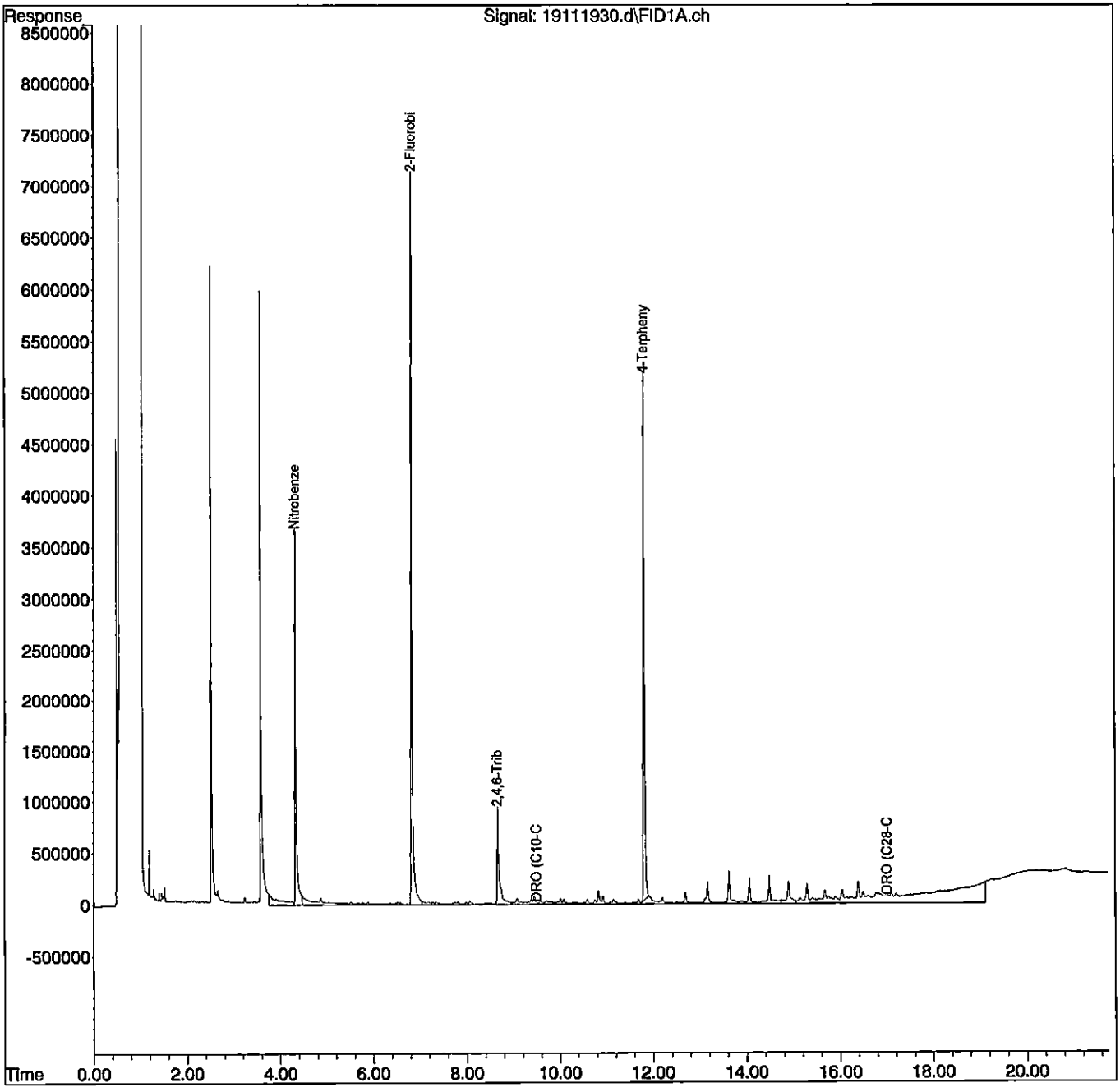
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.320	69111248	5.485	ug/mLm
2) S	2-Fluorobipehenyl	6.819	134280004	42.322	ug/mLm
3) S	2,4,6-Tribromophenol	8.658	30768523	2.196	ug/mLm
4) S	4-Terphenyl-d14	11.806	105849163	29.225	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-234159775	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-105849163	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	252587095	12.537	ug/mL
8) H	ORO (C28-C40)	17.000	213605580	246.838	ug/mL
9) H	ORO (C20-C40)	15.165	-105849163	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-340008938	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-340008938	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111930.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 8:55 pm
Operator : KJB
Sample : 19111428-01A
Misc :
ALS Vial : 109 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:40:06 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111922.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 6:58 pm
Operator : KJB
Sample : 19111428-02A
Misc :
ALS Vial : 105 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:35:28 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

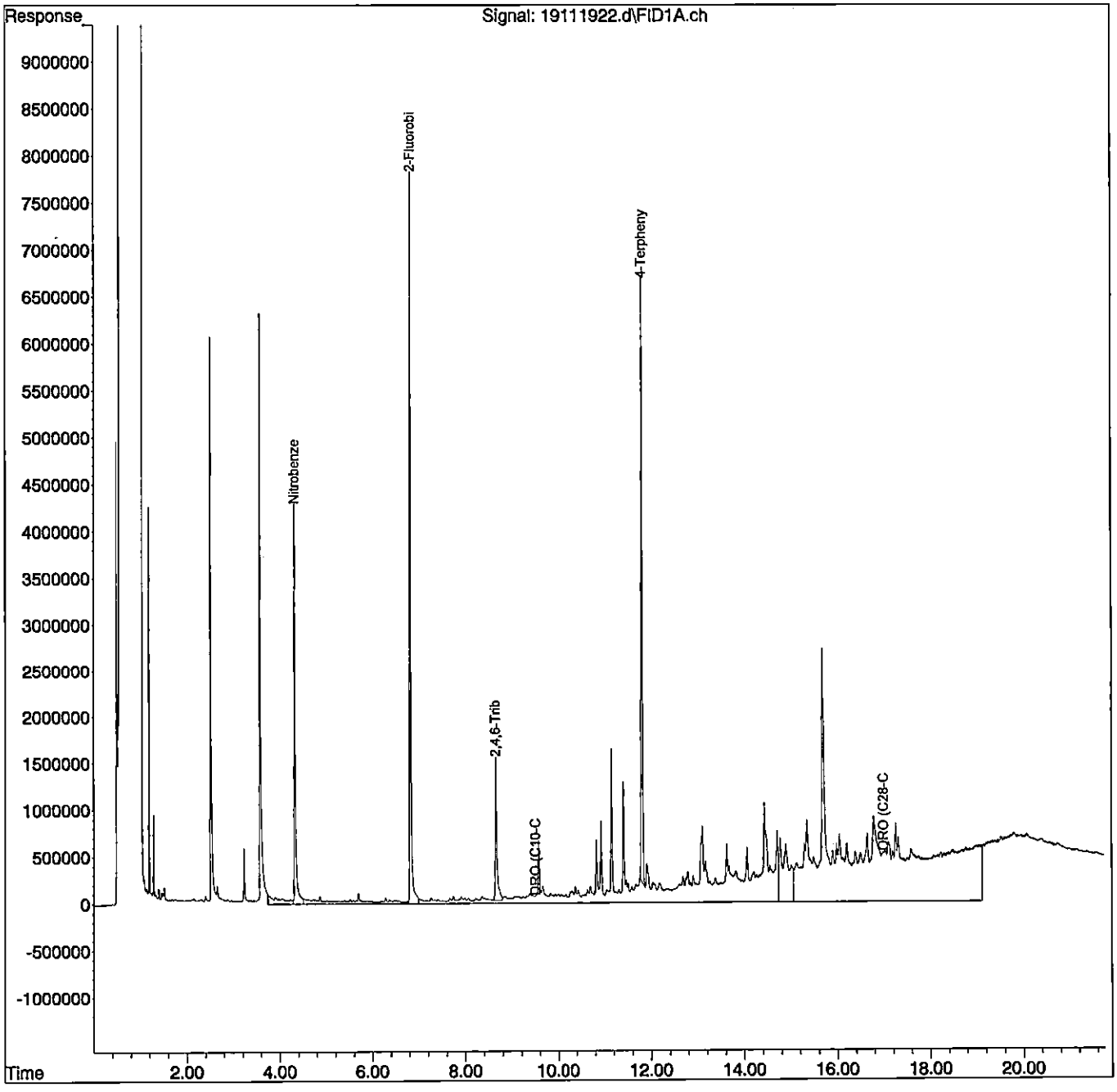
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.321	78014686	6.168	ug/mLm
2) S	2-Fluorobipehenyl	6.819	143409122	42.823	ug/mLm
3) S	2,4,6-Tribromophenol	8.652	37721192	2.450	ug/mLm
4) S	4-Terphenyl-d14	11.804	122015708	33.691	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-259145000	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-122015708	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	1006102792	173.566	ug/mL
8) H	ORO (C28-C40)	17.000	1165478633	703.738	ug/mL
9) H	ORO (C20-C40)	15.165	-122015708	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-381160707	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-381160707	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111922.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 6:58 pm
Operator : KJB
Sample : 19111428-02A
Misc :
ALS Vial : 105 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:35:28 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Method Path : C:\msdchem\1\methods\
Method File : DRO191030M.M
Title :
Last Update : Fri Nov 22 11:19:12 2019
Response Via : Initial Calibration

Calibration Files
50 =30OCT08.d 100 =30OCT10.d 250 =30OCT12.d
500 =30OCT14.d 1000 =30OCT16.d 2500 =30OCT18.d

		Compound	50	100	250	500	1000	2500	Avg		%RSD
1)	S	Nitrobenzene-d5	0.693	0.689	0.578	0.694	0.866	0.794	0.852	E7	34.84
2)	S	2-Fluorobipeh...	0.740	0.847	0.730	0.618	0.622	0.521	0.780	E7	78.81
3)	S	2,4,6-Tribrom...	2.834	2.689	2.135	2.060	2.105	1.920	1.955	E7	31.26
4)	S	4-Terphenyl-d14	4.115	4.613	3.372	3.491	3.834	3.255	3.735	E6	10.59
5)	H	DRO (C10-C20)	5.451	4.576	3.228	3.367	3.741	3.041	3.603	E6	22.09
6)	H	ORO (C20-C34)	5.641	4.847	2.983	2.995	3.597	3.056	3.572	E6	25.89
7)	H	DRO (C10-C28)	7.774	7.510	5.064	4.975	5.327	4.604	5.412	E6	22.12
8)	H	ORO (C28-C40)	5.495	6.590	2.125	1.917	2.072	1.915	2.818	E6	61.11
9)	H	ORO (C20-C40)	9.450	9.571	4.242	3.546	4.426	3.827	5.081	E6	46.30
10)	H	ORO (C28-C35)	3.171	4.198	1.608	1.617	1.816	1.542	2.063	E6	43.38
11)	H	ERO (C8-C40)	7.135	6.809	3.715	3.692	4.127	3.454	4.316	E6	32.80
12)	H	DIESEL (IOWA)	6.129	5.503	4.025	4.025	4.317	3.691	4.258	E6	20.24
13)	H	OIL (IOWA)	1.053	0.996	0.318	0.364	0.384	0.311	0.477	E7	60.74

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method Path : C:\msdchem\1\methods\
Method File : DRO191030M.M
Title :
Last Update : Fri Nov 22 11:19:12 2019
Response Via : Initial Calibration

Calibration Files
50 =30OCT08 100 =30OCT10 250 =30OCT12 500 =30OCT14 1000=30OCT16
2500=30OCT18 5000=30OCT20 10K =30OCT22 50K =30OCT26 25K =30OCT24

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	Nitrobenzene-d5	Lin	-2.3945 e6	1.3037 e7	-----	0.9290
2)	S	2-Fluorobipehenyl	Quad	5.2753 e7	-1.4182 e7	3.8062 e5	0.9866
3)	S	2,4,6-Tribromophenol	Quad	-3.0439 e7	2.8341 e7	-2.1323 e5	0.9533
4)	S	4-Terphenyl-d14	Lin	6.0865 e4	3.6198 e6	-----	0.9994
5)	H	DRO (C10-C20)	Lin	1.2932 e8	3.1148 e6	-----	0.9994
6)	H	ORO (C20-C34)	Lin	9.9434 e7	3.1962 e6	-----	0.9970
7)	H	DRO (C10-C28)	Lin	1.9392 e8	4.6794 e6	-----	0.9997
8)	H	ORO (C28-C40)	Lin	-3.0064 e8	2.0833 e6	-----	0.9992
9)	H	ORO (C20-C40)	Lin	2.9855 e8	3.9539 e6	-----	0.9969
10)	H	ORO (C28-C35)	Lin	-2.7655 e8	1.7320 e6	-----	0.9990
11)	H	ERO (C8-C40)	Lin	4.3462 e8	3.4949 e6	-----	0.9994
12)	H	DIESEL (IOWA)	Lin	1.5862 e8	3.6590 e6	-----	0.9995
13)	H	OIL (IOWA)	Lin	3.7389 e8	3.3590 e6	-----	0.9964

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT04.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:02 pm
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 09:06:20 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

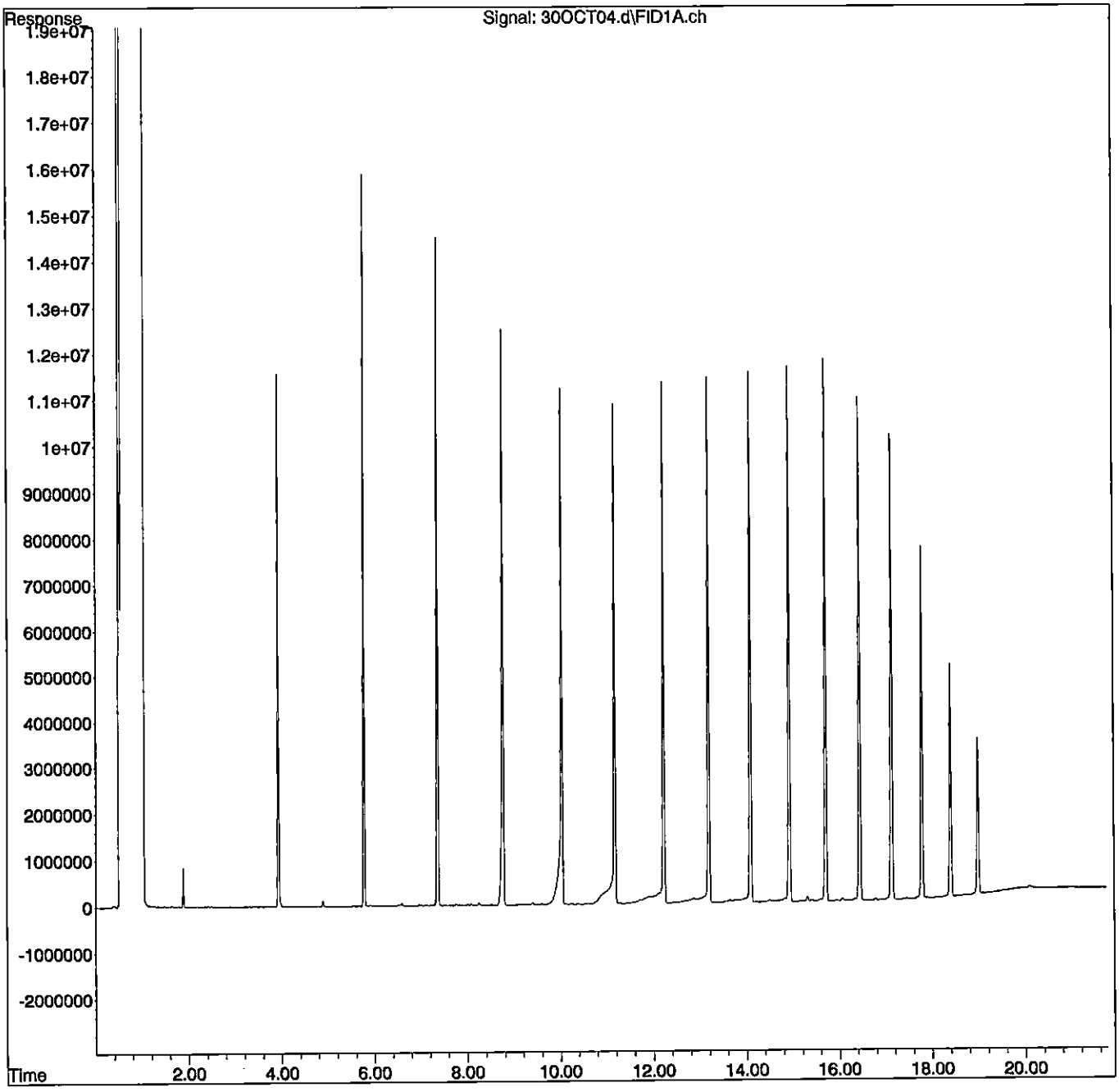
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT04.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:02 pm
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 09:06:20 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT06.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:31 pm
Operator : KJB
Sample : BNA SURROGATE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 13:00:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

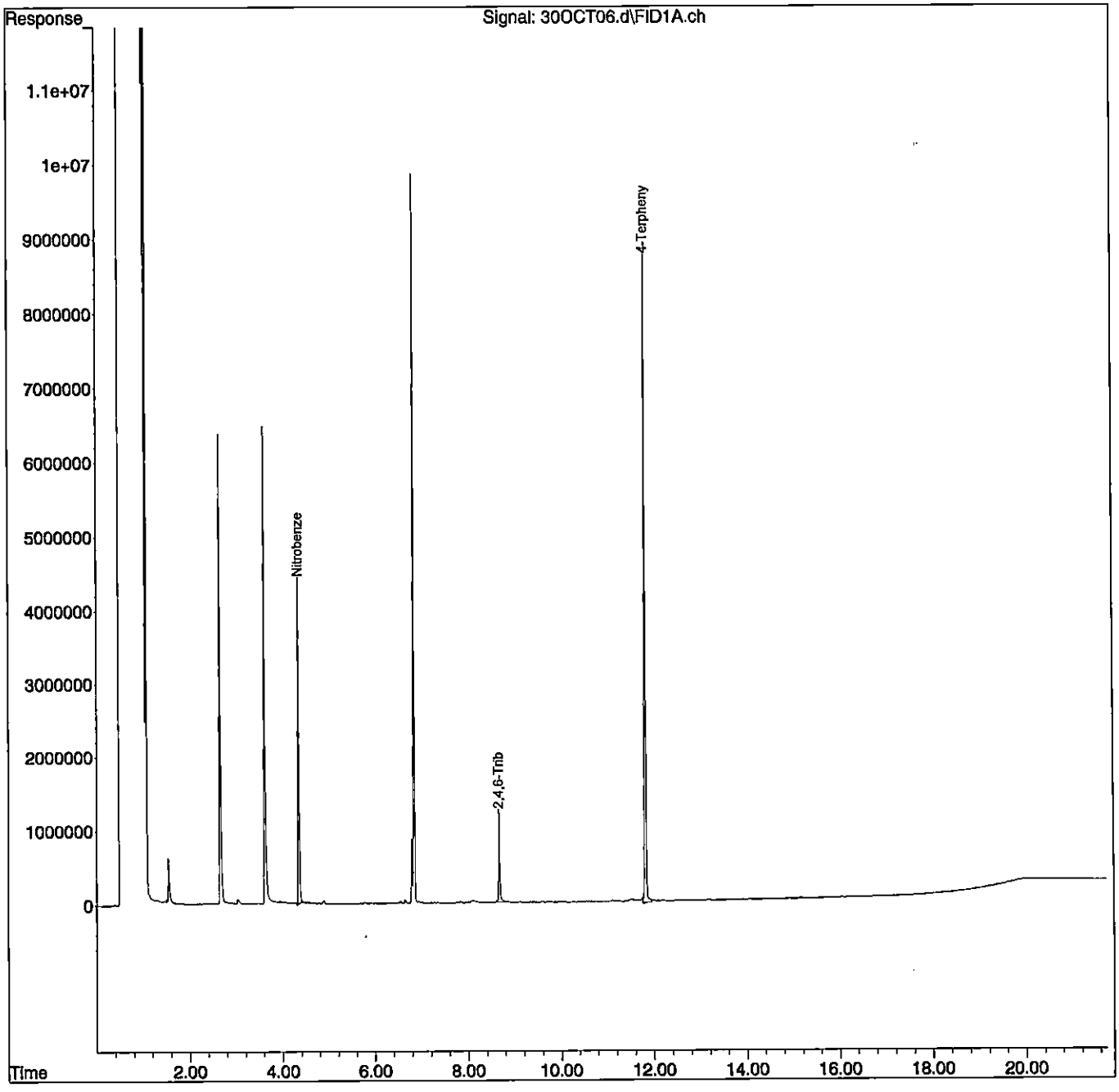
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.348	75166406	10.354	ug/mLm
2) S	2-Fluorobipehenyl	6.839	155466804	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.660	22688792	1.574	ug/mLm
4) S	4-Terphenyl-d14	11.821f	165380733	62.445	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mLd
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT06.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 6:31 pm
Operator : KJB
Sample : BNA SURROGATE
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 01 13:00:39 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:57 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT08.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:01 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10288A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:18:41 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

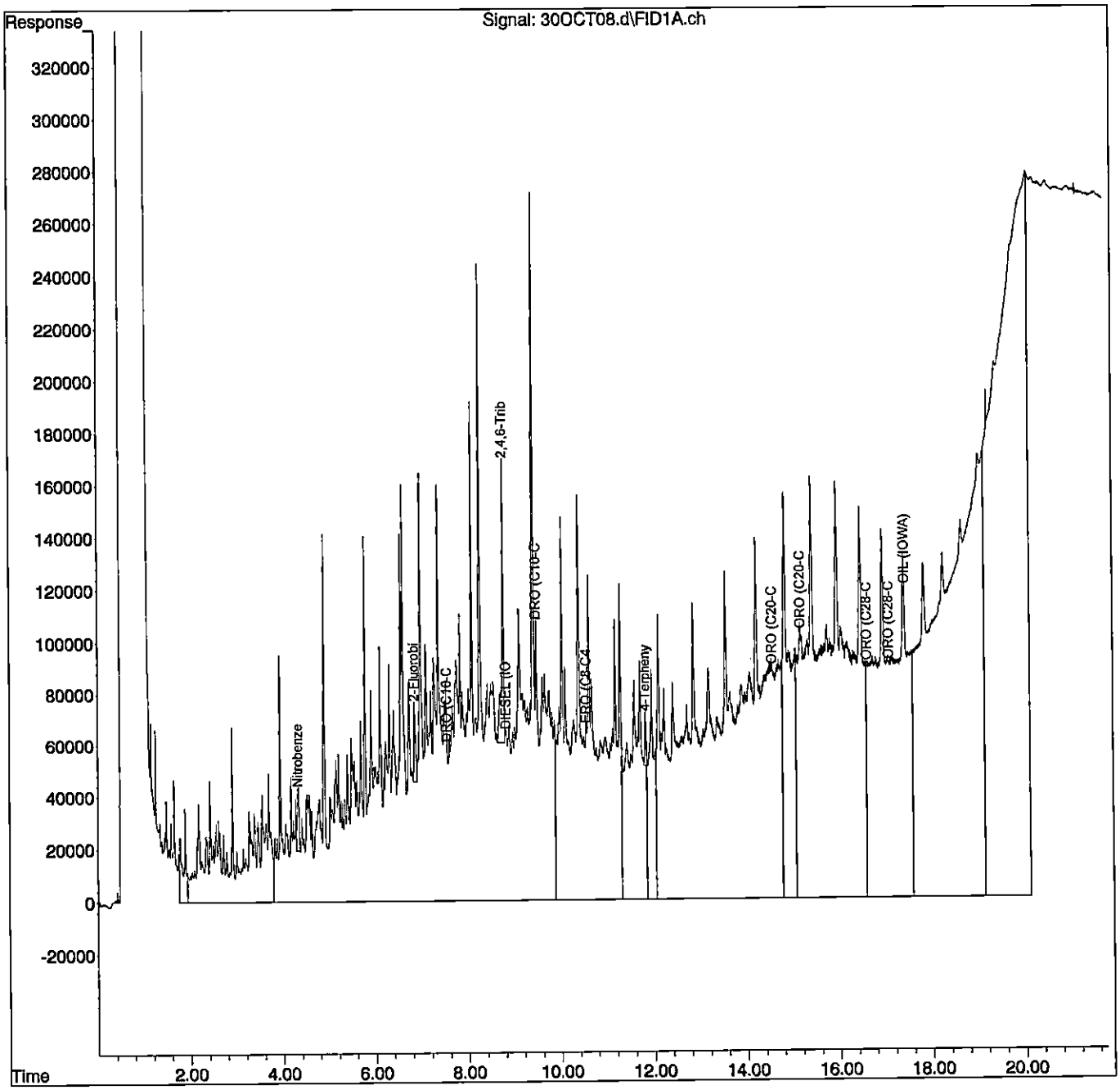
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.317	692554	0.107	ug/mLm
2) S	2-Fluorobipehenyl	6.831	740138	0.588	ug/mLm
3) S	2,4,6-Tribromophenol	8.753	2833915	0.642	ug/mLm
4) S	4-Terphenyl-d14	11.817	411536	0.118	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	272566760	88.866	ug/mL
6) H	ORO (C20-C34)	14.560	282027138	101.493	ug/mL
7) H	DRO (C10-C28)	9.472	388677648	83.453	ug/mL
8) H	ORO (C28-C40)	17.070	286056710	120.609	ug/mL
9) H	ORO (C20-C40)	15.165	472509994	124.068	ug/mL
10) H	ORO (C28-C35)	16.581	158545095	113.961	ug/mL
11) H	ERO (C8-C40)	10.557	713502270	201.046	ug/mL
12) H	DIESEL (IOWA)	8.818	306457160	65.609	ug/mL
13) H	OIL (IOWA)	17.414	526401627	231.923	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT08.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:01 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10288A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:18:41 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT10.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:30 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10288B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

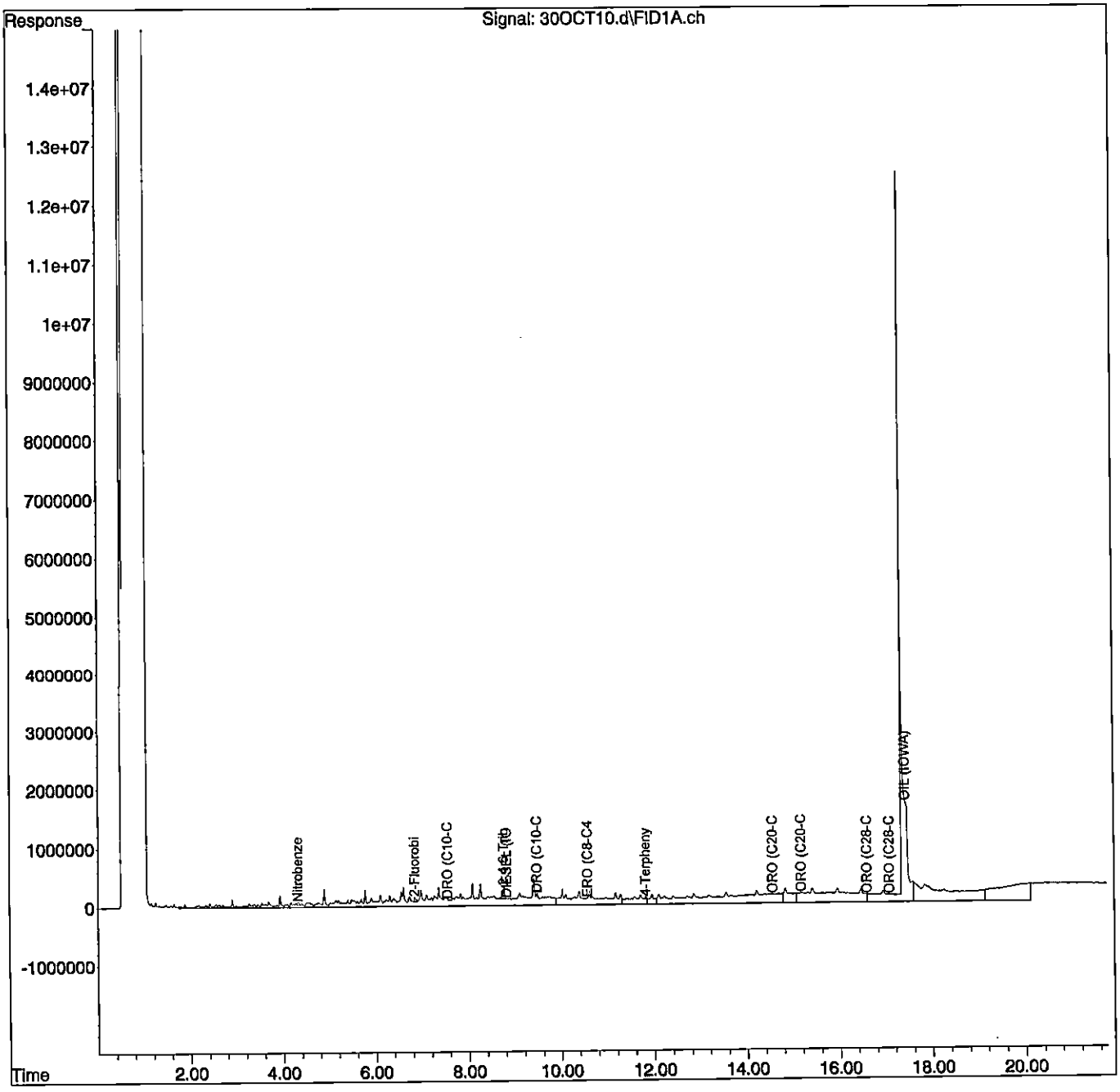
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.314	1377315	0.201	ug/mLm
2) S	2-Fluorobipehenyl	6.832	1693662	0.840	ug/mLm
3) S	2,4,6-Tribromophenol	8.751	5377178	0.761	ug/mLm
4) S	4-Terphenyl-d14	11.811	922590	0.312	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	457624351	147.664	ug/mL
6) H	ORO (C20-C34)	14.560	484699726	173.356	ug/mL
7) H	DRO (C10-C28)	9.472	750996350	159.380	ug/mL
8) H	ORO (C28-C40)	17.070	658424596	288.442	ug/mL
9) H	ORO (C20-C40)	15.165	957141645	251.344	ug/mL
10) H	ORO (C28-C35)	16.581	419768024	297.996	ug/mL
11) H	ERO (C8-C40)	10.557	1361770717	388.132	ug/mL
12) H	DIESEL (IOWA)	8.818	550318807	116.957	ug/mL
13) H	OIL (IOWA)	17.414	996467819	441.813	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT10.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:30 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10288B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT12.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:59 pm
Operator : KJB
Sample : DRO ICAL 250 UG/L
Misc : 100-10288C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:55 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

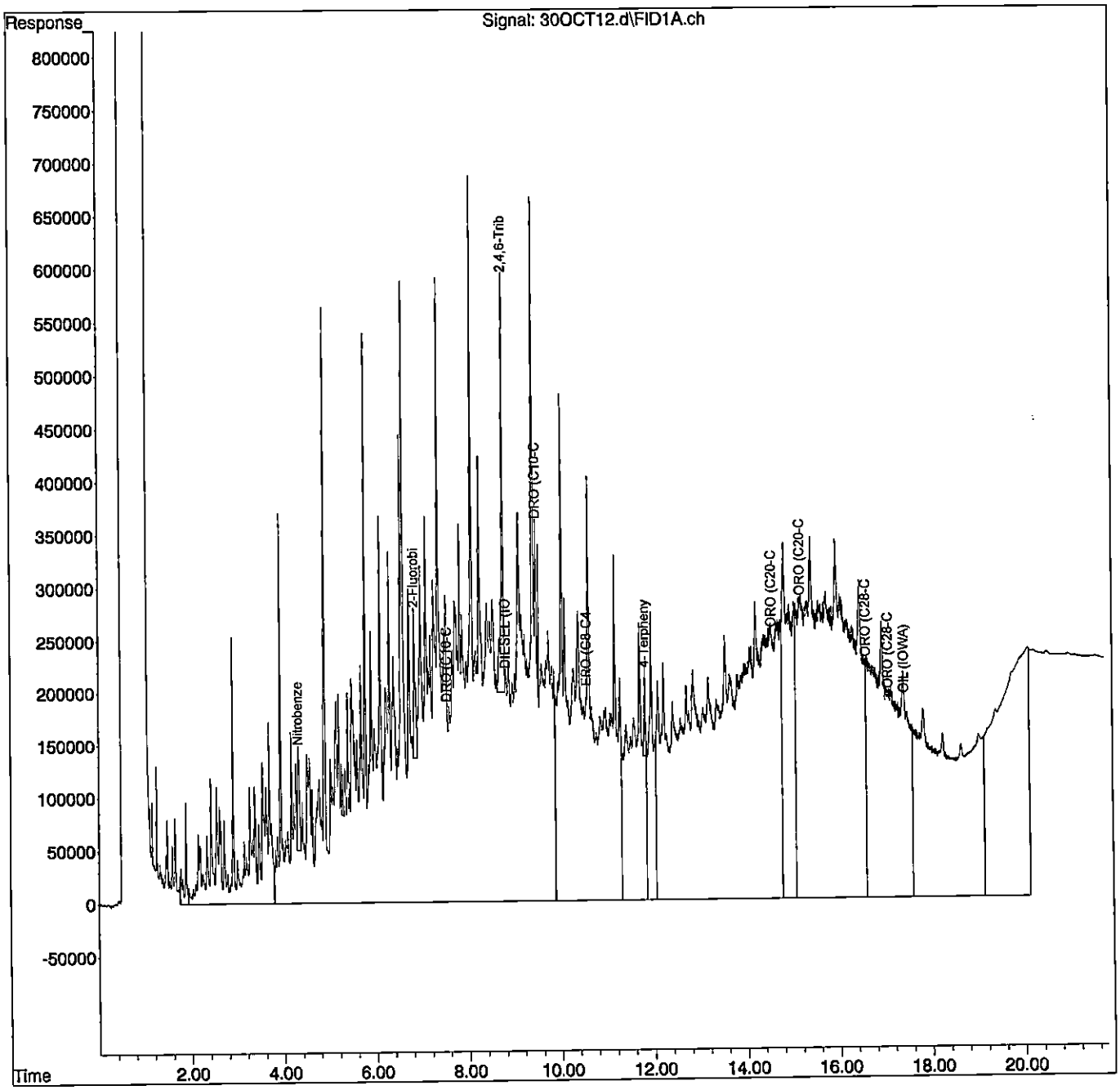
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.313	2892224	0.410	ug/mLm
2) S	2-Fluorobipehenyl	6.830	3648006	1.359	ug/mLm
3) S	2,4,6-Tribromophenol	8.752	10676800	1.009	ug/mLm
4) S	4-Terphenyl-d14	11.811	1685764	0.600	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	806974198	258.663	ug/mL
6) H	ORO (C20-C34)	14.560	745712045	265.906	ug/mL
7) H	DRO (C10-C28)	9.472	1266061913	267.316	ug/mL
8) H	ORO (C28-C40)	17.070	545625385	237.601	ug/mL
9) H	ORO (C20-C40)	15.165	1060400722	278.462	ug/mL
10) H	ORO (C28-C35)	16.581	401883650	285.397	ug/mL
11) H	ERO (C8-C40)	10.557	1857310307	531.141	ug/mL
12) H	DIESEL (IOWA)	8.818	1006161150	212.941	ug/mL
13) H	OIL (IOWA)	17.414	796002526	352.303	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT12.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 7:59 pm
Operator : KJB
Sample : DRO ICAL 250 UG/L
Misc : 100-10288C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:19:55 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT14.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:28 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10288D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:20:19 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

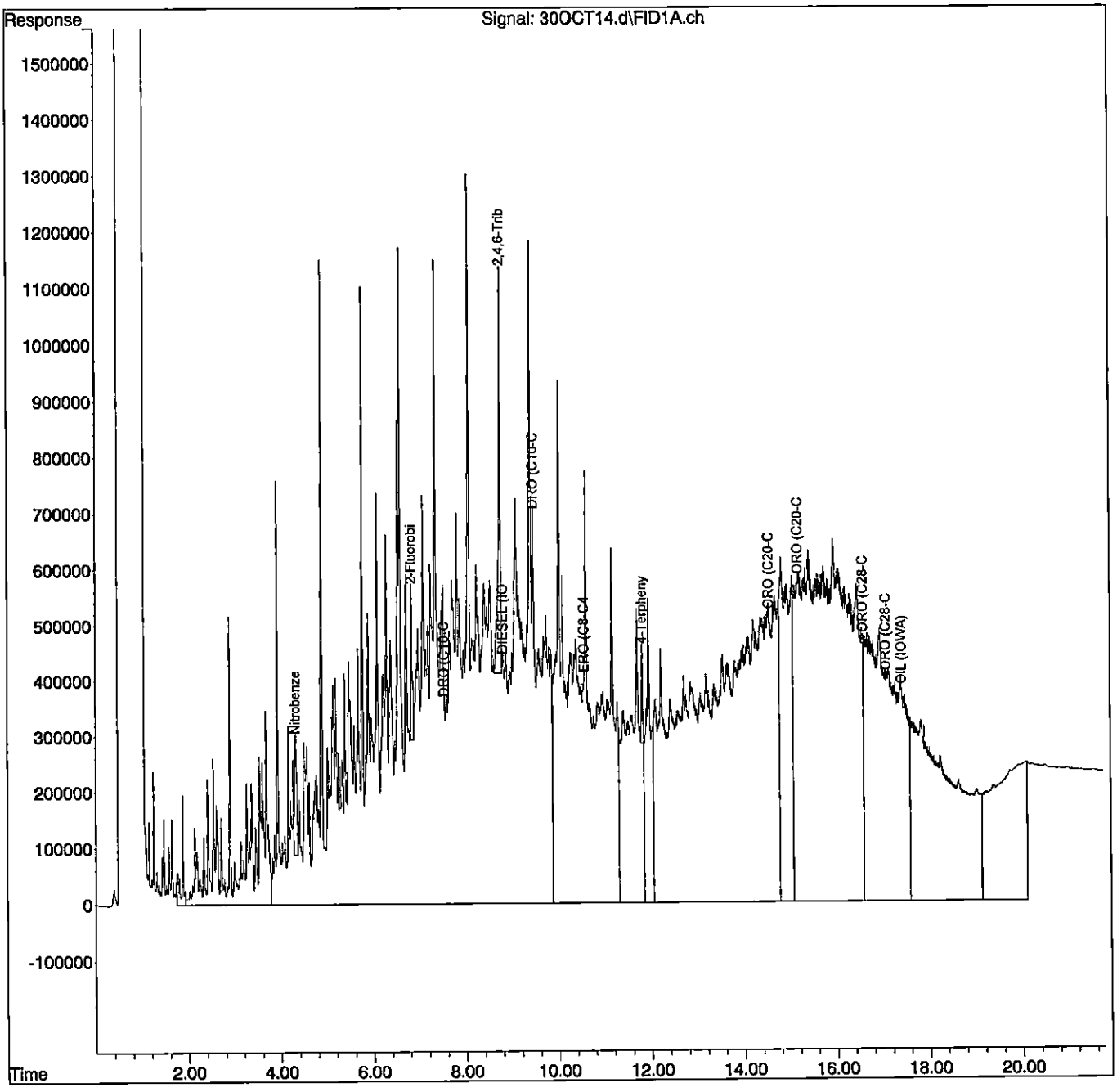
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.318	6940727	0.967	ug/mLm
2) S	2-Fluorobipehenyl	6.830	6183810	2.039	ug/mLm
3) S	2,4,6-Tribromophenol	8.752	20599901	1.475	ug/mLm
4) S	4-Terphenyl-d14	11.810	3490949	1.282	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	1683508935	537.163	ug/mL
6) H	ORO (C20-C34)	14.560	1497684790	532.540	ug/mL
7) H	DRO (C10-C28)	9.472	2487634312	523.307	ug/mL
8) H	ORO (C28-C40)	17.070	1059415770	469.176	ug/mL
9) H	ORO (C20-C40)	15.165	1772917928	465.585	ug/mL
10) H	ORO (C28-C35)	16.581	808349855	571.757	ug/mL
11) H	ERO (C8-C40)	10.557	3692311661	1060.709	ug/mL
12) H	DIESEL (IOWA)	8.818	2012326373	424.802	ug/mL
13) H	OIL (IOWA)	17.414	1820345762	809.685	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT14.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:28 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10288D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 05 12:20:19 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT16.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:57 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10288E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:09:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

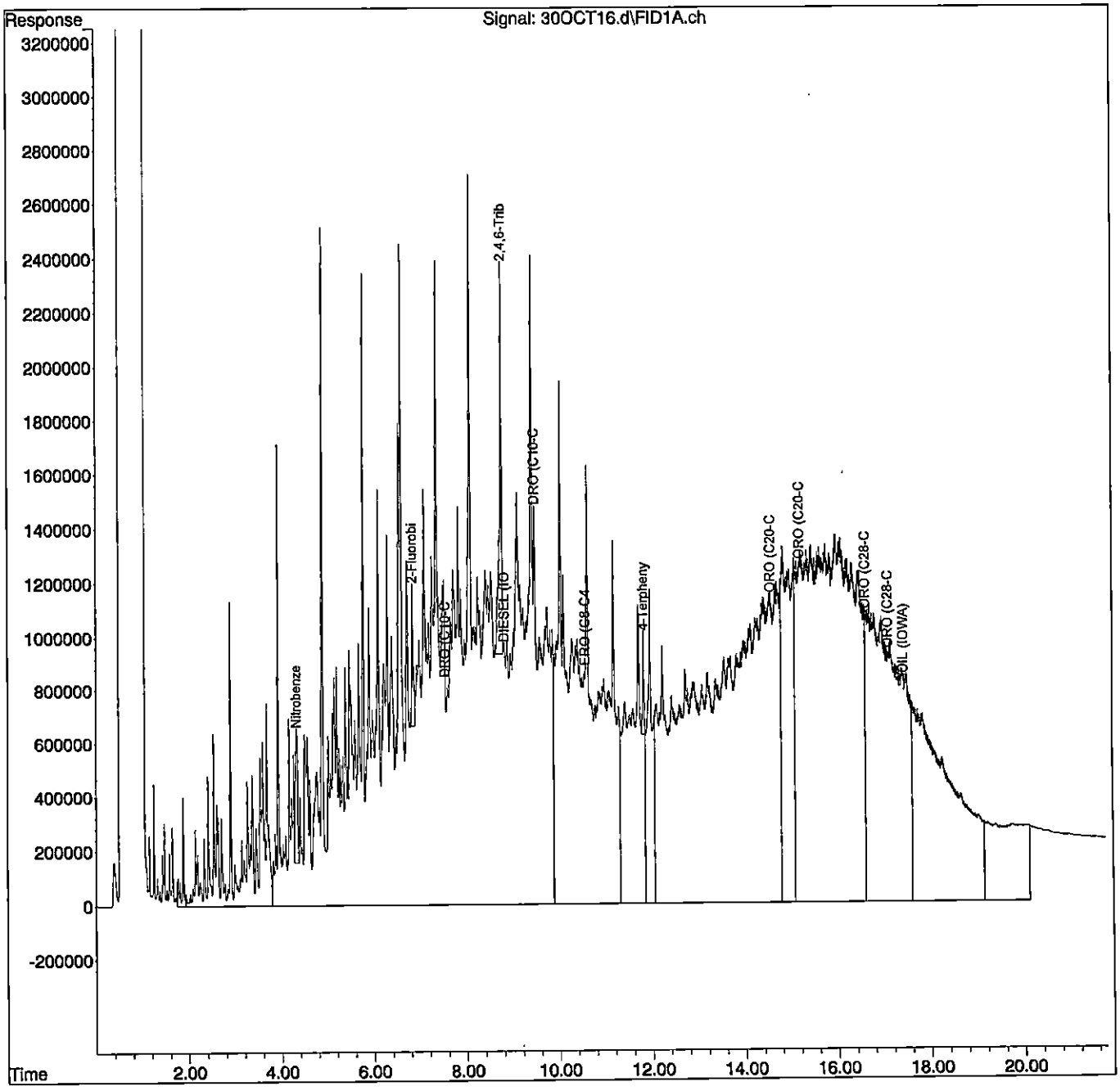
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.322	17320346	2.395	ug/mLm
2) S	2-Fluorobipehenyl	6.830	12444345	3.745	ug/mLm
3) S	2,4,6-Tribromophenol	8.755	42090428	2.494	ug/mLm
4) S	4-Terphenyl-d14	11.811	7668164	2.860	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	3741433600	1191.025	ug/mL
6) H	ORO (C20-C34)	14.560	3597453513	1277.075	ug/mL
7) H	DRO (C10-C28)	9.472	5327440820	1118.412	ug/mL
8) H	ORO (C28-C40)	17.070	2071852618	925.499	ug/mL
9) H	ORO (C20-C40)	15.165	4425760140	1162.283	ug/mL
10) H	ORO (C28-C35)	16.581	1816441068	1281.971	ug/mL
11) H	ERO (C8-C40)	10.557	8254363859	2377.285	ug/mL
12) H	DIESEL (IOWA)	8.818	4317363726	910.158	ug/mL
13) H	OIL (IOWA)	17.414	3837339290	1710.296	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT16.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 8:57 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10288E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:09:11 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT18.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:26 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10288F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:17:12 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

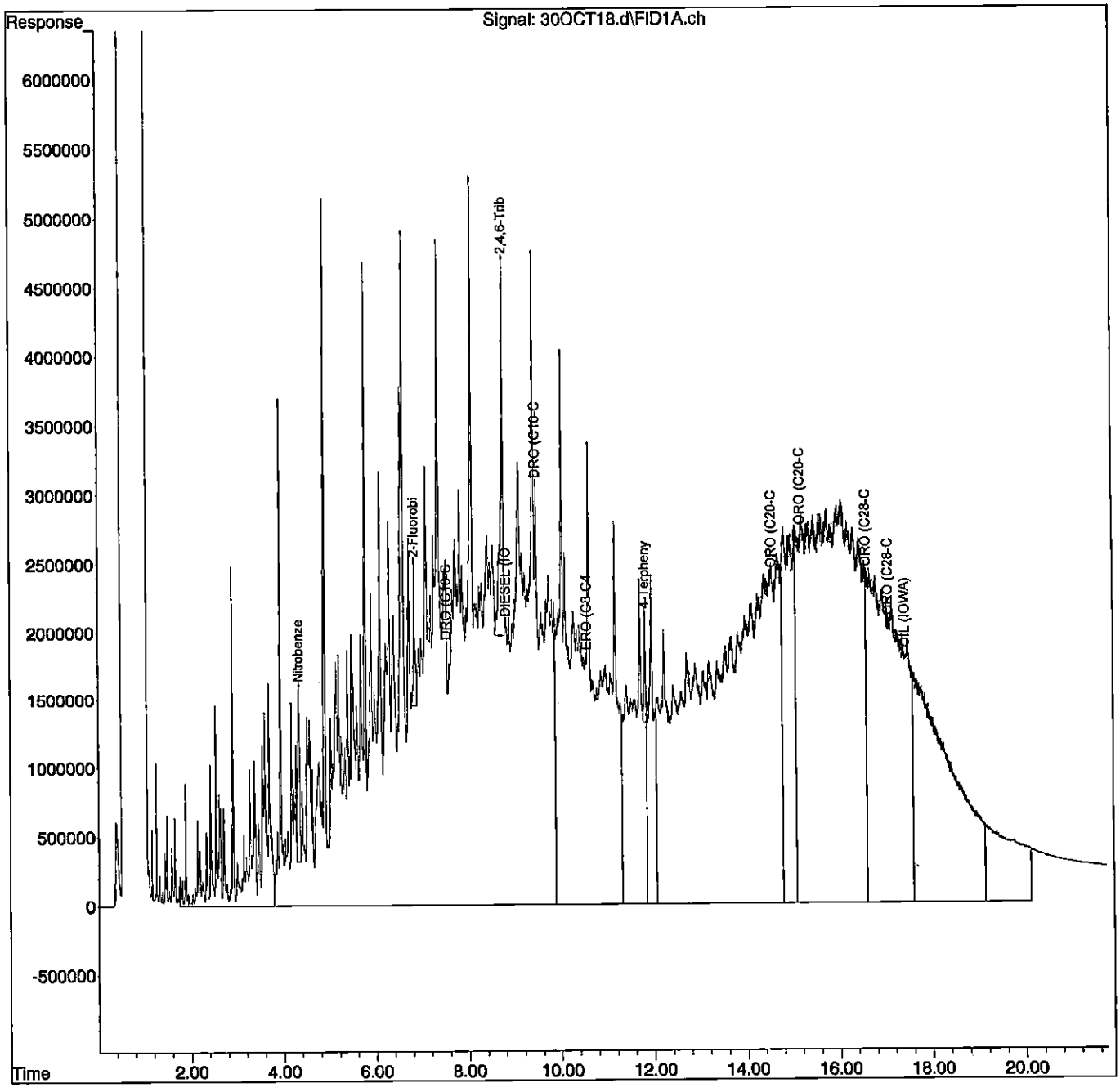
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	Nitrobenzene-d5	4.335	39696898	5.474	ug/mLm
2)	S	2-Fluorobipehenyl	6.835	26049468	7.612	ug/mLm
3)	S	2,4,6-Tribromophenol	8.760	95999853	5.106	ug/mLm
4)	S	4-Terphenyl-d14	11.814	16273604	6.111	ug/mLm
Target Compounds						
5)	H	DRO (C10-C20)	7.548	7602685829	2417.857	ug/mL
6)	H	ORO (C20-C34)	14.560	7638779978	2710.046	ug/mL
7)	H	DRO (C10-C28)	9.472	11509689451	2413.953	ug/mL
8)	H	ORO (C28-C40)	17.070	4788127507	2149.771	ug/mL
9)	H	ORO (C20-C40)	15.165	9567554007	2512.635	ug/mL
10)	H	ORO (C28-C35)	16.581	3856166914	2718.985	ug/mL
11)	H	ERO (C8-C40)	10.557	17271853551	4979.667	ug/mL
12)	H	DIESEL (IOWA)	8.818	9227835662	1944.122	ug/mL
13)	H	OIL (IOWA)	17.414	7778108821	3469.897	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT18.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:26 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10288F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:17:12 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT20.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:55 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10288G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:40:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

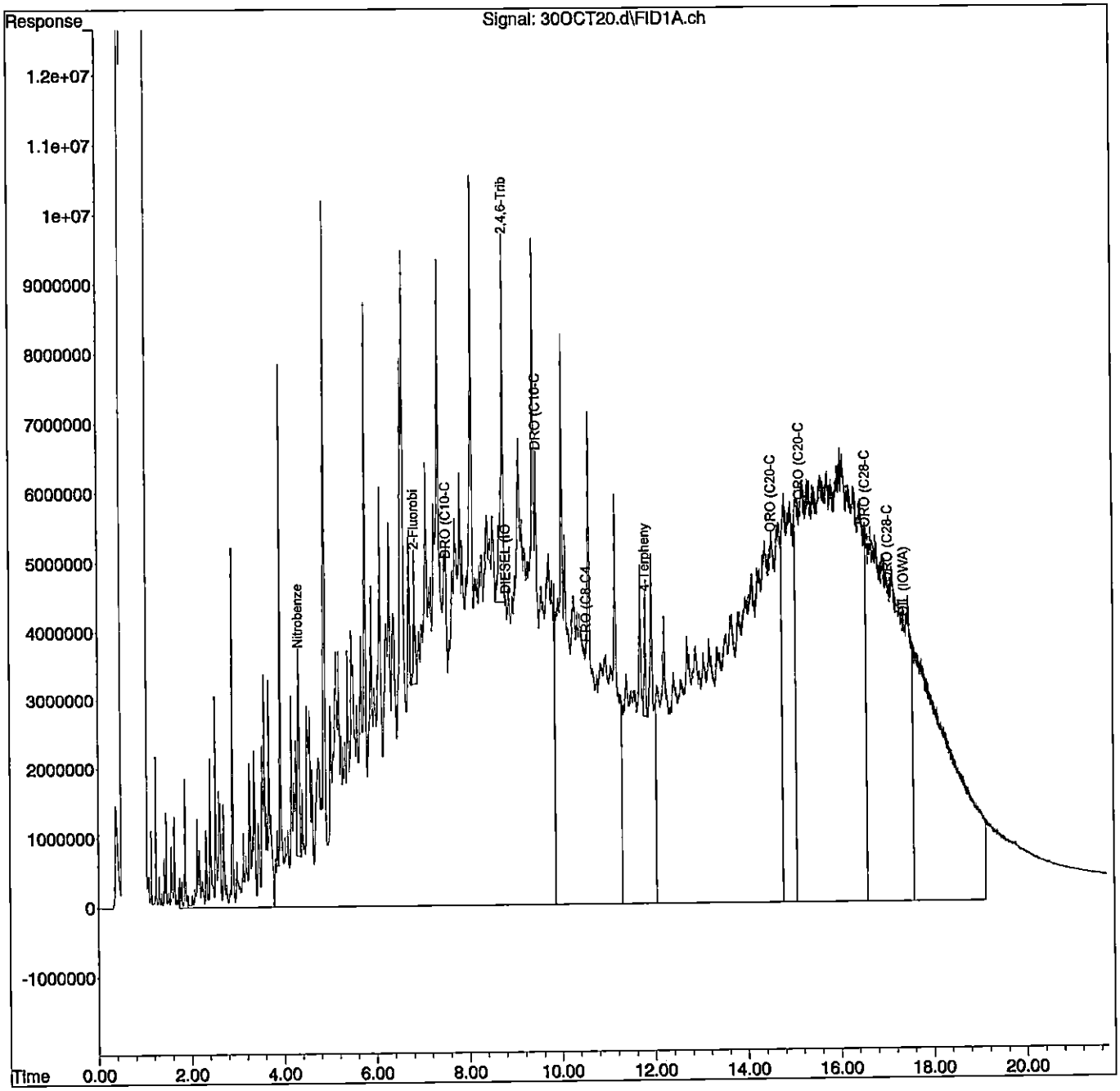
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.333	78660816	10.835	ug/mLm
2) S	2-Fluorobipehenyl	6.842	49514409	14.900	ug/mLm
3) S	2,4,6-Tribromophenol	8.771	173960056	9.039	ug/mLm
4) S	4-Terphenyl-d14	11.823	38389950	14.467	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	15959321728	5073.003	ug/mL
6) H	ORO (C20-C34)	14.560	16553519603	5871.029	ug/mL
7) H	DRO (C10-C28)	9.472	23865677954	5003.252	ug/mL
8) H	ORO (C28-C40)	17.070	10608892516	4773.292	ug/mL
9) H	ORO (C20-C40)	15.165	20803426454	5463.433	ug/mL
10) H	ORO (C28-C35)	16.581	8745864758	6163.843	ug/mL
11) H	ERO (C8-C40)	10.557	36964204271	10662.738	ug/mL
12) H	DIESEL (IOWA)	8.818	19609965826	4130.215	ug/mL
13) H	OIL (IOWA)	17.414	17590906733	7851.427	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT20.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 9:55 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10288G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:40:01 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT22.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:25 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10288H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:24:17 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

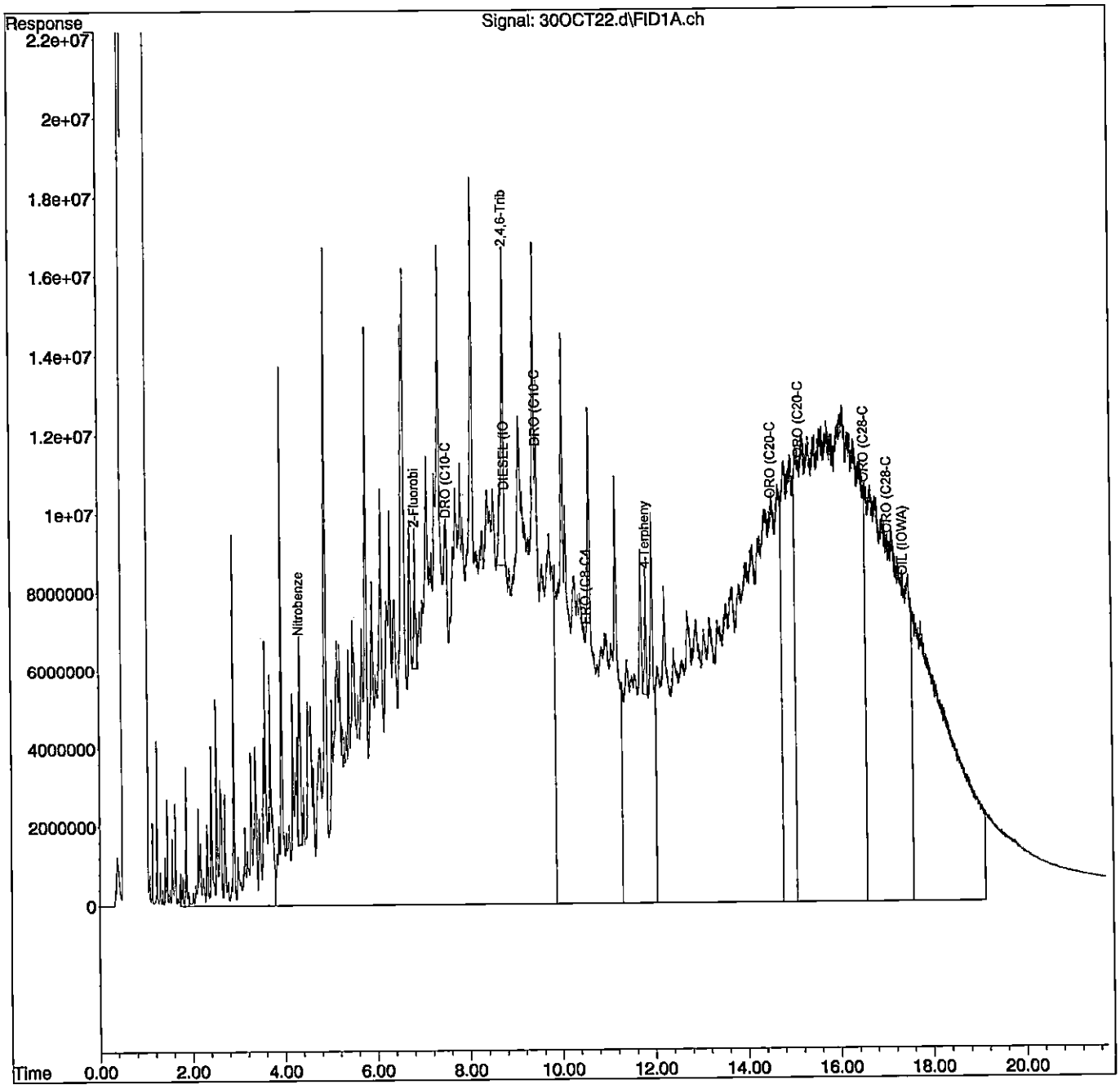
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.339	153137709	21.082 ug/mLm
2) S	2-Fluorobipehenyl	6.857	92824704	31.728 ug/mLm
3) S	2,4,6-Tribromophenol	8.781	295190513	15.587 ug/mLm
4) S	4-Terphenyl-d14	11.835	71381707	26.931 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	31866746709	10127.253 ug/mL
6) H	ORO (C20-C34)	14.560	29054299470	10303.548 ug/mL
7) H	DRO (C10-C28)	9.472	46947519672	9840.243 ug/mL
8) H	ORO (C28-C40)	17.070	18099435567	8149.410 ug/mL
9) H	ORO (C20-C40)	15.165	35035084274	9200.993 ug/mL
10) H	ORO (C28-C35)	16.581	14604864176	10291.587 ug/mL
11) H	ERO (C8-C40)	10.557	70415065161	20316.416 ug/mL
12) H	DIESEL (IOWA)	8.818	36604135232	7708.559 ug/mL
13) H	OIL (IOWA)	17.414	31916967894	14248.183 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT22.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:25 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10288H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:24:17 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT24.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:54 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10288I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:42:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

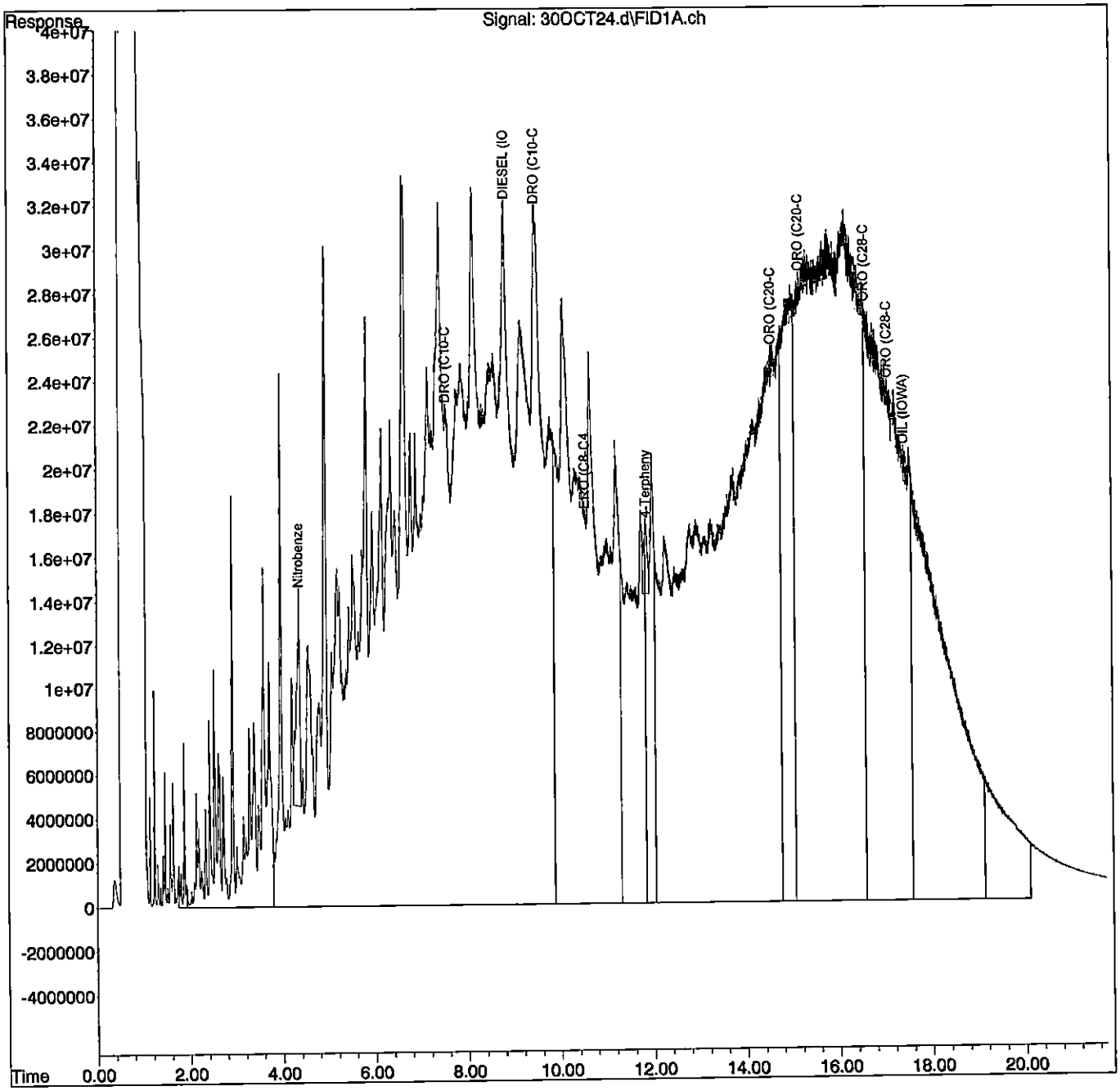
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.361	513730181	70.698	ug/mLm
2) S	2-Fluorobipehenyl	6.791	146460073	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.822	972844493	BelowCal	ug/mLm
4) S	4-Terphenyl-d14	11.857	182172324	68.789	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	79423264261	25237.338	ug/mL
6) H	ORO (C20-C34)	14.560	76228556993	27030.569	ug/mL
7) H	DRO (C10-C28)	9.472	1.18572e+011	24849.710	ug/mL
8) H	ORO (C28-C40)	17.070	50958220953	22959.439	ug/mL
9) H	ORO (C20-C40)	15.165	1.02185e+011	26836.096	ug/mL
10) H	ORO (C28-C35)	16.581	43275911937	30490.724	ug/mL
11) H	ERO (C8-C40)	10.557	1.76896e+011	51046.029	ug/mL
12) H	DIESEL (IOWA)	8.818	92007978916	19374.563	ug/mL
13) H	OIL (IOWA)	17.414	81035663080	36180.263	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT24.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 10:54 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10288I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:42:48 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT26.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:23 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10288J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:31:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

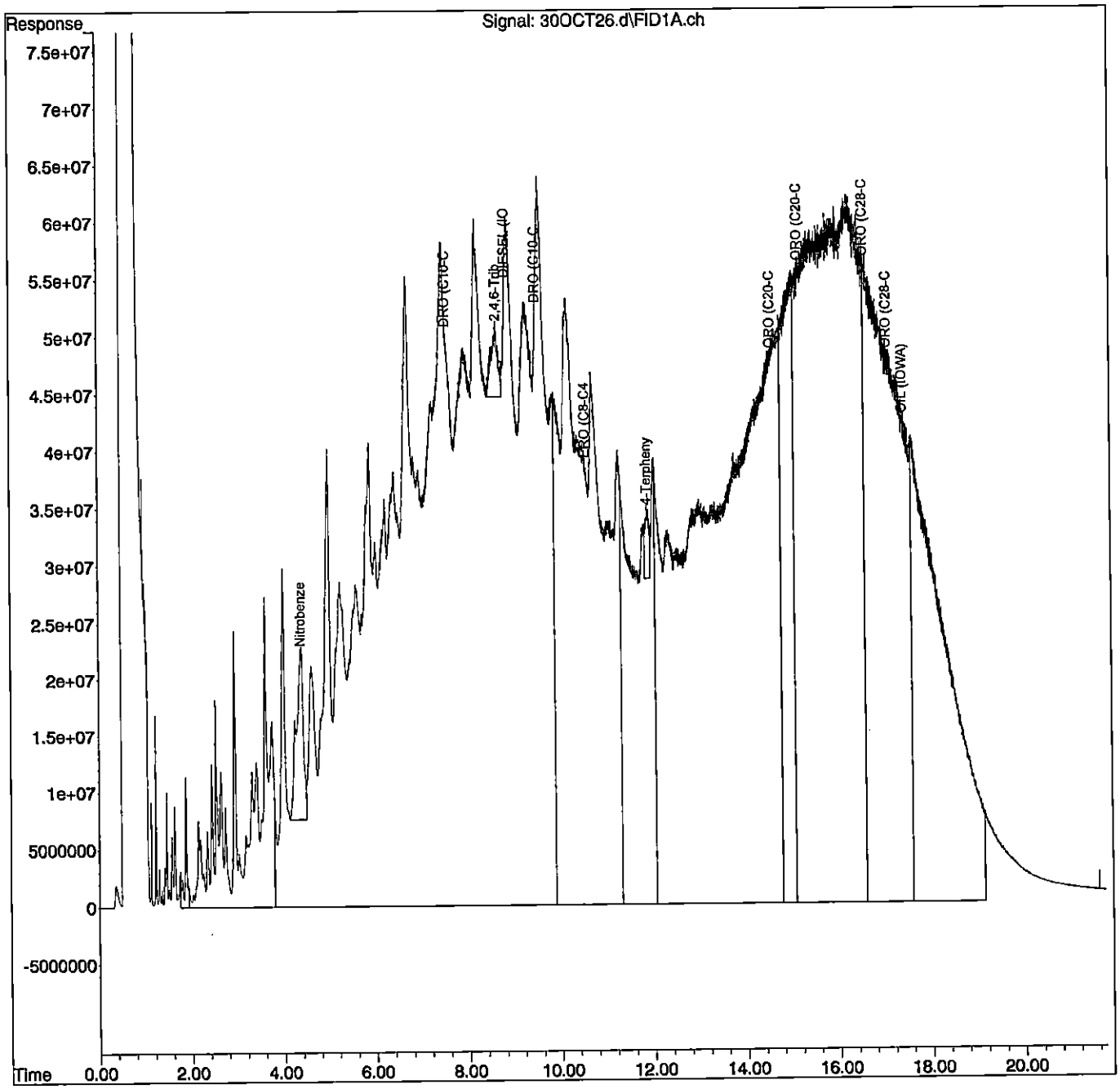
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.378	1623050884	223.333	ug/mLm
2) S	2-Fluorobipehenyl	6.693	2469964512	BelowCal	ug/mLm
3) S	2,4,6-Tribromophenol	8.631	648363811	39.624	ug/mLm
4) S	4-Terphenyl-d14	11.875	361636781	136.591	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	1.53513e+011	48777.661	ug/mL
6) H	ORO (C20-C34)	14.560	1.66633e+011	59086.213	ug/mL
7) H	DRO (C10-C28)	9.472	2.32557e+011	48736.172	ug/mL
8) H	ORO (C28-C40)	17.070	1.0471e+011	47186.151	ug/mL
9) H	ORO (C20-C40)	15.165	1.99958e+011	52513.514	ug/mL
10) H	ORO (C28-C35)	16.581	86644405896	61044.409	ug/mL
11) H	ERO (C8-C40)	10.557	3.46766e+011	100069.291	ug/mL
12) H	DIESEL (IOWA)	8.818	1.81357e+011	38188.152	ug/mL
13) H	OIL (IOWA)	17.414	1.74529e+011	77926.035	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT26.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:23 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10288J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:31:16 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 13:39:10 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT28.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:52 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10288K
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:46:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:26 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

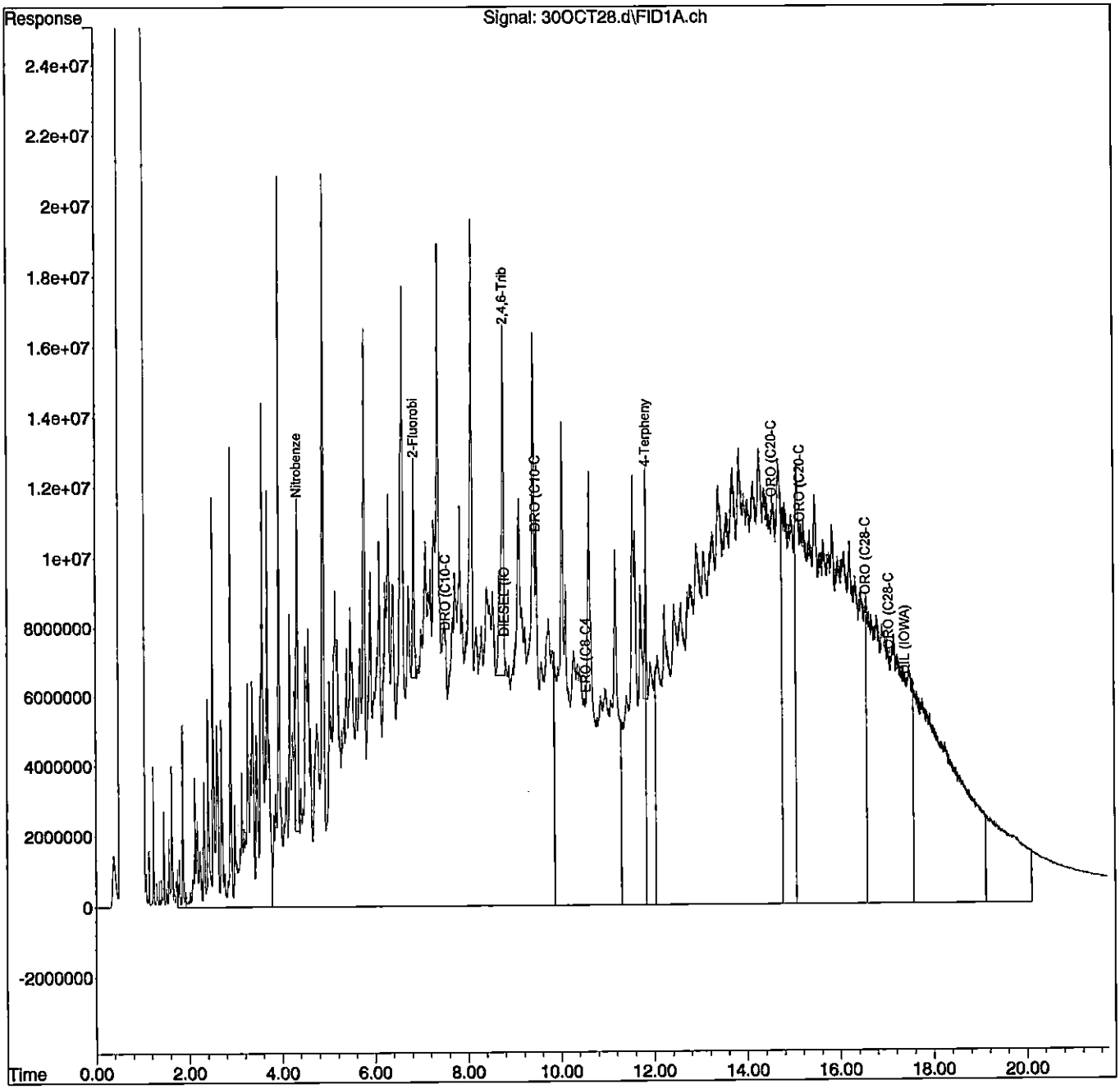
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.341	264106184	20.441 ug/mLm
2) S	2-Fluorobipehenyl	6.860	143292757	42.816 ug/mLm
3) S	2,4,6-Tribromophenol	8.780	381775820	16.624 ug/mLm
4) S	4-Terphenyl-d14	11.845	155390653	42.911 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	31041047955	9924.267 ug/mL
6) H	ORO (C20-C34)	14.560	32300202545	10074.692 ug/mL
7) H	DRO (C10-C28)	9.472	48063641238	10229.939 ug/mL
8) H	ORO (C28-C40)	17.070	16555511769	8090.979 ug/mL
9) H	ORO (C20-C40)	15.165	42173711652	10590.735 ug/mL
10) H	ORO (C28-C35)	16.581	13663837718	8048.876 ug/mL
11) H	ERO (C8-C40)	10.557	72049595207	20491.003 ug/mL
12) H	DIESEL (IOWA)	8.818	37331335770	10159.148 ug/mL
13) H	OIL (IOWA)	17.414	31853351554	9371.722 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191030\
Data File : 30OCT28.d
Signal(s) : FID1A.ch
Acq On : 30 Oct 2019 11:52 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10288K
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 31 14:46:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Thu Oct 31 15:42:26 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Oct 30 1731 Sequence Log

Starting sequence Wed Oct 30 17:31:21 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191030.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191030\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Comment: 'DUAL SYSTEM, UNLINKED'				
2)	Unlinked: 'UNLINKED'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191030.SEC\				
3)	RearSamp	1	30OCT01	LVID4B	DRLVI DIST
This computer is now swap bound.					
4)	Sample	10	30OCT02	LVID4B	RINSE
5)	RearSamp	3	30OCT03	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
6)	Sample	2	30OCT04	LVID4B	DRO DIST
7)	RearSamp	3	30OCT05	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
8)	Sample	11	30OCT06	LVID4B	BNA SURROGATE
9)	RearSamp	51	30OCT07	LVID4B	DBLKW1-144848
This computer is now swap bound.					
10)	Sample	12	30OCT08	LVID4B	DRO ICAL 50 UG/L
11)	RearSamp	52	30OCT09	LVID4B	DLCSW1-144848
This computer is now swap bound.					
12)	Sample	13	30OCT10	LVID4B	DRO ICAL 100 UG/L
13)	RearSamp	53	30OCT11	LVID4B	DRLVSW1-144848
This computer is now swap bound.					
14)	Sample	14	30OCT12	LVID4B	DRO ICAL 250 UG/L
15)	RearSamp	54	30OCT13	LVID4B	19102158-10B
This computer is now swap bound.					
16)	Sample	15	30OCT14	LVID4B	DRO ICAL 500 UG/L
17)	RearSamp	55	30OCT15	LVID4B	19102158-10B MS
This computer is now swap bound.					
18)	Sample	16	30OCT16	LVID4B	DRO ICAL 1000 UG/L
19)	RearSamp	56	30OCT17	LVID4B	19102158-10B MSD
This computer is now swap bound.					
20)	Sample	17	30OCT18	LVID4B	DRO ICAL 2500 UG/L
21)	RearSamp	57	30OCT19	LVID4B	19102158-11B
This computer is now swap bound.					
22)	Sample	18	30OCT20	LVID4B	DRO ICAL 5000 UG/L
23)	RearSamp	58	30OCT21	LVID4B	19102158-12B
This computer is now swap bound.					
24)	Sample	19	30OCT22	LVID4B	DRO ICAL 10,000 UG/L
25)	RearSamp	59	30OCT23	LVID4B	19102158-13B
This computer is now swap bound.					
26)	Sample	20	30OCT24	LVID4B	DRO ICAL 25,000 UG/L
27)	RearSamp	60	30OCT25	LVID4B	19102158-14B
This computer is now swap bound.					
28)	Sample	21	30OCT26	LVID4B	DRO ICAL 50,000 UG/L
29)	RearSamp	3	30OCT27	LVID4B	DRLVI CCV 500 UG/ML

2019 Oct 30 1731 Sequence Log

This computer is now swap bound.
30) Sample 22 30OCT28 LVID4B DRO ICV 10,000 UG/L
31) RearSamp 61 30OCT29 LVID4B 19102158-15B
This computer is now swap bound.
32) Sample 10 30OCT30 LVID4B RINSE
33) RearSamp 62 30OCT31 LVID4B 19102084-01C
This computer is now swap bound.
34) Sample 10 30OCT32 LVID4B RINSE
35) RearSamp 63 30OCT33 LVID4B 19102084-02C
This computer is now swap bound.
36) Sample 10 30OCT34 LVID4B RINSE
37) RearSamp 64 30OCT35 LVID4B 19102196-05B
This computer is now swap bound.
38) Sample 10 30OCT36 LVID4B RINSE
39) RearSamp 65 30OCT37 LVID4B 19102196-06B
This computer is now swap bound.
40) Sample 10 30OCT38 LVID4B RINSE
41) RearSamp 66 30OCT39 LVID4B 19102298-01A
This computer is now swap bound.
42) Sample 10 30OCT40 LVID4B RINSE
43) RearSamp 3 30OCT41 LVID4B DRLVI CCV 500 UG/ML
This computer is now swap bound.
44) Sample 10 30OCT42 LVID4B RINSE

Sequence completed Thu Oct 31 03:39:20 2019

C:\MSDCHEM\1\DATA\GC8-191030\2019 Oct 30 1731 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191030\2019 Oct 30 1731 Sequence Log .LOG

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111904.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:36 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:25:24 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	10.131	49.3#	112	0.00
2	S	2-Fluorobipehenyl	20.000	40.682	-103.4#	106	0.02
3	S	2,4,6-Tribromophenol	20.000	13.991	30.0#	102	0.09
4	S	4-Terphenyl-d14	20.000	18.499	7.5	113	0.02
5	H	DRO (C10-C20)	10000.000	-221.226	102.2#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-52.080	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	10947.766	-9.5	108	0.00
8	H	ORO (C28-C40)	10000.000	9970.386	0.3	98	-0.07
9	H	ORO (C20-C40)	10000.000	-92.458	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	-303.694	101.5#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-214.645	102.1#	0	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-221.226	102.2#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-52.080	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-92.458	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
11	H	ERO (C8-C40)	20000.000	-303.694	101.5#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-214.645	102.1#	0	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111904.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:36 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:25:24 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	6.168	6.484 E6	-5.1	112	0.00
2	S	2-Fluorobipehenyl	5.096	5.287 E6	-3.7	106	0.02
3	S	2,4,6-Tribromophenol	17.759	16.216 E6	8.7	102	0.09
4	S	4-Terphenyl-d14	2.178	3.351 E6	-53.9#	113	0.02
5	H	DRO (C10-C20)	3.360	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000 E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	4.489	5.142 E6	-14.5	108	0.00
8	H	ORO (C28-C40)	1.698	2.047 E6	-20.6#	98	-0.07
9	H	ORO (C20-C40)	2.891	0.000 E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	3.360	0.000 E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000	0.0	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.360	0.000 E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000 E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	2.891	0.000 E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	1.377	0.000 E6	100.0#	0#	0.00
11	H	ERO (C8-C40)	3.360	0.000 E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000	0.0	0#	0.00
13	H	OIL (IOWA)	0.000	0.000	0.0	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111904.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:36 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:25:24 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

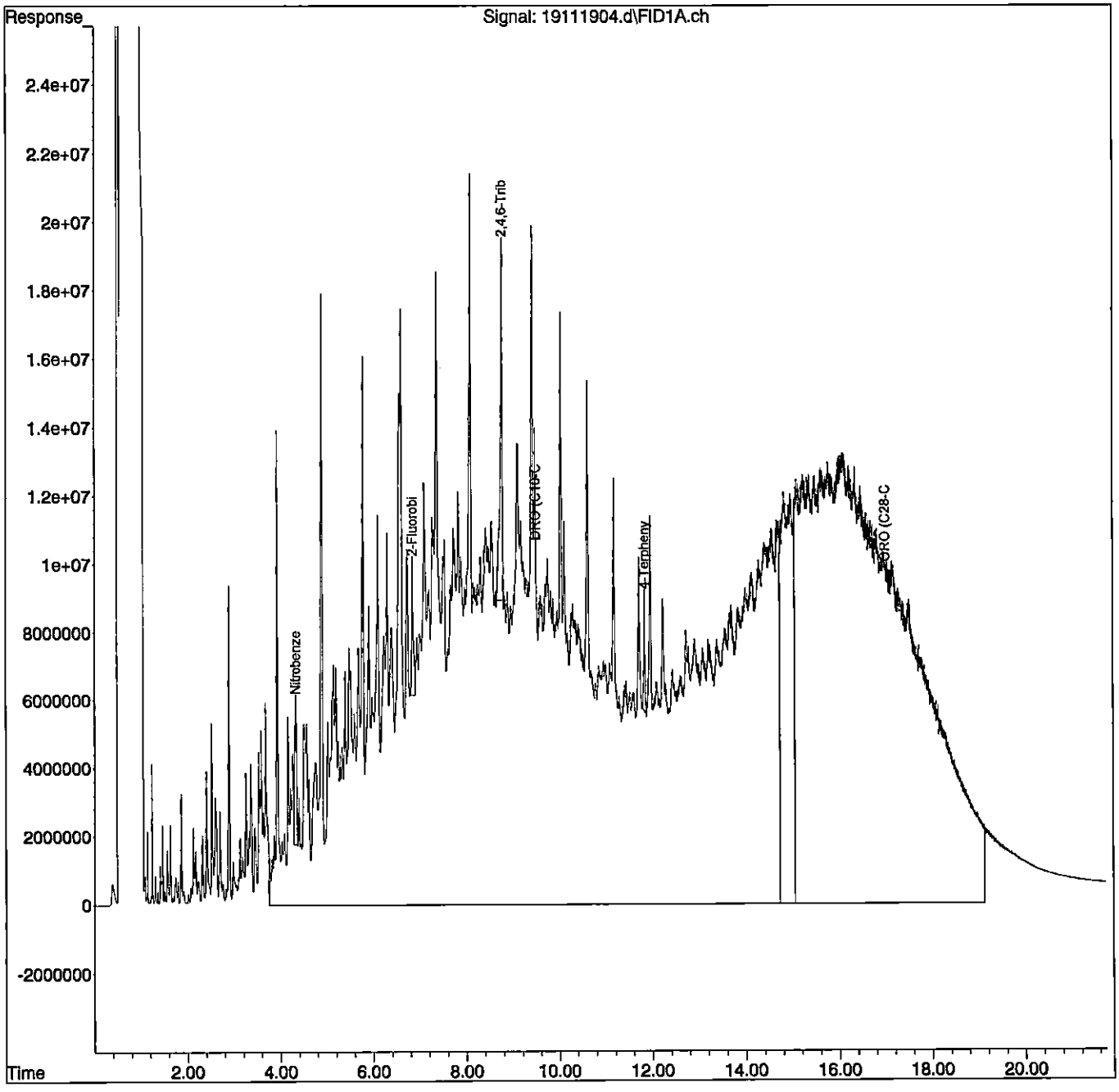
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	Nitrobenzene-d5	4.325	129686972	10.131	ug/mLm
2)	S	2-Fluorobipehenyl	6.842	105730619	40.682	ug/mLm
3)	S	2,4,6-Tribromophenol	8.767	324329994	13.991	ug/mLm
4)	S	4-Terphenyl-d14	11.827	67024944	18.499	ug/mLm
Target Compounds						
5)	H	DRO (C10-C20)	7.548	-559747584	N.D.	ug/mL
6)	H	ORO (C20-C34)	14.560	-67024944	N.D.	ug/mL
7)	H	DRO (C10-C28)	9.500	51422623064	10947.766	ug/mL
8)	H	ORO (C28-C40)	17.000	20470929251	9970.386	ug/mL
9)	H	ORO (C20-C40)	15.165	-67024944	N.D.	ug/mL
10)	H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11)	H	ERO (C8-C40)	10.557	-626772529	N.D.	ug/mL
12)	H	DIESEL (IOWA)	8.818	-626772529	N.D.	ug/mL
13)	H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111904.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:36 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:25:24 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111932.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 9:24 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:41:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	10.602	47.0#	117	0.00
2	S	2-Fluorobipehenyl	20.000	40.637	-103.2#	106	0.02
3	S	2,4,6-Tribromophenol	20.000	14.481	27.6#	105	0.09
4	S	4-Terphenyl-d14	20.000	18.720	6.4	115	0.02
5	H	DRO (C10-C20)	10000.000	-226.461	102.3#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-52.330	100.5#	-0	0.00
7	H	DRO (C10-C28)	10000.000	11100.650	-11.0	110	0.00
8	H	ORO (C28-C40)	10000.000	11240.884	-12.4	110	-0.07
9	H	ORO (C20-C40)	10000.000	-92.660	100.9#	-0	0.00
11	H	ERO (C8-C40)	20000.000	-308.588	101.5#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-219.320	102.2#	0	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-226.461	102.3#	-2	0.00
6	H	ORO (C20-C34)	10000.000	-52.330	100.5#	-0	0.00
9	H	ORO (C20-C40)	10000.000	-92.660	100.9#	-0	0.00
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	0.00
11	H	ERO (C8-C40)	20000.000	-308.588	101.5#	-1	0.00
12	H	DIESEL (IOWA)	10000.000	-219.320	102.2#	0	0.00
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	0.00

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

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111932.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 9:24 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:41:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF		%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	6.168	6.791	E6	-10.1	117	0.00
2	S	2-Fluorobipehenyl	5.096	5.249	E6	-3.0	106	0.02
3	S	2,4,6-Tribromophenol	17.759	16.762	E6	5.6	105	0.09
4	S	4-Terphenyl-d14	2.178	3.391	E6	-55.7#	115	0.02
5	H	DRO (C10-C20)	3.360	0.000	E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000	E6	100.0#	-0#	0.00
7	H	DRO (C10-C28)	4.489	5.214	E6	-16.2	110	0.00
8	H	ORO (C28-C40)	1.698	2.312	E6	-36.2#	110	-0.07
9	H	ORO (C20-C40)	2.891	0.000	E6	100.0#	-0#	0.00
11	H	ERO (C8-C40)	3.360	0.000	E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000		0.0	0#	0.00

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.360	0.000	E6	100.0#	-2#	0.00
6	H	ORO (C20-C34)	2.471	0.000	E6	100.0#	-0#	0.00
9	H	ORO (C20-C40)	2.891	0.000	E6	100.0#	-0#	0.00
10	H	ORO (C28-C35)	1.377	0.000	E6	100.0#	0#	0.00
11	H	ERO (C8-C40)	3.360	0.000	E6	100.0#	-1#	0.00
12	H	DIESEL (IOWA)	0.000	0.000		0.0	0#	0.00
13	H	OIL (IOWA)	0.000	0.000		0.0	0#	0.00

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

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111932.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 9:24 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:41:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

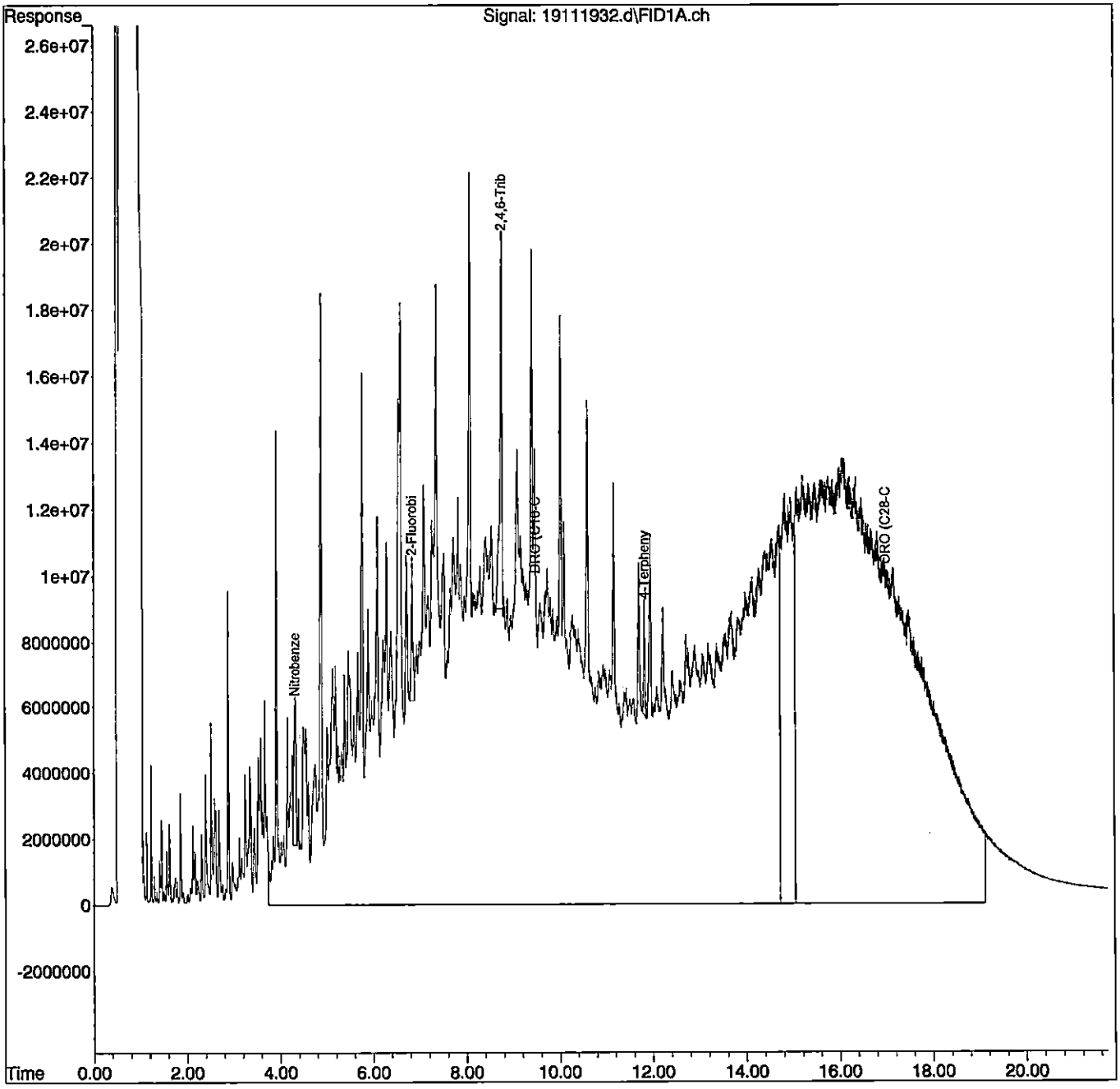
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.319	135828867	10.602	ug/mLm
2) S	2-Fluorobipehenyl	6.838	104981601	40.637	ug/mLm
3) S	2,4,6-Tribromophenol	8.763	335242600	14.481	ug/mLm
4) S	4-Terphenyl-d14	11.825	67824940	18.720	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-576053068	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-67824940	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	52138025157	11100.650	ug/mL
8) H	ORO (C28-C40)	17.000	23117790210	11240.884	ug/mL
9) H	ORO (C20-C40)	15.165	-67824940	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-643878007	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-643878007	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111932.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 9:24 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:41:15 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111902.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:07 pm
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:23:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

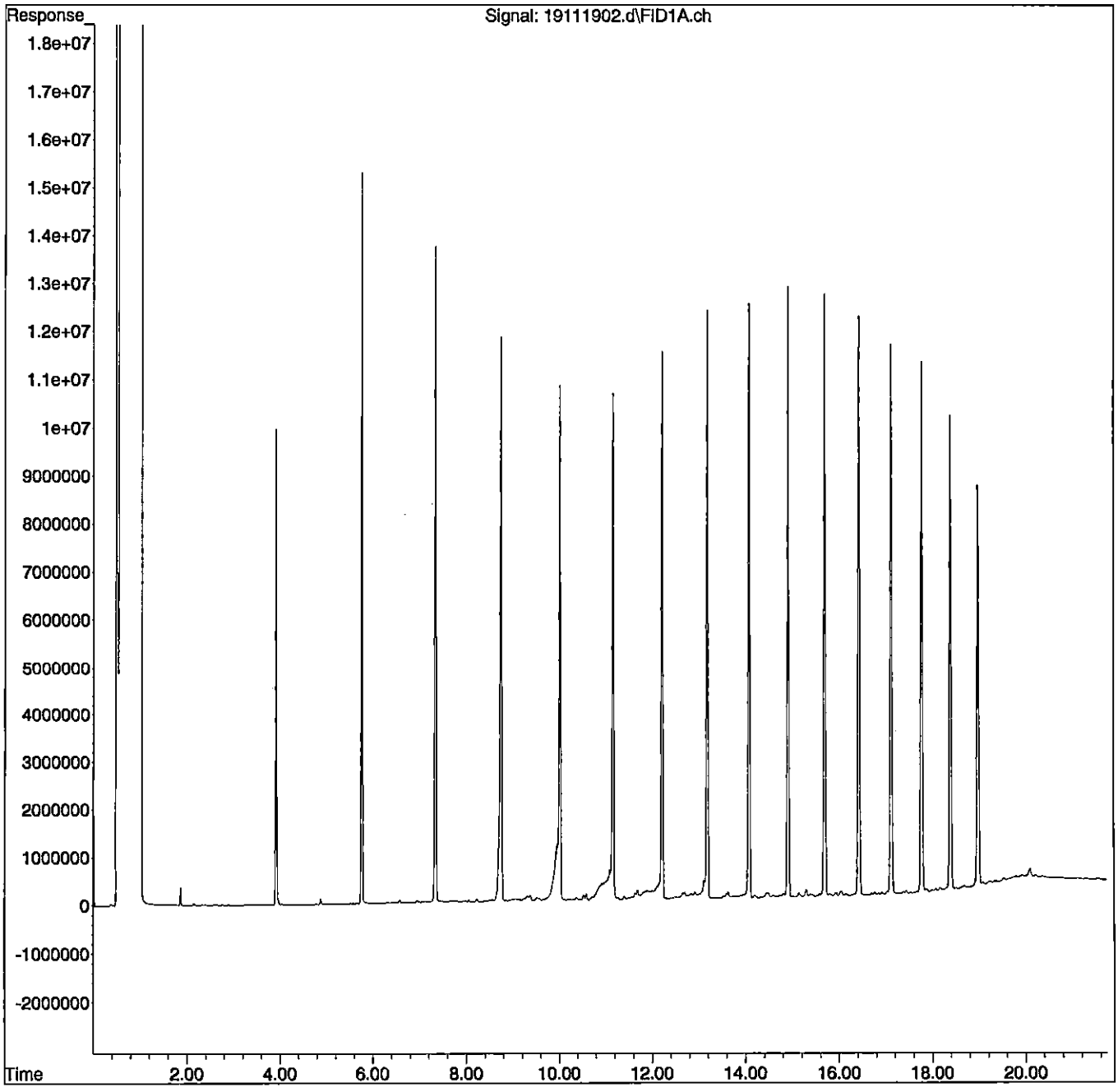
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111902.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 2:07 pm
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:23:47 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111914.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 5:02 pm
Operator : KJB
Sample : DBLKS1-145838
Misc :
ALS Vial : 101 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:30:57 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

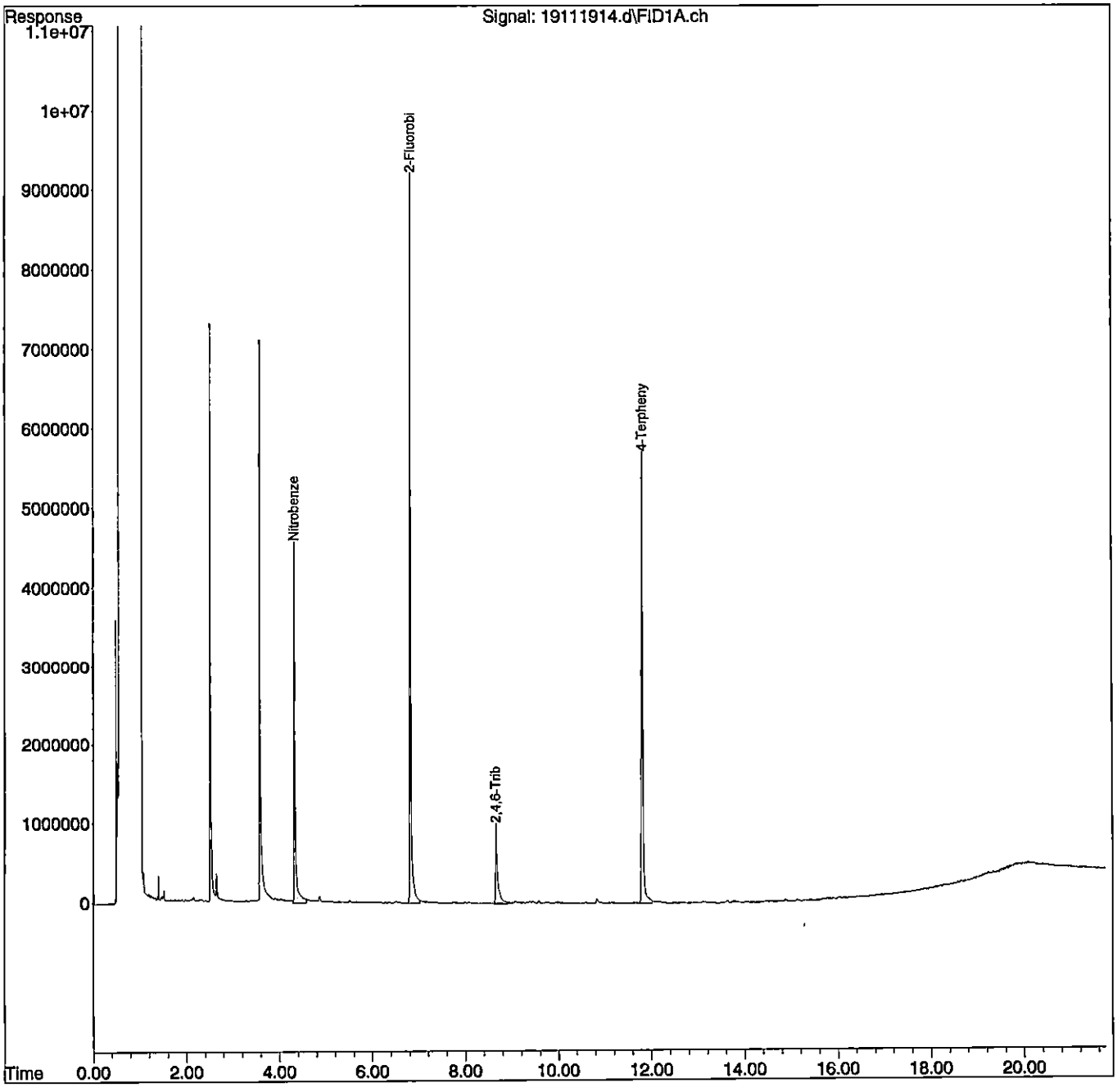
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.322	83625423	6.598	ug/mLm
2) S	2-Fluorobipehenyl	6.821	165504637	43.994	ug/mLm
3) S	2,4,6-Tribromophenol	8.658	32211054	2.249	ug/mLm
4) S	4-Terphenyl-d14	11.807	128767205	35.556	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-281341114	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-128767205	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	-410108319	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-128767205	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-410108319	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-410108319	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111914.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 5:02 pm
Operator : KJB
Sample : DBLKS1-145838
Misc :
ALS Vial : 101 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:30:57 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111916.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 5:31 pm
Operator : KJB
Sample : DLCSS1-145838
Misc :
ALS Vial : 102 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:32:18 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

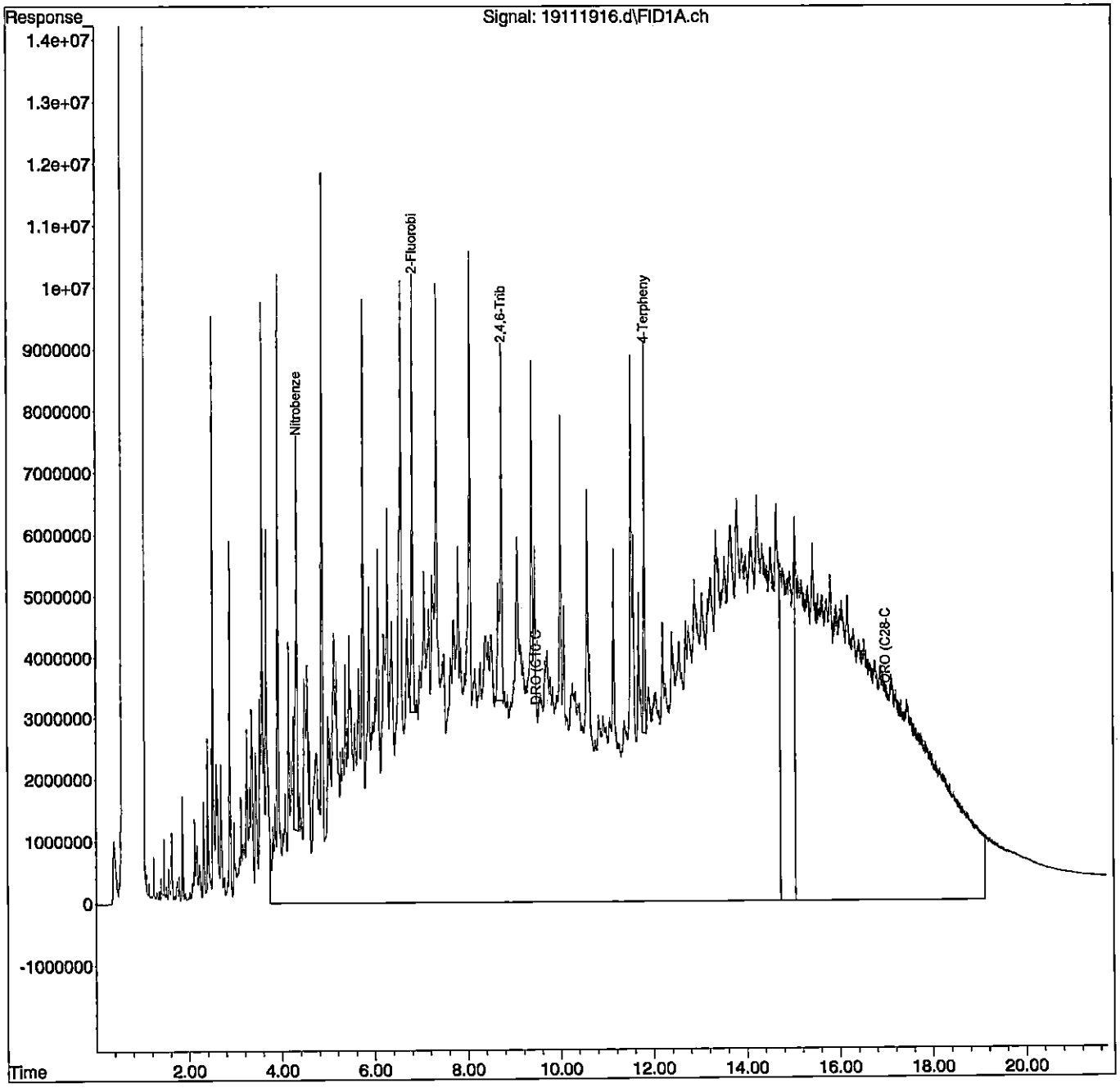
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	Nitrobenzene-d5	4.325	148514850	11.575	ug/mLm
2)	S	2-Fluorobipehenyl	6.828	142545907	42.776	ug/mLm
3)	S	2,4,6-Tribromophenol	8.744	185492375	8.114	ug/mLm
4)	S	4-Terphenyl-d14	11.817	118018614	32.587	ug/mLm
Target Compounds						
5)	H	DRO (C10-C20)	7.548	-476553132	N.D.	ug/mL
6)	H	ORO (C20-C34)	14.560	-118018614	N.D.	ug/mL
7)	H	DRO (C10-C28)	9.500	25059985919	5313.971	ug/mL
8)	H	ORO (C28-C40)	17.000	6972752544	3491.239	ug/mL
9)	H	ORO (C20-C40)	15.165	-118018614	N.D.	ug/mL
10)	H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11)	H	ERO (C8-C40)	10.557	-594571746	N.D.	ug/mL
12)	H	DIESEL (IOWA)	8.818	-594571746	N.D.	ug/mL
13)	H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111916.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 5:31 pm
Operator : KJB
Sample : DLCSS1-145838
Misc :
ALS Vial : 102 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:32:18 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111918.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 6:00 pm
Operator : KJB
Sample : 19111428-02A MS
Misc :
ALS Vial : 103 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:33:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

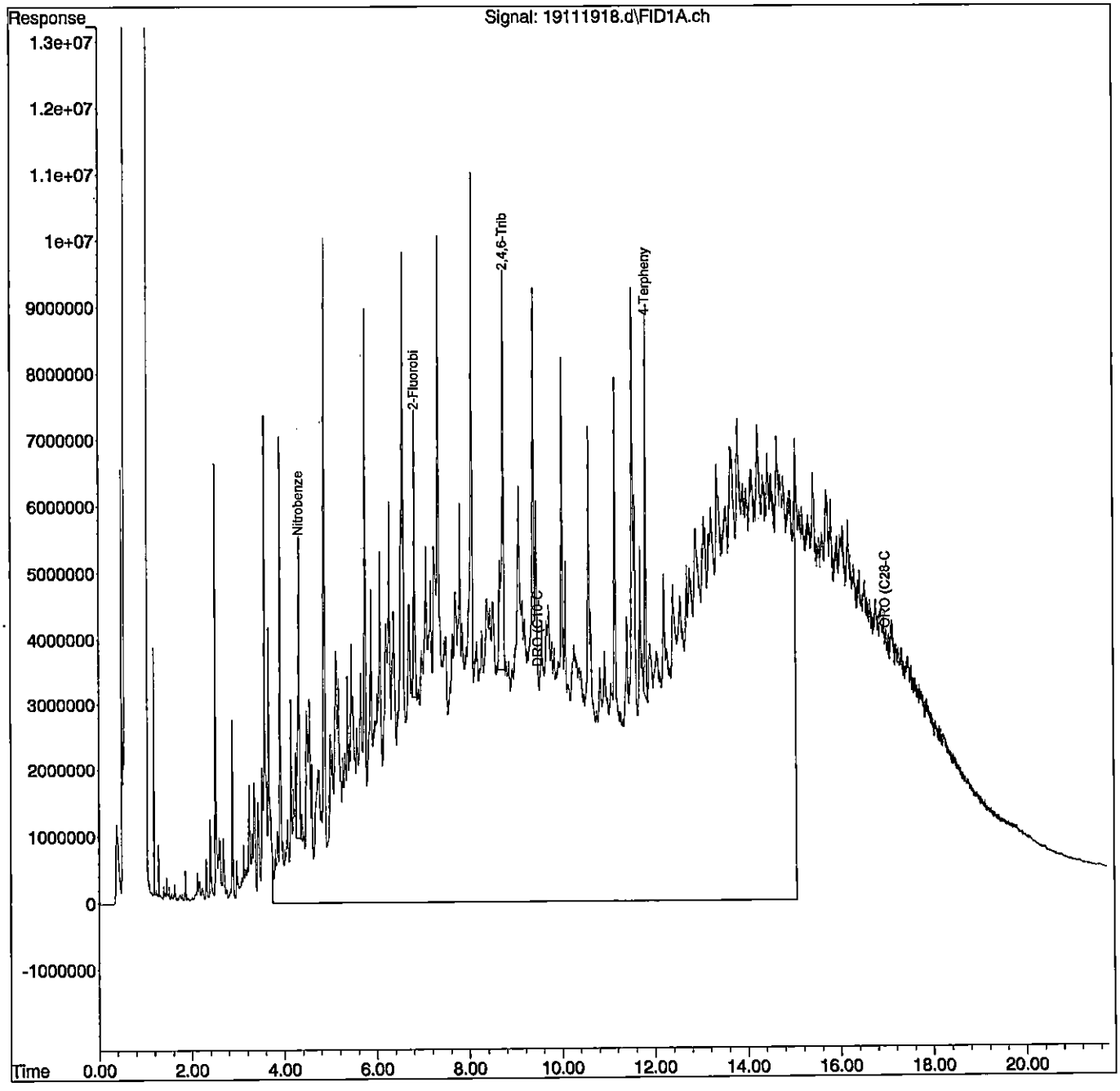
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.323	107563775	8.434	ug/mLm
2) S	2-Fluorobipehenyl	6.826	84636416	39.387	ug/mLm
3) S	2,4,6-Tribromophenol	8.743	181590558	7.958	ug/mLm
4) S	4-Terphenyl-d14	11.818	108312577	29.905	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-373790749	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-108312577	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	26187868953	5555.004	ug/mL
8) H	ORO (C28-C40)	17.000	9896767423	4894.771	ug/mL
9) H	ORO (C20-C40)	15.165	-108312577	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-482103326	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-482103326	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111918.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 6:00 pm
Operator : KJB
Sample : 19111428-02A MS
Misc :
ALS Vial : 103 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:33:25 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111920.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 6:29 pm
Operator : KJB
Sample : 19111428-02A MSD
Misc :
ALS Vial : 104 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:34:27 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

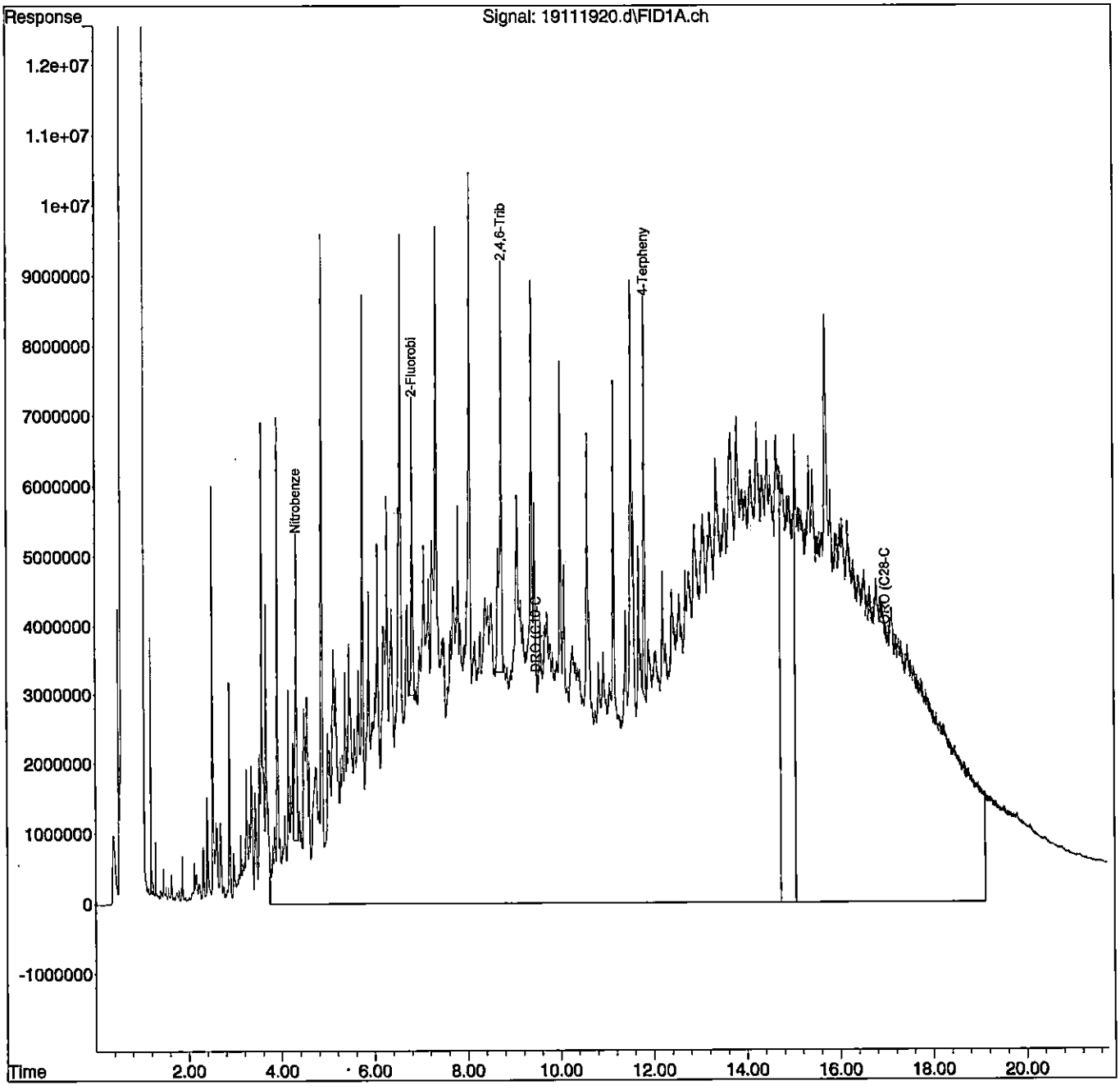
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.321	107325276	8.416	ug/mLm
2) S	2-Fluorobipehenyl	6.826	82083629	39.225	ug/mLm
3) S	2,4,6-Tribromophenol	8.744	177434623	7.792	ug/mLm
4) S	4-Terphenyl-d14	11.815	106388830	29.374	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	7.548	-366843527	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-106388830	N.D.	ug/mL
7) H	DRO (C10-C28)	9.500	25196076232	5343.054	ug/mL
8) H	ORO (C28-C40)	17.000	9992785354	4940.860	ug/mL
9) H	ORO (C20-C40)	15.165	-106388830	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-473232357	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-473232357	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191119\
Data File : 19111920.d
Signal(s) : FID1A.ch
Acq On : 19 Nov 2019 6:29 pm
Operator : KJB
Sample : 19111428-02A MSD
Misc :
ALS Vial : 104 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Nov 20 08:34:27 2019
Quant Method : C:\msdchem\1\methods\DRO191030M.M
Quant Title :
QLast Update : Tue Nov 05 12:20:23 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Nov 19 1405 Sequence Log

Starting sequence Tue Nov 19 14:05:07 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191119.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191119\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Comment: 'DUAL SYSTEM, UNLINKED'				
2)	Unlinked: 'UNLINKED'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191119.SEC\				
3)	RearSamp	1	19111901	LVID4B	DRLVI DIST
This computer is now swap bound.					
4)	Sample	2	19111902	LVID4B	DRO DIST
5)	RearSamp	3	19111903	LVID4B	DRLVI CCV 10,000 UG/ML
This computer is now swap bound.					
6)	Sample	4	19111904	LVID4B	DRO CCV 10,000 UG/ML
7)	RearSamp	3	19111905	LVID4B	DRLVI CCV 10,000 UG/ML
This computer is now swap bound.					
8)	Sample	4	19111906	LVID4B	DRO CCV 10,000 UG/ML
9)	RearSamp	51	19111907	LVID4B	DBLKW2-145706
This computer is now swap bound.					
10)	Sample	11	19111908	LVID4B	DBLKS1-145699
11)	RearSamp	52	19111909	LVID4B	DRLVSW1-145706
This computer is now swap bound.					
12)	Sample	12	19111910	LVID4B	DLCSS1-145699
13)	RearSamp	53	19111911	LVID4B	DLCSW1-145706
This computer is now swap bound.					
14)	Sample	13	19111912	LVID4B	19111162-01A MS
15)	RearSamp	54	19111913	LVID4B	19111091-22D MS
This computer is now swap bound.					
16)	Sample	101	19111914	LVID4B	DBLKS1-145838
17)	RearSamp	10	19111915	LVID4B	RINSE
This computer is now swap bound.					
18)	Sample	102	19111916	LVID4B	DLCSS1-145838
19)	RearSamp	10	19111917	LVID4B	RINSE
This computer is now swap bound.					
20)	Sample	103	19111918	LVID4B	19111428-02A MS
21)	RearSamp	10	19111919	LVID4B	RINSE
This computer is now swap bound.					
22)	Sample	104	19111920	LVID4B	19111428-02A MSD
23)	RearSamp	10	19111921	LVID4B	RINSE
This computer is now swap bound.					
24)	Sample	105	19111922	LVID4B	19111428-02A
25)	RearSamp	10	19111923	LVID4B	RINSE
This computer is now swap bound.					

2019 Nov 19 1405 Sequence Log

26) Sample 106 19111924 LVID4B 19111405-01A
27) RearSamp 10 19111925 LVID4B RINSE

This computer is now swap bound.
28) Sample 107 19111926 LVID4B 19111405-02A
29) RearSamp 10 19111927 LVID4B RINSE

This computer is now swap bound.
30) Sample 108 19111928 LVID4B 19111405-03A
31) RearSamp 10 19111929 LVID4B RINSE

This computer is now swap bound.
32) Sample 109 19111930 LVID4B 19111428-01A
33) RearSamp 10 19111931 LVID4B RINSE

This computer is now swap bound.
34) Sample 4 19111932 LVID4B DRO CCV 10,000 UG/ML
35) RearSamp 3 19111933 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
36) Sample 14 19111934 LVID4B 19111162-01A MSD
37) RearSamp 55 19111935 LVID4B 19111091-22D MSD
This computer is now swap bound.
38) Sample 15 19111936 LVID4B 19111162-01A
39) RearSamp 56 19111937 LVID4B 19111091-22D
This computer is now swap bound.
40) Sample 16 19111938 LVID4B 19110931-03A
41) RearSamp 57 19111939 LVID4B 19111091-15D
This computer is now swap bound.
42) Sample 17 19111940 LVID4B 19110931-04A
43) RearSamp 58 19111941 LVID4B 19111091-16D
This computer is now swap bound.
44) Sample 18 19111942 LVID4B 19110931-05A
45) RearSamp 59 19111943 LVID4B 19111091-17D
This computer is now swap bound.
46) Sample 19 19111944 LVID4B 19110931-06A
47) RearSamp 60 19111945 LVID4B 19111091-18D
This computer is now swap bound.
48) Sample 20 19111946 LVID4B 19110931-07A
49) RearSamp 31 19111947 LVID4B 19111091-19D
This computer is now swap bound.
50) Sample 21 19111948 LVID4B 19111130-01A DF10
51) RearSamp 62 19111949 LVID4B 19111091-20D
This computer is now swap bound.
52) Sample 22 19111950 LVID4B 19111114-01A DF10
53) RearSamp 63 19111951 LVID4B 19111091-21D
This computer is now swap bound.
54) Sample 23 19111952 LVID4B 19111162-02A
55) RearSamp 64 19111953 LVID4B 19111091-23D
This computer is now swap bound.
56) Sample 24 19111954 LVID4B 19111162-03A
57) RearSamp 65 19111955 LVID4B 19111085-01B
This computer is now swap bound.
58) Sample 4 19111956 LVID4B DRO CCV 10,000 UG/ML
59) RearSamp 3 19111957 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
60) Sample 4 19111958 LVID4B DRO CCV 10,000 UG/ML

2019 Nov 19 1405 Sequence Log

61) RearSamp 3 19111959 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
62) Sample 25 19111960 LVID4B 19111164-01A
63) RearSamp 66 19111961 LVID4B 19111085-02B
This computer is now swap bound.
64) Sample 26 19111962 LVID4B 19111164-02A
65) RearSamp 67 19111963 LVID4B 19111085-03B
This computer is now swap bound.
66) Sample 27 19111964 LVID4B Dblks1-14756
67) RearSamp 68 19111965 LVID4B 19111085-04B
This computer is now swap bound.
68) Sample 28 19111966 LVID4B DLCSS1-14756
69) RearSamp 69 19111967 LVID4B 19111085-05B
This computer is now swap bound.
70) Sample 29 19111968 LVID4B 19111271-01A MS
71) RearSamp 70 19111969 LVID4B 19111085-06B
This computer is now swap bound.
72) Sample 30 19111970 LVID4B 19111271-01A MSD
73) RearSamp 3 19111971 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
74) Sample 31 19111972 LVID4B 19111271-01A
75) RearSamp 3 19111973 LVID4B DRLVI CCV 10,000 UG/ML
This computer is now swap bound.
76) Sample 32 19111974 LVID4B 19111193-01A
77) RearSamp 10 19111975 LVID4B RINSE

This computer is now swap bound.
78) Sample 33 19111976 LVID4B 19111193-02A
79) RearSamp 10 19111977 LVID4B RINSE

This computer is now swap bound.
80) Sample 34 19111978 LVID4B 19111193-03A
81) RearSamp 10 19111979 LVID4B RINSE

This computer is now swap bound.
82) Sample 35 19111980 LVID4B 19111193-04A
83) RearSamp 10 19111981 LVID4B RINSE

This computer is now swap bound.
84) Sample 36 19111982 LVID4B 19111272-01A DF10
85) RearSamp 10 19111983 LVID4B RINSE

This computer is now swap bound.
86) Sample 4 19111984 LVID4B DRO CCV 10,000 UG/ML
87) RearSamp 10 19111985 LVID4B RINSE

This computer is now swap bound.
88) Sample 4 19111986 LVID4B DRO CCV 10,000 UG/ML
89) RearSamp 10 19111987 LVID4B RINSE

This computer is now swap bound.
90) Sample 37 19111988 LVID4B 19111285-01A
91) RearSamp 10 19111989 LVID4B RINSE

This computer is now swap bound.
92) Sample 38 19111990 LVID4B 19111285-02A

2019 Nov 19 1405 Sequence Log

93) RearSamp 10 19111991 LVID4B RINSE

This computer is now swap bound.
94) Sample 39 19111992 LVID4B 19111285-03A
95) RearSamp 10 19111993 LVID4B RINSE

This computer is now swap bound.
96) Sample 40 19111994 LVID4B 19111285-04A
97) RearSamp 10 19111995 LVID4B RINSE

This computer is now swap bound.
98) Sample 41 19111996 LVID4B 1911185-05A
99) RearSamp 10 19111997 LVID4B RINSE

This computer is now swap bound.
100) Sample 4 19111998 LVID4B DRO CCV 10,000 UG/ML
101) RearSamp 10 19111999 LVID4B RINSE

This computer is now swap bound.
102) Sample 4 91119100 LVID4B DRO CCV 10,000 UG/ML
103) RearSamp 10 91119101 LVID4B RINSE

This computer is now swap bound.
104) Sample 42 91119102 LVID4B BLK 1
105) RearSamp 10 91119103 LVID4B RINSE

This computer is now swap bound.
106) Sample 43 91119104 LVID4B BLK2
107) RearSamp 10 91119105 LVID4B RINSE

This computer is now swap bound.
108) Sample 44 91119106 LVID4B BLK3
109) RearSamp 10 91119107 LVID4B RINSE

This computer is now swap bound.
110) Sample 45 91119108 LVID4B LCS1
111) RearSamp 10 91119109 LVID4B RINSE

This computer is now swap bound.
112) Sample 46 91119110 LVID4B LCS2
113) RearSamp 10 91119111 LVID4B RINSE

This computer is now swap bound.
114) Sample 47 91119112 LVID4B LCS3
115) RearSamp 10 91119113 LVID4B RINSE

This computer is now swap bound.
116) Sample 48 91119114 LVID4B POST BLK1

Sequence completed Wed Nov 20 17:41:05 2019

C:\MSDCHEM\1\DATA\GC8-191119\2019 Nov 19 1405 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191119\2019 Nov 19 1405 Sequence Log .LOG

ALS Group, USA

PREP BATCH REPORT

Batch ID: **145838** Prep Code: **DRO_3550_S**

Start Date: **11/19/2019 12:25:36 PM** End Date: **11/19/2019 4:34:31 PM**

Technician: **Matthew Krause**

InitSamp Wt/Vol:	15 g
FinSampVol:	1 mL
OriginalFac:	66.6667
PrepUnitFac:	1000

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
19110931-08A	Soil		15.09		0	1	66.2691
19110931-09A	Soil		15.107		0	1	66.1945
19110931-10A	Soil		15.088		0	1	66.2778
19110931-11A	Soil		15.037		0	1	66.5026
19110931-12A	Soil		15.529		0	1	64.3956
19110931-13A	Soil		15.231		0	1	65.6556
19111360-01B	Soil		15.326		0	1	65.2486
19111360-02B	Soil		15.489		0	1	64.5619
19111360-03B	Soil		15.087		0	1	66.2822
19111360-04B	Soil		15.331		0	1	65.2273
19111360-05B	Soil		15.006		0	1	66.64
19111405-01A			15.058		0	1	66.4099
19111405-02A			15.009		0	1	66.6267
19111405-03A			15.065		0	1	66.379
19111428-01A	Soil		15.2363		0	1	65.6327
19111428-02A	Soil		15.0033		0	1	66.652
19111428-02A MS	Soil		15.035		0	1	66.5115
19111428-02A MS	Soil		15.1673		0	1	65.9313
DBLKS1-145838			15		0	1	66.6667
DLCSS1-145838			15		0	1	66.6667

Notes: *500uL Surrogate (3081-155-7) added to all samples. 500 uL DRO Spike (400-0112) added to QC. DCM (3081-153-2). Hydromatrix, H102919. Sodium Sulfate S111119. Balance 5. All extractions are B1/E1 unless otherwise noted.*

Inorganic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

Wet Chemistry

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-PP-Soil-01-111819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19111428

Matrix: Soil Lab Sample ID: 19111428-01A

Level (low/med): LOW Date Received: 11/19/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	17			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-PP-Soil-02-111819

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19111428

Matrix: Soil Lab Sample ID: 19111428-02A

Level (low/med): LOW Date Received: 11/19/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	31			

ALS Group, USA

Date: 09-Dec-19

Client: Tetra Tech EM Inc.

Work Order: 19111428

Project: Joliet Fire

QC BATCH REPORT

Batch ID: **R275778** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R275778** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**

Client ID: Run ID: **MOIST_191119D** SeqNo: **6070874** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R275778** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**

Client ID: Run ID: **MOIST_191119D** SeqNo: **6070873** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19111050-46A DUP** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**

Client ID: Run ID: **MOIST_191119D** SeqNo: **6070858** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	22.92	0.10	0	0	0	0-0	21.71	5.42	10	

DUP Sample ID: **19111428-02A DUP** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**

Client ID: **MPGI-PP-Soil-02-111819** Run ID: **MOIST_191119D** SeqNo: **6070872** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	31.19	0.10	0	0	0	0-0	31.31	0.384	10	

The following samples were analyzed in this batch:

19111428-01A	19111428-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Moisture

Analyst:	KT	Date/Time In:	11/19/19 4:07 PM	Temp In Deg C:	104.2
Review By:		Date/Time Out:	11/20/19 8:51 AM	Temp Out Deg C:	105
Method:	% Moisture (SW3550C)	Batch ID:	MOIST_191119D	Sand BPL:	2049-184-4
SOP:	HN-WC-018	Balance ID:	6	Oven ID:	9

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.1495	0	0.0000				1.1503	0.08	0.08	Moisture
LCS		LCS	LCS	1.1401	0	8.8188				9.9587	100.00	100.00	Moisture
19111428-02A	1	SAMP	Z1	1.1386	0	6.9969				5.9451	68.69	31.31	Moisture
19111428-02A DUP	1	DUP	Z2	1.1364	0	6.9999				5.9533	68.81	31.19	Moisture
19111405-01A	1	SAMP	Z3	1.1476	0	8.103				8.2761	87.97	12.03	Moisture
19111428-01A	1	SAMP	Z4	1.1354	0	8.2408				7.9641	82.86	17.14	Moisture
19111409-01B	1	SAMP	Z5	1.1289	0	6.7712				5.513	64.75	35.25	Moisture
19111405-02A	1	SAMP	Z6	1.146	0	8.8538				8.8891	87.46	12.54	Moisture
19111405-03A	1	SAMP	Z7	1.1284	0	9.4729				10.2186	95.96	4.04	Moisture
19111417-01A	1	SAMP	Z8	1.1265	0	8.0758				7.872	83.53	16.47	Moisture
19111371-01B	1	SAMP	Z9	1.1175	0	8.6393				9.48	96.80	3.20	Moisture
19111371-02B	1	SAMP	Z10	1.1317	0	9.8107				10.0627	91.03	8.97	Moisture
19111050-37A	1	SAMP	Z11	1.1319	0	9.2572				9.2102	87.27	12.73	Moisture
19111050-46A	1	SAMP	Z12	1.1447	0	8.8143				8.045	78.29	21.71	Moisture
19111050-46A DUP	1	DUP	Z13	1.1362	0	8.8004				7.9197	77.08	22.92	Moisture
19111050-43A	1	SAMP	Z14	1.1487	0	9.8531				9.175	81.46	18.54	Moisture
19111050-38A	1	SAMP	Z15	1.1342	0	9.5361				8.9411	81.87	18.13	Moisture
19111050-44A	1	SAMP	Z16	1.1504	0	6.6576				6.3755	78.48	21.52	Moisture
19111050-42A	1	SAMP	Z17	1.1245	0	7.383				7.1863	82.10	17.90	Moisture
19111050-50A	1	SAMP	Z18	1.1464	0	6.5361				6.3084	78.98	21.02	Moisture
19111050-48A	1	SAMP	Z19	1.1424	0	7.6565				8.2642	93.02	6.98	Moisture
19111050-49A	1	SAMP	Z20	1.1335	0	8.4396				7.59	76.50	23.50	Moisture
19111050-45A	1	SAMP	Z21	1.1384	0	8.8489				8.4559	82.69	17.31	Moisture
19111050-47A	1	SAMP	Z22	1.1347	0	9.2535				8.5679	80.33	19.67	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	11/20/2019 10:53	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

Copyright ALS Environmental, 2019

Section IV

ATTACHMENTS

-Previously Issued Report(s)

20-Nov-2019

Andre Baker
Tetra Tech EM Inc.
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

Re: **Joliet Fire** Work Order: **19111428**

Dear Andre,

ALS Environmental received 2 samples on 19-Nov-2019 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: IL: 200076

ALS Group, USA

Date: 20-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: **19111428**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19111428-01	MPGI-PP-Soil-01-111819	Soil		11/18/2019 11:00	11/19/2019 10:00	☐
19111428-02	MPGI-PP-Soil-02-111819	Soil		11/18/2019 11:02	11/19/2019 10:00	☐

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Work Order: 19111428

Case Narrative

Samples for the above noted Work Order were received on 11/19/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

Client: Tetra Tech EM Inc.
Project: Joliet Fire
WorkOrder: **19111428**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group, USA

Date: *20-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Sample ID: MPGI-PP-Soil-01-111819
Collection Date: 11/18/2019 11:00 AM

Work Order: 19111428
Lab ID: 19111428-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/19/19		Analyst: **BCM**
DRO (C10-C28)	U		3.4	5.9	mg/Kg-dry	1	11/19/2019 20:55
Surr: 4-Terphenyl-d14	*58.5*			*33-111*	*%REC*	1	11/19/2019 20:55
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	11/19/2019 16:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *20-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Fire
Sample ID: MPGI-PP-Soil-02-111819
Collection Date: 11/18/2019 11:02 AM

Work Order: 19111428
Lab ID: 19111428-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/19/19		Analyst: **BCM**
DRO (C10-C28)	**17**		**4.1**	**7.3**	**mg/Kg-dry**	1	11/19/2019 18:58
Surr: 4-Terphenyl-d14	*67.4*			*33-111*	*%REC*	1	11/19/2019 18:58
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**31**		**0.10**	**0.10**	**% of sample**	1	11/19/2019 16:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 20-Nov-19

Client: Tetra Tech EM Inc.

Work Order: 19111428

Project: Joliet Fire

QC BATCH REPORT

Batch ID: **145838** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-145838-145838** Units: **mg/Kg** Analysis Date: **11/19/2019 05:02 P**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070431** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.371*	0	*3.33*	0	*71.2*	*33-111*	0			

LCS Sample ID: **DLCSS1-145838-145838** Units: **mg/Kg** Analysis Date: **11/19/2019 05:31 P**

Client ID: Run ID: **GC8_191119A** SeqNo: **6070432** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	354.3	5.0	333	0	106	58-111	0			
Surr: 4-Terphenyl-d14	*2.173*	0	*3.33*	0	*65.2*	*33-111*	0			

MS Sample ID: **19111428-02A MS** Units: **mg/Kg** Analysis Date: **11/19/2019 06:00 P**

Client ID: **MPGI-PP-Soil-02-111819** Run ID: **GC8_191119A** SeqNo: **6070433** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	369.5	5.0	332.2	11.57	108	58-111	0			
Surr: 4-Terphenyl-d14	*1.989*	0	*3.322*	0	*59.9*	*33-111*	0			

MSD Sample ID: **19111428-02A MSD** Units: **mg/Kg** Analysis Date: **11/19/2019 06:29 P**

Client ID: **MPGI-PP-Soil-02-111819** Run ID: **GC8_191119A** SeqNo: **6070434** Prep Date: **11/19/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	352.3	4.9	329.3	11.57	103	58-111	369.5	4.77	30	
Surr: 4-Terphenyl-d14	*1.936*	0	*3.293*	0	*58.8*	*33-111*	1.989	*2.7*	*30*	

The following samples were analyzed in this batch:

19111428-01A	19111428-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19111428
Project: Joliet Fire

QC BATCH REPORT

Batch ID: **R275778** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R275778** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**
Client ID: Run ID: **MOIST_191119D** SeqNo: **6070874** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R275778** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**
Client ID: Run ID: **MOIST_191119D** SeqNo: **6070873** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19111050-46A DUP** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**
Client ID: Run ID: **MOIST_191119D** SeqNo: **6070858** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	22.92	0.10	0	0	0	0-0	21.71	5.42	10	

DUP Sample ID: **19111428-02A DUP** Units: **% of sample** Analysis Date: **11/19/2019 04:07 P**
Client ID: **MPGI-PP-Soil-02-111819** Run ID: **MOIST_191119D** SeqNo: **6070872** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	31.19	0.10	0	0	0	0-0	31.31	0.384	10	

The following samples were analyzed in this batch:

19111428-01A	19111428-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

19111428

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:		X Non Standard or urgent TAT (List due date): 24 Hr TAT
PROJECT: 103x903100690002aj001	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7
ORDER NUMBER: ALS-1 Mod. 2		
PROJECT MANAGER: Andre Baker	CONTACT PH: 6303793749	
SAMPLER: Brendan Martin	SAMPLER MOBILE:	
COC emailed to ALS? (NO)	EDD FORMAT (or default):	
Email Reports to Andre.baker@tetratech.com, Brendan.martin@tetratech.com		
Email Invoice to (will default to PM if no other addresses are listed):		

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Brendan Martin	FED EX	FED EX	
DATE/TIME: 11/18/19 1450	DATE/TIME:	DATE/TIME:	DATE/TIME: 11/19/19 1000

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: 8R2 3.4°C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO/SW8015	Percent Solids							
1	MPGI-PP-Soil-01 11/18/19 BM	11/18/19, 1100	Soil	None	1	X	X							
2	MPGI-PP-Soil-02 11/18/19 BM	11/18/19, 1102	Soil	None	2	X	X							Extra container for MS/MSD
				TOTAL	3									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Group, USA

Sample Receipt Checklist

Client Name: **TETRATECH-EM-CHI** Date/Time Received: **19-Nov-19 10:00**

Work Order: **19111428** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 19-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 19-Nov-19 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.4/3.4 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/19/2019 1:40:16 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL03010**

Date Completed:12/04/2019
Revision Date: 12/12/2019

N. Saikaly

12/12/2019 1:31 PM
Approved and released by:
Project Manager: Nisreen Saikaly

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL03010

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision (12/06/2019)

This report supersedes and replaces any prior reports issued under this lot number.

The sample Ds are corrected to “MPGI” (capital letter “i”, rather than number 1)

Sample Summary

Tetra Tech, Inc.

Lot Number: UL03010

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-20-Water-RW-120219	Aqueous	12/02/2019 1036	12/03/2019
002	MPGI-21-Water-RW-120219	Aqueous	12/02/2019 0951	12/03/2019
003	MPGI-22-Water-RW-120219	Aqueous	12/02/2019 1114	12/03/2019
004	MPGI-24-Water-RW-120219	Aqueous	12/02/2019 1327	12/03/2019
005	MPGI-25-Water-RW-120219	Aqueous	12/02/2019 1244	12/03/2019
006	MPGI-FB-120129	Aqueous	12/02/2019 1400	12/03/2019
007	MPGI-TB-120129	Aqueous	12/02/2019	12/03/2019

(7 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL03010

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page

(0 detections)

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.** Laboratory ID: **UL03010-001**

Description: **MPGI-20-Water-RW-120219** Matrix: **Aqueous**

Date Sampled: **12/02/2019 1036**

Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1403	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-001**
Description: **MPGI-20-Water-RW-120219**
Matrix: **Aqueous**
Date Sampled: **12/02/2019 1036**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1403	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		98	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.** Laboratory ID: **UL03010-002**

Description: **MPGI-21-Water-RW-120219** Matrix: **Aqueous**

Date Sampled: **12/02/2019 0951**

Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1427	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-002**
Description: **MPGI-21-Water-RW-120219**
Matrix: **Aqueous**
Date Sampled: **12/02/2019 0951**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1427	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.** Laboratory ID: **UL03010-003**

Description: **MPGI-22-Water-RW-120219** Matrix: **Aqueous**

Date Sampled: **12/02/2019 1114**

Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1451	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-003**
Description: **MPGI-22-Water-RW-120219**
Matrix: **Aqueous**
Date Sampled: **12/02/2019 1114**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1451	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.** Laboratory ID: **UL03010-004**

Description: **MPGI-24-Water-RW-120219** Matrix: **Aqueous**

Date Sampled: **12/02/2019 1327**

Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1514	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-004**
Description: **MPGI-24-Water-RW-120219**
Matrix: **Aqueous**
Date Sampled: **12/02/2019 1327**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1514	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.** Laboratory ID: **UL03010-005**

Description: **MPGI-25-Water-RW-120219** Matrix: **Aqueous**

Date Sampled: **12/02/2019 1244**

Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1539	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-005**
Description: **MPGI-25-Water-RW-120219**
Matrix: **Aqueous**
Date Sampled: **12/02/2019 1244**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1539	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.** Laboratory ID: **UL03010-006**

Description: **MPGI-FB-120129** Matrix: **Aqueous**

Date Sampled: **12/02/2019 1400**

Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1228	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-006**
Description: **MPGI-FB-120129**
Matrix: **Aqueous**
Date Sampled: **12/02/2019 1400**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1228	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-007**
Description: **MPGI-TB-120129**
Matrix: **Aqueous**
Date Sampled: **12/02/2019**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1252	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL03010-007**
Description: **MPGI-TB-120129**
Matrix: **Aqueous**
Date Sampled: **12/02/2019**
Date Received: **12/03/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1252	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	5.0	ug/L	12/03/2019 1035
Benzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Bromodichloromethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Bromoform	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	12/03/2019 1035
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/03/2019 1035
Carbon disulfide	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Chlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Chloroethane	ND		1	2.0	0.40	ug/L	12/03/2019 1035
Chloroform	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	12/03/2019 1035
Cyclohexane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Dibromochloromethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	12/03/2019 1035
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Ethylbenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
2-Hexanone	ND		1	10	2.0	ug/L	12/03/2019 1035
Isopropylbenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Methyl acetate	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	12/03/2019 1035
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	12/03/2019 1035
Methylcyclohexane	ND		1	5.0	0.40	ug/L	12/03/2019 1035
Methylene chloride	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Styrene	ND		1	1.0	0.41	ug/L	12/03/2019 1035
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Tetrachloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Toluene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	12/03/2019 1035
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Vinyl chloride	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Xylenes (total)	ND		1	1.0	0.40	ug/L	12/03/2019 1035

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002
Batch: 37730
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	12/03/2019 0947
Benzene	50	50		1	100	70-130	12/03/2019 0947
Bromodichloromethane	50	52		1	103	70-130	12/03/2019 0947
Bromoform	50	48		1	96	70-130	12/03/2019 0947
Bromomethane (Methyl bromide)	50	41		1	81	70-130	12/03/2019 0947
2-Butanone (MEK)	100	96		1	96	70-130	12/03/2019 0947
Carbon disulfide	50	43		1	86	70-130	12/03/2019 0947
Carbon tetrachloride	50	49		1	99	70-130	12/03/2019 0947
Chlorobenzene	50	50		1	99	70-130	12/03/2019 0947
Chloroethane	50	45		1	89	70-130	12/03/2019 0947
Chloroform	50	50		1	100	70-130	12/03/2019 0947
Chloromethane (Methyl chloride)	50	39		1	79	60-140	12/03/2019 0947
Cyclohexane	50	50		1	99	70-130	12/03/2019 0947
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	12/03/2019 0947
Dibromochloromethane	50	52		1	104	70-130	12/03/2019 0947
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	12/03/2019 0947
1,2-Dichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,3-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
1,4-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
Dichlorodifluoromethane	50	42		1	84	60-140	12/03/2019 0947
1,1-Dichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,2-Dichloroethane	50	49		1	97	70-130	12/03/2019 0947
1,1-Dichloroethene	50	52		1	103	70-130	12/03/2019 0947
cis-1,2-Dichloroethene	50	49		1	97	70-130	12/03/2019 0947
trans-1,2-Dichloroethene	50	53		1	106	70-130	12/03/2019 0947
1,2-Dichloropropane	50	50		1	101	70-130	12/03/2019 0947
cis-1,3-Dichloropropene	50	55		1	110	70-130	12/03/2019 0947
trans-1,3-Dichloropropene	50	55		1	109	70-130	12/03/2019 0947
Ethylbenzene	50	50		1	101	70-130	12/03/2019 0947
2-Hexanone	100	95		1	95	70-130	12/03/2019 0947
Isopropylbenzene	50	51		1	102	70-130	12/03/2019 0947
Methyl acetate	50	49		1	99	70-130	12/03/2019 0947
Methyl tertiary butyl ether (MTBE)	50	48		1	95	70-130	12/03/2019 0947
4-Methyl-2-pentanone	100	96		1	96	70-130	12/03/2019 0947
Methylcyclohexane	50	50		1	101	70-130	12/03/2019 0947
Methylene chloride	50	42		1	84	70-130	12/03/2019 0947
Styrene	50	52		1	104	70-130	12/03/2019 0947
1,1,2,2-Tetrachloroethane	50	48		1	95	70-130	12/03/2019 0947
Tetrachloroethene	50	50		1	99	70-130	12/03/2019 0947
Toluene	50	50		1	100	70-130	12/03/2019 0947
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	12/03/2019 0947
1,2,4-Trichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,1,1-Trichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,1,2-Trichloroethane	50	48		1	96	70-130	12/03/2019 0947

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002
Batch: 37730
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	12/03/2019 0947
Trichlorofluoromethane	50	42		1	84	70-130	12/03/2019 0947
Vinyl chloride	50	39		1	78	70-130	12/03/2019 0947
Xylenes (total)	100	100		1	102	70-130	12/03/2019 0947

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: UL03010-001DU
Batch: 37730
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Acetone	ND	ND		1	0.00	20	12/03/2019 1603
Benzene	ND	ND		1	0.00	20	12/03/2019 1603
Bromodichloromethane	ND	ND		1	0.00	20	12/03/2019 1603
Bromoform	ND	ND		1	0.00	20	12/03/2019 1603
Bromomethane (Methyl bromide)	ND	ND		1	0.00	20	12/03/2019 1603
2-Butanone (MEK)	ND	ND		1	0.00	20	12/03/2019 1603
Carbon disulfide	ND	ND		1	0.00	20	12/03/2019 1603
Carbon tetrachloride	ND	ND		1	0.00	20	12/03/2019 1603
Chlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
Chloroethane	ND	ND		1	0.00	20	12/03/2019 1603
Chloroform	ND	ND		1	0.00	20	12/03/2019 1603
Chloromethane (Methyl chloride)	ND	ND		1	0.00	20	12/03/2019 1603
Cyclohexane	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dibromo-3-chloropropane (DBCP)	ND	ND		1	0.00	20	12/03/2019 1603
Dibromochloromethane	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dibromoethane (EDB)	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
1,3-Dichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
1,4-Dichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
Dichlorodifluoromethane	ND	ND		1	0.00	20	12/03/2019 1603
1,1-Dichloroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dichloroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,1-Dichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
cis-1,2-Dichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
trans-1,2-Dichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dichloropropane	ND	ND		1	0.00	20	12/03/2019 1603
cis-1,3-Dichloropropene	ND	ND		1	0.00	20	12/03/2019 1603
trans-1,3-Dichloropropene	ND	ND		1	0.00	20	12/03/2019 1603
Ethylbenzene	ND	ND		1	0.00	20	12/03/2019 1603
2-Hexanone	ND	ND		1	0.00	20	12/03/2019 1603
Isopropylbenzene	ND	ND		1	0.00	20	12/03/2019 1603
Methyl acetate	ND	ND		1	0.00	20	12/03/2019 1603
Methyl tertiary butyl ether (MTBE)	ND	ND		1	0.00	20	12/03/2019 1603
4-Methyl-2-pentanone	ND	ND		1	0.00	20	12/03/2019 1603
Methylcyclohexane	ND	ND		1	0.00	20	12/03/2019 1603
Methylene chloride	ND	ND		1	0.00	20	12/03/2019 1603
Styrene	ND	ND		1	0.00	20	12/03/2019 1603
1,1,2,2-Tetrachloroethane	ND	ND		1	0.00	20	12/03/2019 1603
Tetrachloroethene	ND	ND		1	0.00	20	12/03/2019 1603
Toluene	ND	ND		1	0.00	20	12/03/2019 1603
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,2,4-Trichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
1,1,1-Trichloroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,1,2-Trichloroethane	ND	ND		1	0.00	20	12/03/2019 1603

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: UL03010-001DU
Batch: 37730
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Trichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
Trichlorofluoromethane	ND	ND		1	0.00	20	12/03/2019 1603
Vinyl chloride	ND	ND		1	0.00	20	12/03/2019 1603
Xylenes (total)	ND	ND		1	0.00	20	12/03/2019 1603

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: UL03010-002MS
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	100	82		1	82	60-140	12/03/2019 1626
Benzene	ND	50	50		1	101	70-130	12/03/2019 1626
Bromodichloromethane	ND	50	49		1	99	70-130	12/03/2019 1626
Bromoform	ND	50	35		1	70	70-130	12/03/2019 1626
Bromomethane (Methyl bromide)	ND	50	43		1	87	70-130	12/03/2019 1626
2-Butanone (MEK)	ND	100	90		1	90	70-130	12/03/2019 1626
Carbon disulfide	ND	50	41		1	81	70-130	12/03/2019 1626
Carbon tetrachloride	ND	50	51		1	102	70-130	12/03/2019 1626
Chlorobenzene	ND	50	49		1	99	70-130	12/03/2019 1626
Chloroethane	ND	50	47		1	94	70-130	12/03/2019 1626
Chloroform	ND	50	50		1	99	70-130	12/03/2019 1626
Chloromethane (Methyl chloride)	ND	50	42		1	84	60-140	12/03/2019 1626
Cyclohexane	ND	50	53		1	105	70-130	12/03/2019 1626
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	44		1	88	70-130	12/03/2019 1626
Dibromochloromethane	ND	50	46		1	93	70-130	12/03/2019 1626
1,2-Dibromoethane (EDB)	ND	50	48		1	97	70-130	12/03/2019 1626
1,2-Dichlorobenzene	ND	50	48		1	97	70-130	12/03/2019 1626
1,3-Dichlorobenzene	ND	50	48		1	96	70-130	12/03/2019 1626
1,4-Dichlorobenzene	ND	50	49		1	97	70-130	12/03/2019 1626
Dichlorodifluoromethane	ND	50	48		1	96	60-140	12/03/2019 1626
1,1-Dichloroethane	ND	50	50		1	100	70-130	12/03/2019 1626
1,2-Dichloroethane	ND	50	48		1	96	70-130	12/03/2019 1626
1,1-Dichloroethene	ND	50	51		1	103	70-130	12/03/2019 1626
cis-1,2-Dichloroethene	ND	50	49		1	98	70-130	12/03/2019 1626
trans-1,2-Dichloroethene	ND	50	54		1	107	70-130	12/03/2019 1626
1,2-Dichloropropane	ND	50	50		1	100	70-130	12/03/2019 1626
cis-1,3-Dichloropropene	ND	50	52		1	104	70-130	12/03/2019 1626
trans-1,3-Dichloropropene	ND	50	51		1	103	70-130	12/03/2019 1626
Ethylbenzene	ND	50	51		1	103	70-130	12/03/2019 1626
2-Hexanone	ND	100	94		1	94	70-130	12/03/2019 1626
Isopropylbenzene	ND	50	52		1	104	70-130	12/03/2019 1626
Methyl acetate	ND	50	46		1	92	70-130	12/03/2019 1626
Methyl tertiary butyl ether (MTBE)	ND	50	44		1	88	70-130	12/03/2019 1626
4-Methyl-2-pentanone	ND	100	94		1	94	70-130	12/03/2019 1626
Methylcyclohexane	ND	50	55		1	111	70-130	12/03/2019 1626
Methylene chloride	ND	50	39		1	78	70-130	12/03/2019 1626
Styrene	ND	50	51		1	101	70-130	12/03/2019 1626
1,1,2,2-Tetrachloroethane	ND	50	46		1	92	70-130	12/03/2019 1626
Tetrachloroethene	ND	50	51		1	102	70-130	12/03/2019 1626
Toluene	ND	50	51		1	102	70-130	12/03/2019 1626
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	50		1	101	70-130	12/03/2019 1626
1,2,4-Trichlorobenzene	ND	50	47		1	94	70-130	12/03/2019 1626
1,1,1-Trichloroethane	ND	50	51		1	102	70-130	12/03/2019 1626
1,1,2-Trichloroethane	ND	50	47		1	95	70-130	12/03/2019 1626

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: UL03010-002MS
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	50	50		1	100	70-130	12/03/2019 1626
Trichlorofluoromethane	ND	50	47		1	93	70-130	12/03/2019 1626
Vinyl chloride	ND	50	42		1	85	70-130	12/03/2019 1626
Xylenes (total)	ND	100	100		1	102	70-130	12/03/2019 1626

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number

Client: Tetra Tech	Report to Contact: Andre Baker and Brendan Martin	Telephone No. / E-mail: andre.baker@tetratech.com, brendan.martin@tetratech.com	Quote No.
Address: 1 S. Wacker Drive, Suite 3700	Sampler's Signature: x [signature] Printed Name: Brendan Martin	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Chicago; State: IL; Zip Code: 60606			
Project Name: Joliet Chemical Fire PRP Cleanup Site			
Project Number: 103X9031100690002AJC01	P.O No.: SHLY-*		

UL03010

UL03011

NMS

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	Remarks
MP61-20-Water-RW-120219	120219	1038		X			1			3			X	X	
MP61-21-Water-RW-120219	120219	0951		X			1			3			X	X	
MP61-22-Water-RW-120219	120219	1114		X			1			3			X	X	
MP61-24-Water-RW-120219	120219	1327		X			1			3			X	X	
MP61-25-Water-RW-120219	120219	1244		X			1			3			X	X	
MP61-FB-120219	120219	1400		X			1			3			X	X	Field Blank
MP61-TB-120219	120219	—		X						2			X		Trip Blank

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks): ☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements:

	Date	Time
1. Relinquished by: Brendan Martin [signature]	120219	1500
2. Relinquished by:		
3. Relinquished by:		
4. Relinquished by: Fed EX	12/03/19	0935

	Date	Time
1. Received by:		
2. Received by:		
3. Received by:		
4. Laboratory Received by: L Hite	12/03/19	0935

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check): ☒ Y ☐ N ☐ Ice Pack
Receipt Temp. 1.5 °C

Document Number: ME002OW-01

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: LKH / 12-03-2019 Lot #: UL03010/UL03010

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.5 / 1.5 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA.

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA _____ were received with bubbles >6 mm in diameter.

Samples(s) NA _____ were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 12-03-2019

Comments:

VOLATILE

QC SUMMARY

FORM 2
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03010

Project No.: 103X9031006

AnalyticalMethod: 8260B-TCL Matrix: Water

CLIENT SAMPLE ID	DMC1	DMC2	DMC3						TOT OUT
MPG1-20-Water-RW-12	94	99	98						0
MPG1-21-Water-RW-12	99	103	101						0
MPG1-22-Water-RW-12	97	99	104						0
MPG1-24-Water-RW-12	95	99	101						0
MPG1-25-Water-RW-12	98	99	101						0
MPG1-FB-120129	94	99	100						0
MPG1-TB-120129	96	100	101						0
VBLKBR	95	101	100						0
50uL/100mL 15608/11	96	103	100						0
MPG1-21-Water-RW-12MS	97	103	103						0
MPG1-20-Water-RW-12DUP	96	100	103						0

	QC LIMITS
DMC1 = 1,2-Dichloroethane-d4	70-130
DMC2 = Bromofluorobenzene	70-130
DMC3 = Toluene-d8	70-130

* Values outside of contract required QC limits
D DMC diluted out

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03010

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-21-Water-RW-12

Instrument ID: _GC 7890B / MS 5977B_MSD17 Lab Sample ID: UL03010-002MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC #	QC LIMITS REC.
Acetone	100		82	82	60-140
Benzene	50		50	101	70-130
Bromodichloromethane	50		49	99	70-130
Bromoform	50		35	70	70-130
Bromomethane (Methyl	50		43	87	70-130
2-Butanone (MEK)	100		90	90	70-130
Carbon disulfide	50		41	81	70-130
Carbon tetrachloride	50		51	102	70-130
Chlorobenzene	50		49	99	70-130
Chloroethane	50		47	94	70-130
Chloroform	50		50	99	70-130
Chloromethane (Methyl	50		42	84	60-140
Cyclohexane	50		53	105	70-130
1,2-Dibromo-3-chloropropane	50		44	88	70-130
Dibromochloromethane	50		46	93	70-130
1,2-Dibromoethane (EDB)	50		48	97	70-130
1,2-Dichlorobenzene	50		48	97	70-130
1,3-Dichlorobenzene	50		48	96	70-130
1,4-Dichlorobenzene	50		49	97	70-130
Dichlorodifluoromethane	50		48	96	60-140
1,1-Dichloroethane	50		50	100	70-130
1,2-Dichloroethane	50		48	96	70-130
1,1-Dichloroethene	50		51	103	70-130
cis-1,2-Dichloroethene	50		49	98	70-130
trans-1,2-Dichloroethene	50		54	107	70-130
1,2-Dichloropropane	50		50	100	70-130
cis-1,3-Dichloropropene	50		52	104	70-130
trans-1,3-Dichloropropene	50		51	103	70-130
Ethylbenzene	50		51	103	70-130
2-Hexanone	100		94	94	70-130
Isopropylbenzene	50		52	104	70-130
Methyl acetate	50		46	92	70-130
Methyl tertiary butyl ether	50		44	88	70-130
4-Methyl-2-pentanone	100		94	94	70-130
Methylcyclohexane	50		55	111	70-130
Methylene chloride	50		39	78	70-130
Styrene	50		51	101	70-130

* Values outside of QC Limits

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03010

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-21-Water-RW-12

Instrument ID: _GC 7890B / MS 5977B_MSD17 Lab Sample ID: UL03010-002MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC #	QC LIMITS REC.
1,1,2,2-Tetrachloroethane	50		46	92	70-130
Tetrachloroethene	50		51	102	70-130
Toluene	50		51	102	70-130
1,1,2-Trichloro-1,2,2-	50		50	101	70-130
1,2,4-Trichlorobenzene	50		47	94	70-130
1,1,1-Trichloroethane	50		51	102	70-130
1,1,2-Trichloroethane	50		47	95	70-130
Trichloroethene	50		50	100	70-130
Trichlorofluoromethane	50		47	93	70-130
Vinyl chloride	50		42	85	70-130
Xylenes (total)	100		100	102	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03010

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID: 50uL/100mL 15608/11 Lab Sample ID: UQ37730-002

Instrument ID: _GC 7890B / MS 5977B_MSD17

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Acetone	100	98	98	60-140
Benzene	50	50	100	70-130
Bromodichloromethane	50	52	103	70-130
Bromoform	50	48	96	70-130
Bromomethane (Methyl	50	41	81	70-130
2-Butanone (MEK)	100	96	96	70-130
Carbon disulfide	50	43	86	70-130
Carbon tetrachloride	50	49	99	70-130
Chlorobenzene	50	50	99	70-130
Chloroethane	50	45	89	70-130
Chloroform	50	50	100	70-130
Chloromethane (Methyl	50	39	79	60-140
Cyclohexane	50	50	99	70-130
1,2-Dibromo-3-chloropropane	50	48	96	70-130
Dibromochloromethane	50	52	104	70-130
1,2-Dibromoethane (EDB)	50	50	99	70-130
1,4-Dichlorobenzene	50	49	99	70-130
1,3-Dichlorobenzene	50	49	99	70-130
1,2-Dichlorobenzene	50	49	98	70-130
Dichlorodifluoromethane	50	42	84	60-140
1,2-Dichloroethane	50	49	97	70-130
1,1-Dichloroethane	50	49	99	70-130
trans-1,2-Dichloroethene	50	53	106	70-130
cis-1,2-Dichloroethene	50	49	97	70-130
1,1-Dichloroethene	50	52	103	70-130
1,2-Dichloropropane	50	50	101	70-130
trans-1,3-Dichloropropene	50	55	109	70-130
cis-1,3-Dichloropropene	50	55	110	70-130
Ethylbenzene	50	50	101	70-130
2-Hexanone	100	95	95	70-130
Isopropylbenzene	50	51	102	70-130
Methyl acetate	50	49	99	70-130
Methyl tertiary butyl ether	50	48	95	70-130
4-Methyl-2-pentanone	100	96	96	70-130
Methylcyclohexane	50	50	101	70-130
Methylene chloride	50	42	84	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03010

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID: 50uL/100mL 15608/11 Lab Sample ID: UQ37730-002

Instrument ID: _GC 7890B / MS 5977B_MSD17

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Styrene	50	52	104	70-130
1,1,2,2-Tetrachloroethane	50	48	95	70-130
Tetrachloroethene	50	50	99	70-130
Toluene	50	50	100	70-130
1,1,2-Trichloro-1,2,2-	50	47	94	70-130
1,2,4-Trichlorobenzene	50	49	98	70-130
1,1,2-Trichloroethane	50	48	96	70-130
1,1,1-Trichloroethane	50	49	99	70-130
Trichloroethene	50	50	100	70-130
Trichlorofluoromethane	50	42	84	70-130
Vinyl chloride	50	39	78	70-130
Xylenes (total)	100	100	102	70-130

* Values outside of QC Limits

CLIENT SAMPLE ID

VBLKBR

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03010

Project No.: 103X9031006 Lab Sample ID: UQ37730-001

Analytical Method: 8260B-TCL Matrix: Water

Instrument ID: GC 7890B / MS 5977B_MSD17 Lab File ID: 171203A05

Extraction Type: Date Extracted:

GC Column(1): DB-624 ID: 0.25 (mm) Date Analyzed: 12/03/2019

GC Column(2): ID: (mm) Time Analyzed: 10:35

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPG1-20-Water-RW-12	UL03010-001	171203A11	12/03/2019
MPG1-21-Water-RW-12	UL03010-002	171203A12	12/03/2019
MPG1-22-Water-RW-12	UL03010-003	171203A13	12/03/2019
MPG1-24-Water-RW-12	UL03010-004	171203A14	12/03/2019
MPG1-25-Water-RW-12	UL03010-005	171203A15	12/03/2019
MPG1-FB-120129	UL03010-006	171203A07	12/03/2019
MPG1-TB-120129	UL03010-007	171203A08	12/03/2019
50uL/100mL 15608/11	UQ37730-002	171203A03	12/03/2019
MPG1-21-Water-RW-12MS	UL03010-002MS	171203A17	12/03/2019
MPG1-20-Water-RW-12DUP	UL03010-001DU	171203A16	12/03/2019

Report Date: 04-Dec-2019 13:04:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B01.d		
Injection Date:	02-Dec-2019 23:45:30	Inst. ID:	msd17.i
Method:	BFB-17.m	Tune Type:	BFB
Client ID:	15547	Lab ID:	BFBBQ
Sample Info:	17120219B, BFBBQ		
Injection Vol.		Dil. Factor:	1.0
Operator:	JTH		
Column:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.6
75	30.00 - 60.00% of mass 95	50.9
96	5.00 - 9.00% of mass 95	7.0
173	Less than 2.00% of mass 174	0.9 (0.9) 1
174	50.00 - 150.00% of mass 95	95.9
175	5.00 - 9.00% of mass 174	7.4 (7.7) 1
176	95.00 - 101.00% of mass 174	94.0 (98.0) 1
177	5.00 - 9.00% of mass 176	6.4 (6.8) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	171202B01.d	BFBBQ	15547	02-Dec-2019 23:45:30	00:00:00
Client	171202B02.d	VIBLK	VIBLK	03-Dec-2019 00:10:30	00:25:00
Client	171202B03.d	VIBLK	VIBLK	03-Dec-2019 00:34:30	00:49:00
Client	171202B04.d	VIBLK	VIBLK	03-Dec-2019 00:58:30	01:13:00
Ical	171202B05.d	VSTD0.5BQ	1mL/100mL VSTD050	03-Dec-2019 01:21:30	01:36:00
Ical	171202B06.d	VSTD001BQ	2mL/100mL VSTD050	03-Dec-2019 01:44:30	01:59:00
Ical	171202B07.d	VSTD005BQ	5uL/100mL 15613/10	03-Dec-2019 02:08:30	02:23:00
Ical	171202B08.d	VSTD020BQ	20uL/100mL 15613/10	03-Dec-2019 02:32:30	02:47:00
Ical	171202B09.d	VSTD050BQ	50uL/100mL 15613/10	03-Dec-2019 02:56:30	03:11:00
Ical	171202B10.d	VSTD100BQ	100uL/100mL15613/10	03-Dec-2019 03:19:30	03:34:00
Ical	171202B11.d	VSTD200BQ	200uL/100mL15613/10	03-Dec-2019 03:43:30	03:58:00
Client	171202B12.d	VIBLK	VIBLK	03-Dec-2019 04:07:30	04:22:00
ICV	171202B13.d	VICV050BQ	50uL/100mL 15608/11	03-Dec-2019 04:30:30	04:45:00
ICV	171202B13_dodICV.d	VICV050BQ	50uL/100mL 15608/11	03-Dec-2019 04:30:30	04:45:00

Report Date: 04-Dec-2019 13:38:40 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A01.d		
Injection Date:	03-Dec-2019 08:59:30	Inst. ID:	msd17.i
Method:	BFB-17.m	Tune Type:	BFB
Client ID:	15588	Lab ID:	BFBBR
Sample Info:	17120319, BFBBR		
Injection Vol.		Dil. Factor:	1.0
Operator:	TML		
Column:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.2
75	30.00 - 60.00% of mass 95	50.1
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.8 (0.9) 1
174	50.00 - 150.00% of mass 95	98.2
175	5.00 - 9.00% of mass 174	7.4 (7.6) 1
176	95.00 - 101.00% of mass 174	96.0 (97.7) 1
177	5.00 - 9.00% of mass 176	6.5 (6.8) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	171203A01.d	BFBBR	15588	03-Dec-2019 08:59:30	00:00:00
Ccv	171203A02.d	VSTD050BR	50uL/100mL 15613/10	03-Dec-2019 09:23:30	00:24:00
LCS	171203A03.d	VLCS050BR	50uL/100mL 15608/11	03-Dec-2019 09:47:30	00:48:00
Client	171203A04.d	VIBLK	VIBLK	03-Dec-2019 10:11:30	01:12:00
BLANK	171203A05.d	VBLKBR	VBLKBR	03-Dec-2019 10:35:30	01:36:00
Client	171203A06.d	VIBLK	VIBLK	03-Dec-2019 12:04:30	03:05:00
Client	171203A07.d	UL03010-006	MPG1-FB-120129	03-Dec-2019 12:28:30	03:29:00
Client	171203A08.d	UL03010-007	MPG1-TB-120129	03-Dec-2019 12:52:30	03:53:00
Client	171203A09.d	UL02023-008	EB-01-120219	03-Dec-2019 13:16:30	04:17:00
Client	171203A10.d	UL02023-009	TB-01-120219	03-Dec-2019 13:39:30	04:40:00
Client	171203A11.d	UL03010-001	MPG1-20-Water-RW-12	03-Dec-2019 14:03:30	05:04:00
Client	171203A12.d	UL03010-002	MPG1-21-Water-RW-12	03-Dec-2019 14:27:30	05:28:00
Client	171203A13.d	UL03010-003	MPG1-22-Water-RW-12	03-Dec-2019 14:51:30	05:52:00
Client	171203A14.d	UL03010-004	MPG1-24-Water-RW-12	03-Dec-2019 15:14:30	06:15:00
Client	171203A15.d	UL03010-005	MPG1-25-Water-RW-12	03-Dec-2019 15:39:30	06:40:00
DUP	171203A16.d	UL03010-001	MPG1-20-Water-RW-12	03-Dec-2019 16:03:30	07:04:00
MS	171203A17.d	UL03010-002	MPG1-21-Water-RW-12	03-Dec-2019 16:26:30	07:27:00

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd17.i\17120219B.b

Instrument: msd17.m Method: 8260B-17.m

Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

Initial Calibration Samples

Standard File: /chem/msd17.i/17120219B.b/171202B08.D.d

Injection Date: 03-Dec-2019 02:32:30 Lab ID: VSTD020BQ

Sublist: std.sub Sample Type: IcalIS, Level: 4

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3251337	6.18	4509793	7.13	3742570	10.86	1283920	13.22
Upper Limit	6502674	6.68	9019586	7.63	7485140	11.36	2567840	13.72
Lower Limit	1625669	5.68	2254897	6.63	1871285	10.36	641960	12.72
VSTD0.5BQ	3369394	6.18	4589286	7.13	3527512	10.86	1177587	13.23
VSTD001BQ	3358266	6.18	4566594	7.13	3613790	10.86	1181830	13.23
VSTD005BQ	3240441	6.18	4545769	7.13	3690473	10.86	1260968	13.23
VSTD020BQ	3251337	6.18	4509793	7.13	3742570	10.86	1283920	13.22
VSTD050BQ	3182314	6.18	4447059	7.13	3682563	10.86	1317460	13.23
VSTD100BQ	3347696	6.18	4520476	7.13	3487938	10.86	1212249	13.23
VSTD200BQ	3241688	6.18	4344084	7.13	3297677	10.86	1166250	13.23
VICV050BQ	3282259	6.18	4565509	7.13	3793008	10.86	1331546	13.22
VICV050BQ	3282259	6.18	4565509	7.13	3793008	10.86	1331546	13.22

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd17.i/17120219B.b/171202B09.D.d

Injection Date: 03-Dec-2019 02:56:30 Lab ID: VSTD050BQ

Sublist: std.sub Sample Type: CCV

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3182314	6.18	4447059	7.13	3682563	10.86	1317460	13.23
Upper Limit	6364628	6.68	8894118	7.63	7365126	11.36	2634920	13.73
Lower Limit	1591157	5.68	2223530	6.63	1841282	10.36	658730	12.73
VIBLK	3366940	6.17	4533892	7.12	3479092	10.86	1178828	13.23
VIBLK	3239479	6.18	4471345	7.13	3657806	10.86	1231056	13.22
VIBLK	3394016	6.18	4645082	7.13	3638256	10.86	1209472	13.22
VIBLK	3368580	6.18	4676055	7.13	3843266	10.86	1294029	13.23

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Report Date: 04-Dec-2019 13:38:42 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd17.i\17120319.b

Instrument: msd17.m Method: 8260B-17.m

Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

CCV Samples

Standard File: /chem/msd17.i/17120219B.b/171202B09.D.d

Injection Date: 03-Dec-2019 02:56:30 Lab ID: VSTD050BQ

Sublist: std.sub Sample Type: Ical, Level: 5

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3182314	6.17	4447059	7.12	3682563	10.86	1317460	13.22
Upper Limit	6364628	6.67	8894118	7.62	7365126	11.36	2634920	13.72
Lower Limit	1591157	5.67	2223530	6.62	1841282	10.36	658730	12.72
VSTD050BR	3285049	6.17	4484878	7.12	3655388	10.86	1302586	13.22

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd17.i/17120319.b/171203A02.D.d

Injection Date: 03-Dec-2019 09:23:30 Lab ID: VSTD050BR

Sublist: std.sub Sample Type: CCVIS

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3285049	6.17	4484878	7.12	3655388	10.86	1302586	13.22
Upper Limit	6570098	6.67	8969756	7.62	7310776	11.36	2605172	13.72
Lower Limit	1642525	5.67	2242439	6.62	1827694	10.36	651293	12.72
VLCS050BR	3442850	6.18	4685938	7.13	3757656	10.86	1331218	13.22
VIBLK	3397610	6.18	4649847	7.13	3763913	10.86	1253048	13.22
VBLKBR	3357544	6.18	4609231	7.13	3696718	10.86	1266246	13.22
VIBLK	3067388	6.17	4178110	7.12	3758545	10.86	1273371	13.22
UL03010-006	3329905	6.18	4557678	7.13	3618692	10.86	1225472	13.23
UL03010-007	3393642	6.18	4613782	7.13	3742091	10.86	1277807	13.23
UL02023-008	3314174	6.19	4512897	7.13	3491561	10.86	1208614	13.23
UL02023-009	3301962	6.19	4506144	7.13	3653835	10.86	1245354	13.23
UL03010-001	3261884	6.19	4469177	7.13	3554736	10.86	1217350	13.23
UL03010-002	3293979	6.19	4545663	7.13	3666321	10.86	1275295	13.23
UL03010-003	3398703	6.19	4583413	7.13	3588225	10.86	1216531	13.23
UL03010-004	3236408	6.19	4431754	7.13	3547563	10.86	1203167	13.23
UL03010-005	3258561	6.19	4478667	7.13	3546773	10.86	1233259	13.23
UL03010-001	3351745	6.19	4487557	7.13	3423716	10.86	1159771	13.23
UL03010-002	3338162	6.19	4513273	7.14	3537515	10.86	1262144	13.23

AREA UPPER LIMIT = +100% of internal standard area. AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.5 minutes of internal standard RT. RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

RAW SAMPLE DATA

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-001
Description: MPG1-20-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1403	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-001
Description: MPG1-20-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1403	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		98	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A11.D		
Lab Sample ID:	UL03010-001	Client Sample ID:	MPG1-20-Water-RW-12
Injection Date:	03-Dec-2019 14:03:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, UL03010-001		
Misc. Info:	XRSI02		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	11
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.011	3261884	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.011	4469177	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.006	3554736	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.232	13.226	0.005	1217350	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0		3.144		ND			
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.520	0.010	1350468	47.190	47.190	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4100153	49.087	49.087	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.131	12.125	0.005	1182606	49.481	49.481	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

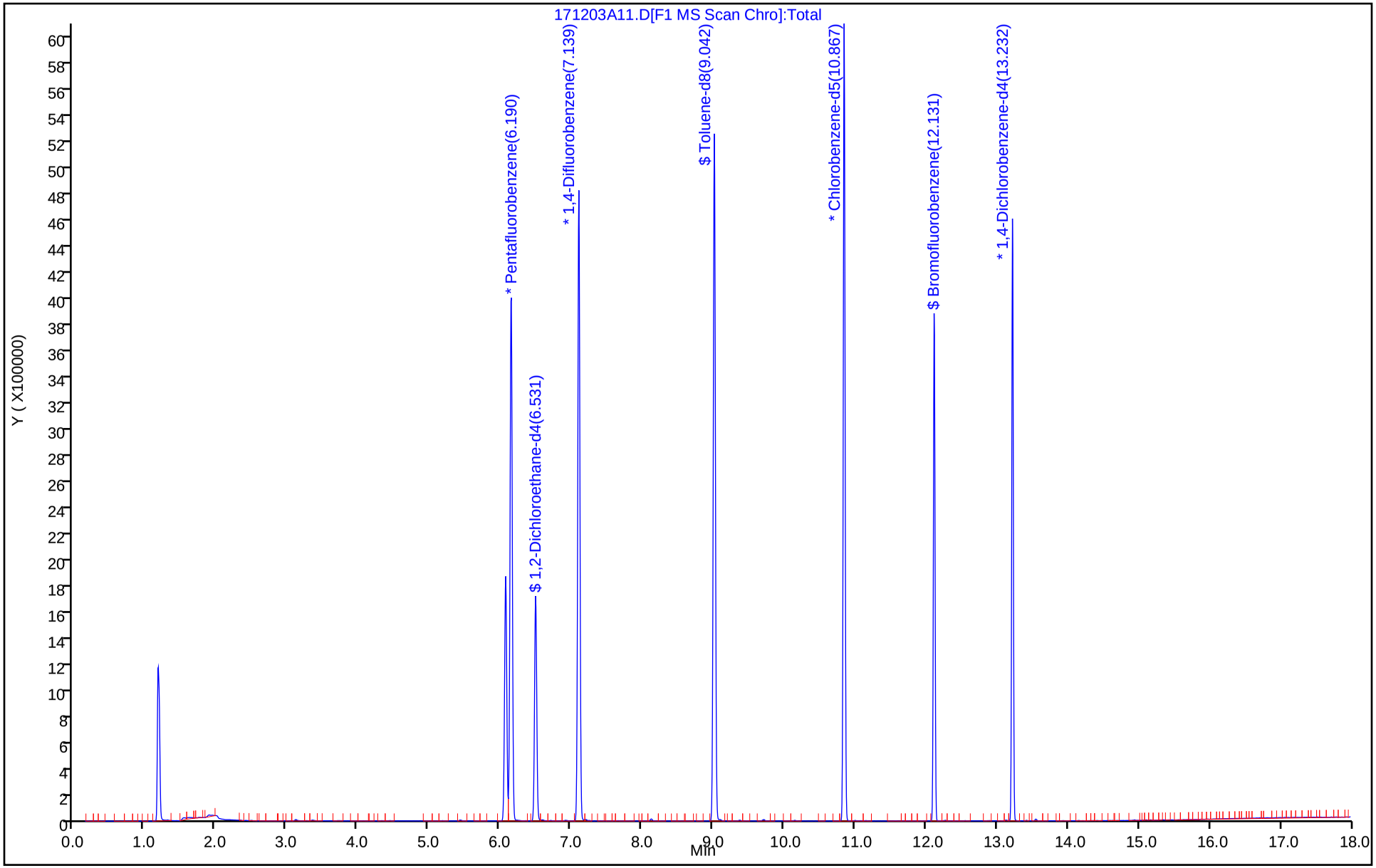
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A11.D				
Injection Date:	03-Dec-2019 14:03:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-20-Water-RW-12	Lab ID:	UL03010-001		
Sample Info:	17120319, UL03010-001				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: UL03010-001DU
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Acetone	ND	ND		1	0.00	20	12/03/2019 1603
Benzene	ND	ND		1	0.00	20	12/03/2019 1603
Bromodichloromethane	ND	ND		1	0.00	20	12/03/2019 1603
Bromoform	ND	ND		1	0.00	20	12/03/2019 1603
Bromomethane (Methyl bromide)	ND	ND		1	0.00	20	12/03/2019 1603
2-Butanone (MEK)	ND	ND		1	0.00	20	12/03/2019 1603
Carbon disulfide	ND	ND		1	0.00	20	12/03/2019 1603
Carbon tetrachloride	ND	ND		1	0.00	20	12/03/2019 1603
Chlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
Chloroethane	ND	ND		1	0.00	20	12/03/2019 1603
Chloroform	ND	ND		1	0.00	20	12/03/2019 1603
Chloromethane (Methyl chloride)	ND	ND		1	0.00	20	12/03/2019 1603
Cyclohexane	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dibromo-3-chloropropane (DBCP)	ND	ND		1	0.00	20	12/03/2019 1603
Dibromochloromethane	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dibromoethane (EDB)	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
1,3-Dichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
1,4-Dichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
Dichlorodifluoromethane	ND	ND		1	0.00	20	12/03/2019 1603
1,1-Dichloroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dichloroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,1-Dichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
cis-1,2-Dichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
trans-1,2-Dichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
1,2-Dichloropropane	ND	ND		1	0.00	20	12/03/2019 1603
cis-1,3-Dichloropropene	ND	ND		1	0.00	20	12/03/2019 1603
trans-1,3-Dichloropropene	ND	ND		1	0.00	20	12/03/2019 1603
Ethylbenzene	ND	ND		1	0.00	20	12/03/2019 1603
2-Hexanone	ND	ND		1	0.00	20	12/03/2019 1603
Isopropylbenzene	ND	ND		1	0.00	20	12/03/2019 1603
Methyl acetate	ND	ND		1	0.00	20	12/03/2019 1603
Methyl tertiary butyl ether (MTBE)	ND	ND		1	0.00	20	12/03/2019 1603
4-Methyl-2-pentanone	ND	ND		1	0.00	20	12/03/2019 1603
Methylcyclohexane	ND	ND		1	0.00	20	12/03/2019 1603
Methylene chloride	ND	ND		1	0.00	20	12/03/2019 1603
Styrene	ND	ND		1	0.00	20	12/03/2019 1603
1,1,2,2-Tetrachloroethane	ND	ND		1	0.00	20	12/03/2019 1603
Tetrachloroethene	ND	ND		1	0.00	20	12/03/2019 1603
Toluene	ND	ND		1	0.00	20	12/03/2019 1603
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,2,4-Trichlorobenzene	ND	ND		1	0.00	20	12/03/2019 1603
1,1,1-Trichloroethane	ND	ND		1	0.00	20	12/03/2019 1603
1,1,2-Trichloroethane	ND	ND		1	0.00	20	12/03/2019 1603

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: UL03010-001DU
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Trichloroethene	ND	ND		1	0.00	20	12/03/2019 1603
Trichlorofluoromethane	ND	ND		1	0.00	20	12/03/2019 1603
Vinyl chloride	ND	ND		1	0.00	20	12/03/2019 1603
Xylenes (total)	ND	ND		1	0.00	20	12/03/2019 1603

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A16.D		
Lab Sample ID:	UL03010-001	Client Sample ID:	MPG1-20-Water-RW-12
Injection Date:	03-Dec-2019 16:03:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, UL03010-001,DUP		
Misc. Info:	XRSI01		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	DUP	ALS Bottle:	16
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.011	3351745	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.011	4487557	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3423716	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.232	13.226	0.005	1159771	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0		3.144		ND			
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.536	6.520	0.016	1376952	47.919	47.919	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4158748	51.694	51.694	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.131	12.125	0.005	1152042	50.047	50.047	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

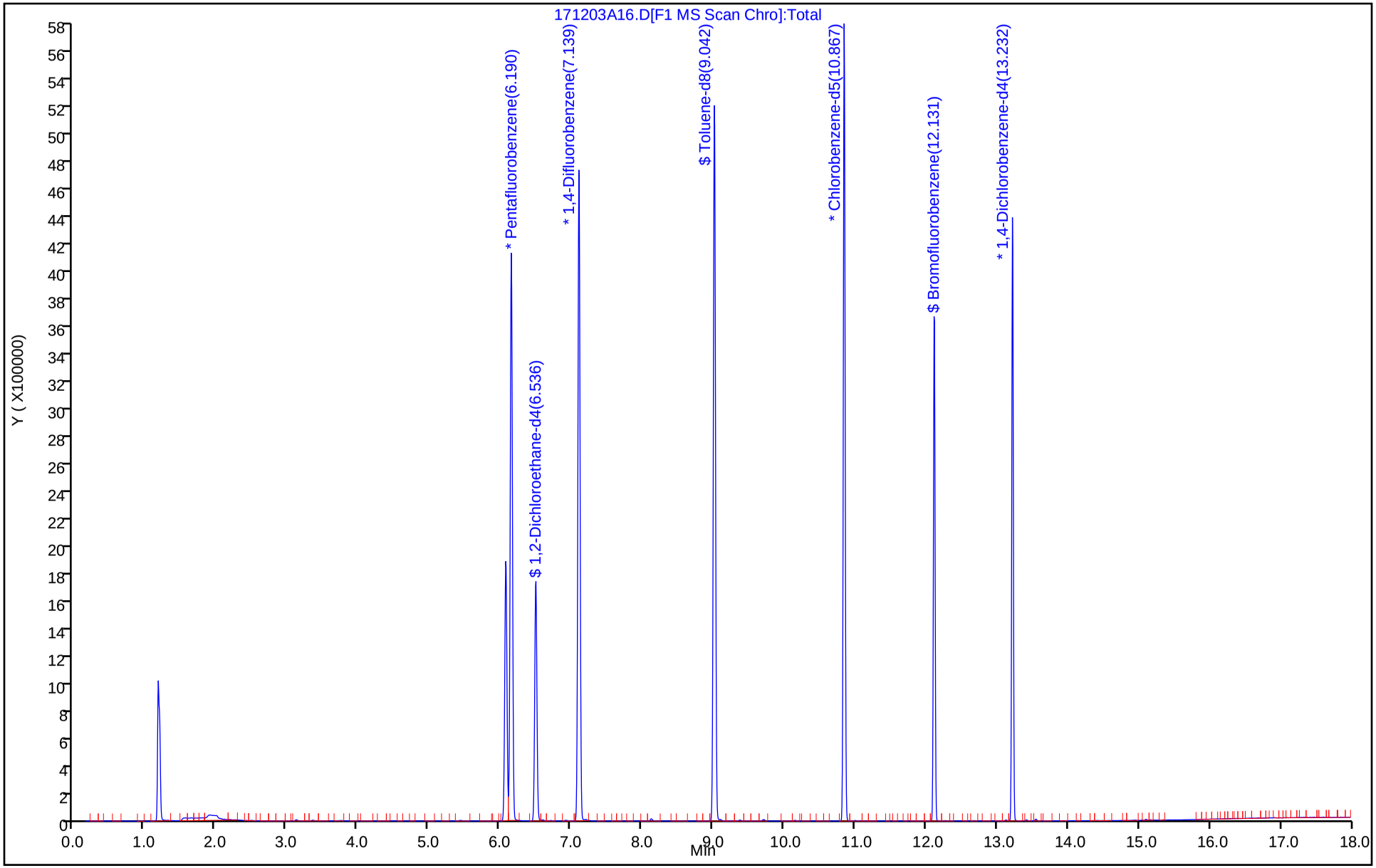
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:27 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A16.D				
Injection Date:	03-Dec-2019 16:03:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-20-Water-RW-12	Lab ID:	UL03010-001		
Sample Info:	17120319, UL03010-001,DUP				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-002
Description: MPG1-21-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1427	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-002
Description: MPG1-21-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1427	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A12.D		
Lab Sample ID:	UL03010-002	Client Sample ID:	MPG1-21-Water-RW-12
Injection Date:	03-Dec-2019 14:27:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, UL03010-002		
Misc. Info:	XRSK02		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.011	3293979	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.011	4545663	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3666321	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.232	13.226	0.005	1275295	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0		3.144		ND			
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.520	0.010	1439968	49.471	49.471	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4337141	50.344	50.344	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.131	12.125	0.005	1266616	51.383	51.383	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

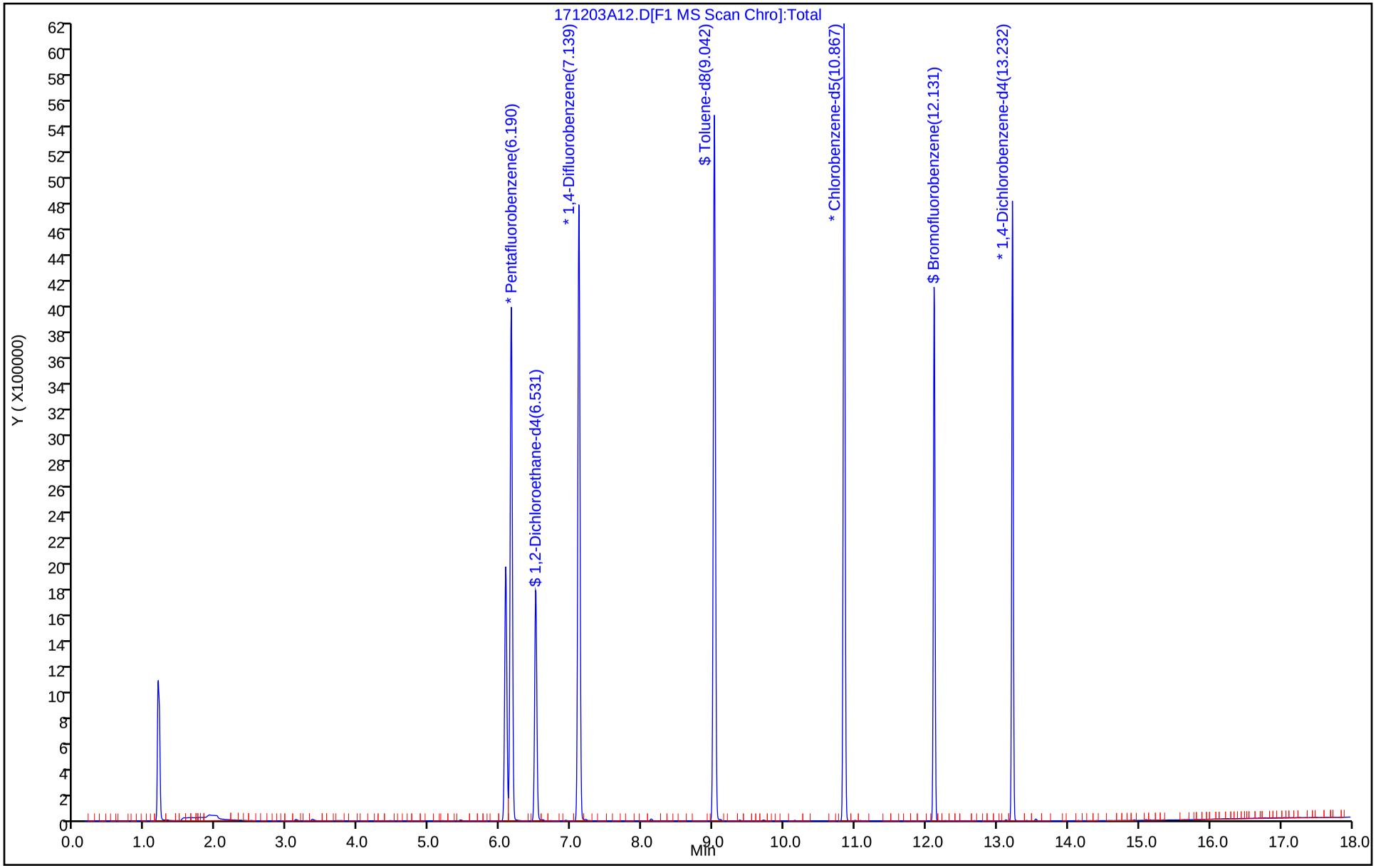
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A12.D				
Injection Date:	03-Dec-2019 14:27:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-21-Water-RW-12	Lab ID:	UL03010-002		
Sample Info:	17120319, UL03010-002				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-003
Description: MPG1-22-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1451	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-003
Description: MPG1-22-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1451	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 04-Dec-2019 13:38:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A13.D		
Lab Sample ID:	UL03010-003	Client Sample ID:	MPG1-22-Water-RW-12
Injection Date:	03-Dec-2019 14:51:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, UL03010-003		
Misc. Info:	XRSM02		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	13
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.010	3398703	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.010	4583413	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3588225	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.226	0.005	1216531	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0		3.144		ND			
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.520	0.010	1424371	48.532	48.532	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4368772	51.815	51.815	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.130	12.125	0.005	1194236	49.501	49.501	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

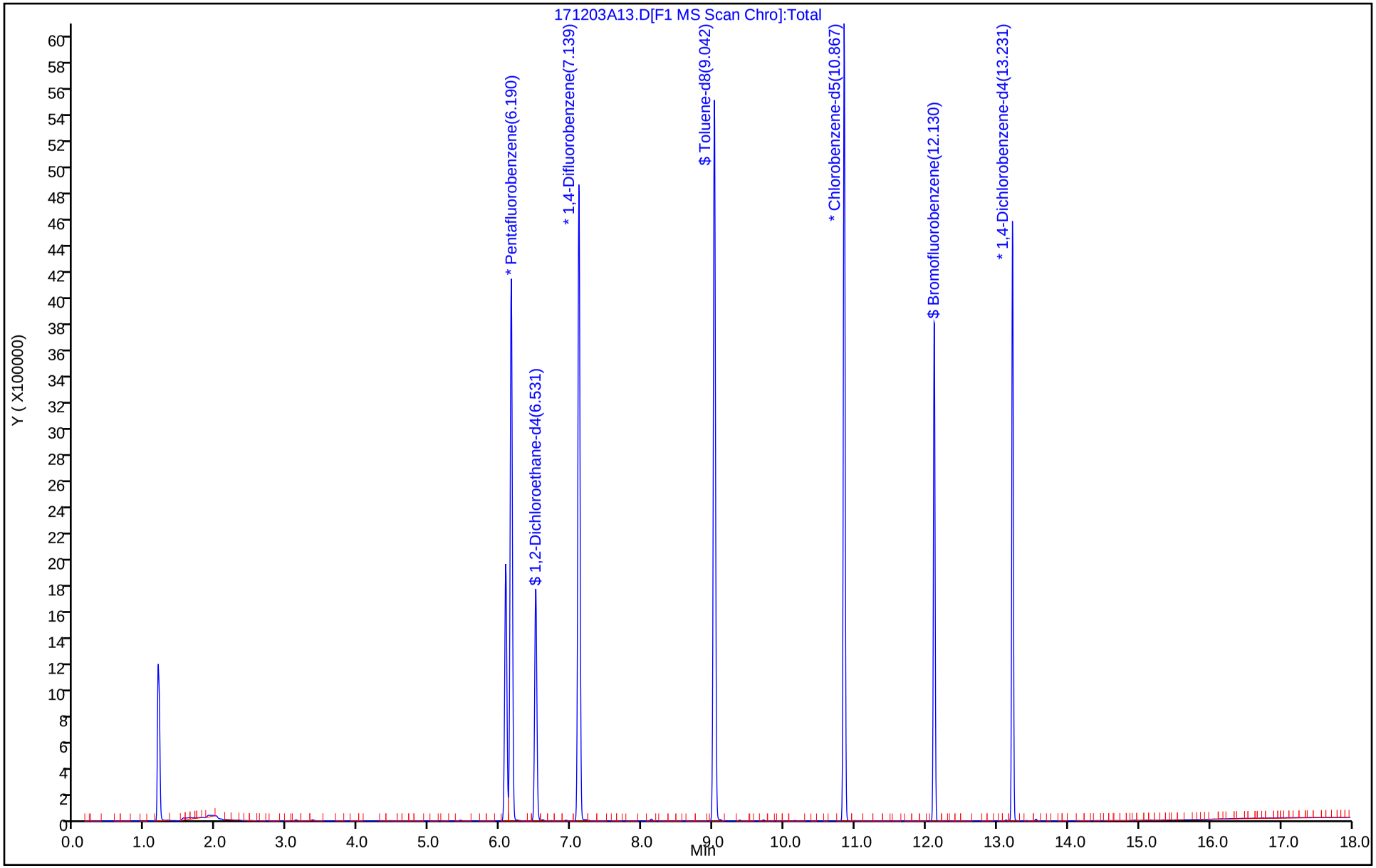
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A13.D				
Injection Date:	03-Dec-2019 14:51:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-22-Water-RW-12	Lab ID:	UL03010-003		
Sample Info:	17120319, UL03010-003				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-004
Description: MPG1-24-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1514	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-004
Description: MPG1-24-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1514	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A14.D		
Lab Sample ID:	UL03010-004	Client Sample ID:	MPG1-24-Water-RW-12
Injection Date:	03-Dec-2019 15:14:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, UL03010-004		
Misc. Info:	XRSO02		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	14
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.010	3236408	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.011	4431754	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3547563	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.226	0.005	1203167	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0	3.165	3.144	0.021	29648	2.8321	2.8321	e
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.536	6.520	0.016	1354615	47.735	47.735	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4196411	50.341	50.341	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.130	12.125	0.005	1184906	49.677	49.677	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

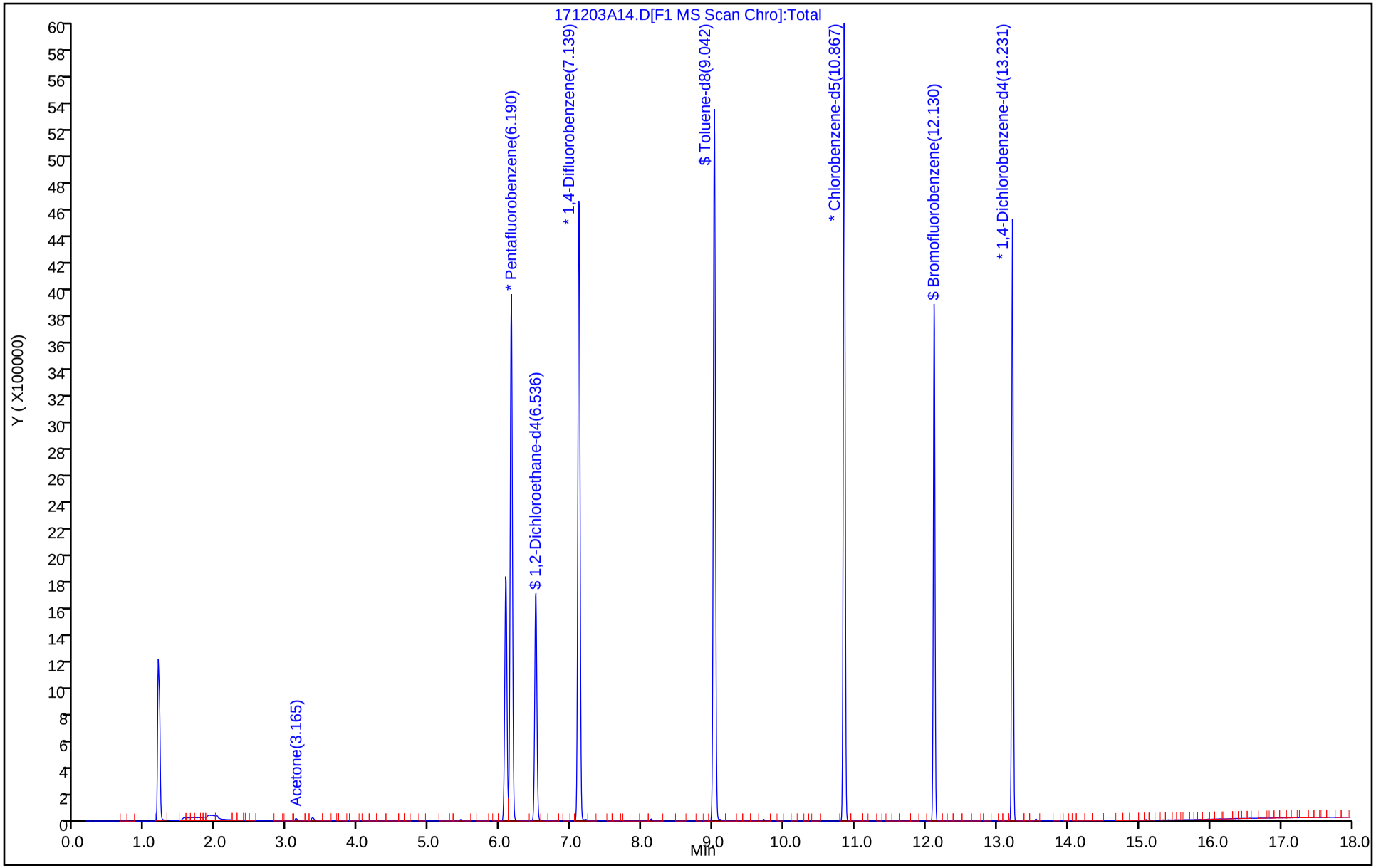
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Review Flags

Report Date: 04-Dec-2019 13:38:25 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A14.D				
Injection Date:	03-Dec-2019 15:14:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-24-Water-RW-12	Lab ID:	UL03010-004		
Sample Info:	17120319, UL03010-004				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

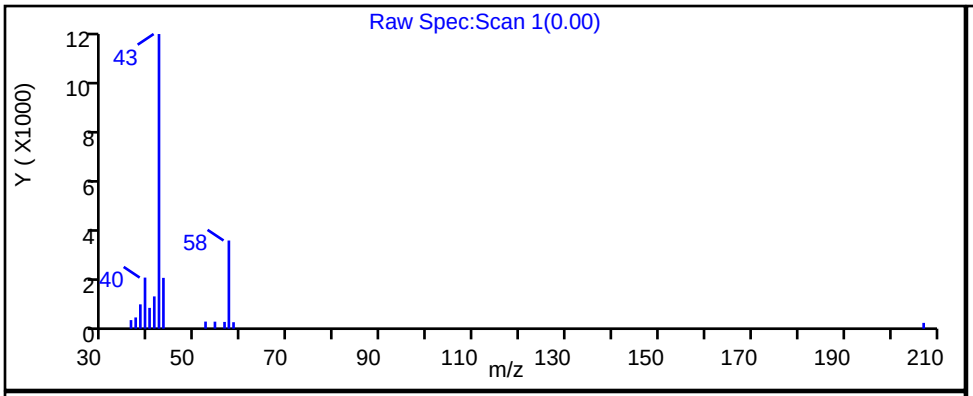


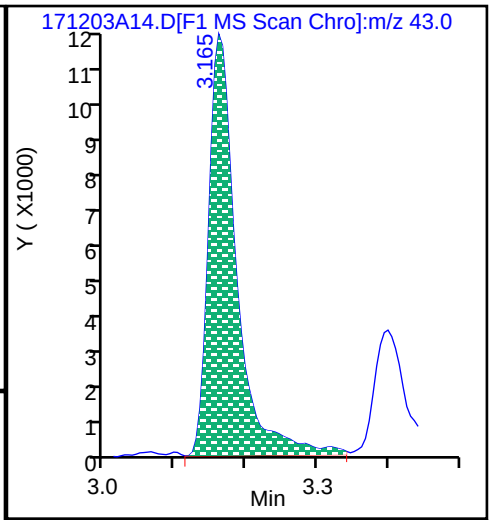
Report Date: 04-Dec-2019 13:38:25 AIM Revision: 1.0 11-Sep-2019 14:31:36

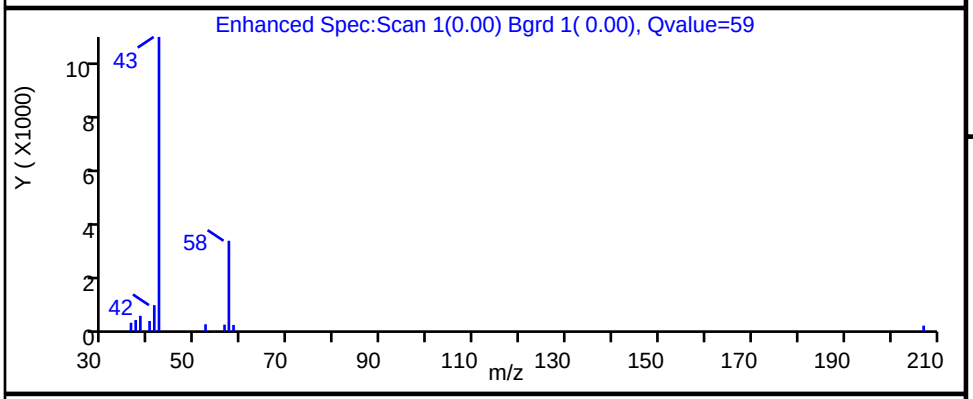
Shealy Environmental Services

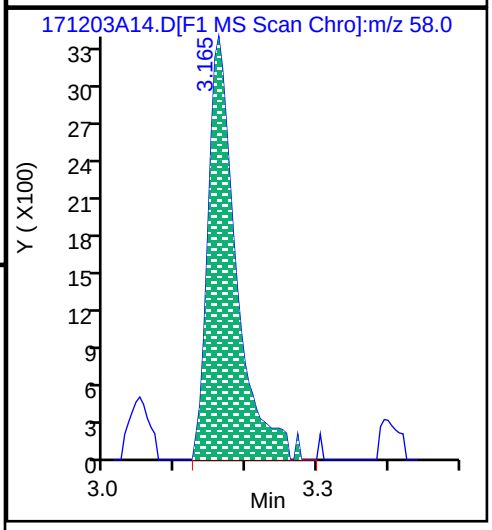
Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A14.D		
Injection Date:	03-Dec-2019 15:14:30	Inst. ID:	msd17.i
Client ID:	MPG1-24-Water-RW-12	Lab ID:	UL03010-004
Sample Info:	17120319, UL03010-004		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

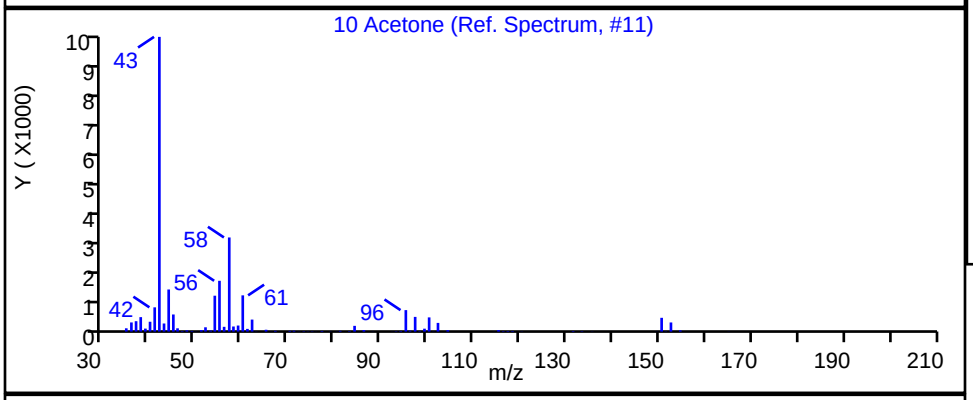
10 Acetone

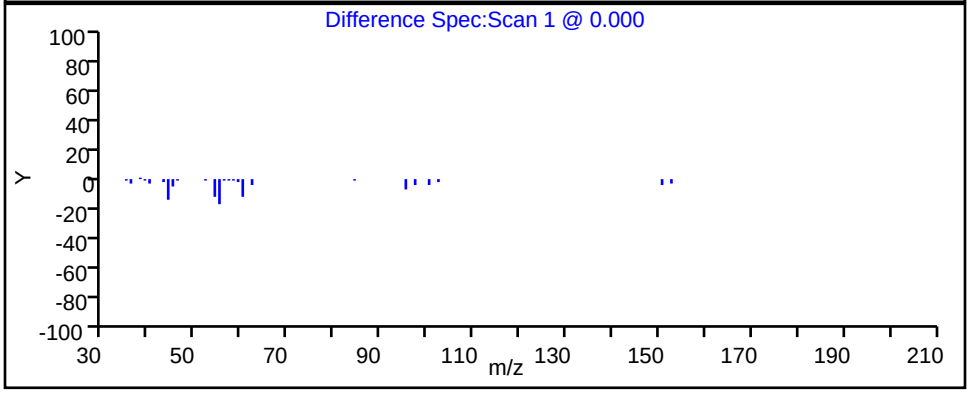












Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-005
Description: MPG1-25-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1539	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-005
Description: MPG1-25-Water-RW**-120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1539	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 04-Dec-2019 13:38:27 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A15.D		
Lab Sample ID:	UL03010-005	Client Sample ID:	MPG1-25-Water-RW-12
Injection Date:	03-Dec-2019 15:39:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, UL03010-005		
Misc. Info:	XRSQ02		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	15
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.010	3258561	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.010	4478667	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3546773	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.226	0.005	1233259	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0		3.144		ND			
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.536	6.520	0.015	1404397	48.971	48.971	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4195864	50.346	50.346	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.130	12.125	0.005	1181212	49.533	49.533	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

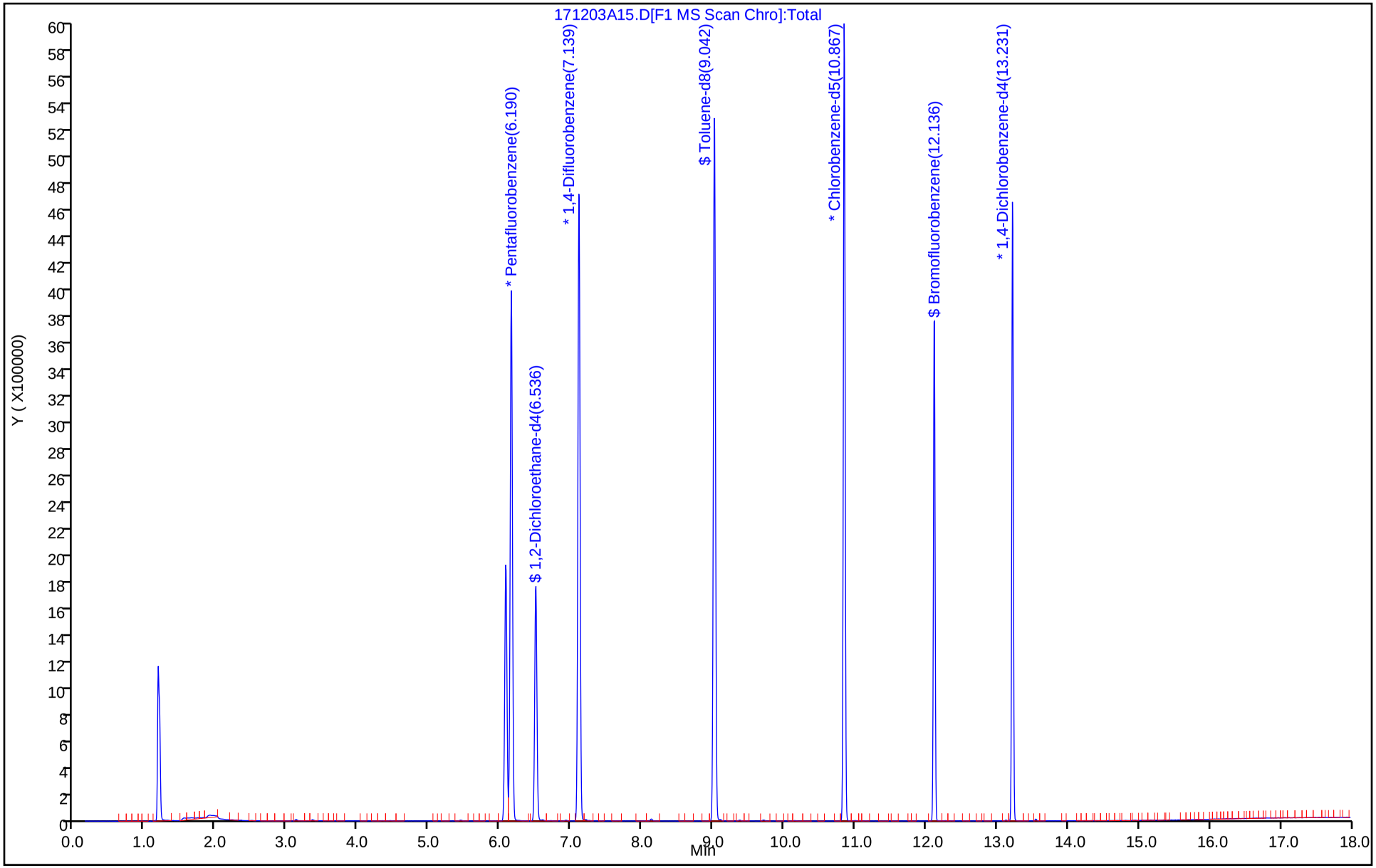
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:27 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A15.D				
Injection Date:	03-Dec-2019 15:39:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-25-Water-RW-12	Lab ID:	UL03010-005		
Sample Info:	17120319, UL03010-005				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-006
Description: MPG1-FB-**120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1228	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-006
Description: MPG1-FB-**120219**
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1228	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A07.D
Lab Sample ID: UL03010-006 Client Sample ID: MPG1-FB-120129
Injection Date: 03-Dec-2019 12:28:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, UL03010-006
Misc. Info: XRSS02
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Client ALS Bottle: 7
Cpnd Sublist: sample.sb
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.185	6.179	0.005	3329905	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.134	7.128	0.005	4557678	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3618692	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.226	0.005	1225472	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0	3.159	3.144	0.016	29786	2.7653	2.7653	e
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.520	0.005	1377528	47.201	47.201	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.037	9.032	0.005	4241308	49.879	49.879	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.130	12.125	0.005	1209585	49.715	49.715	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

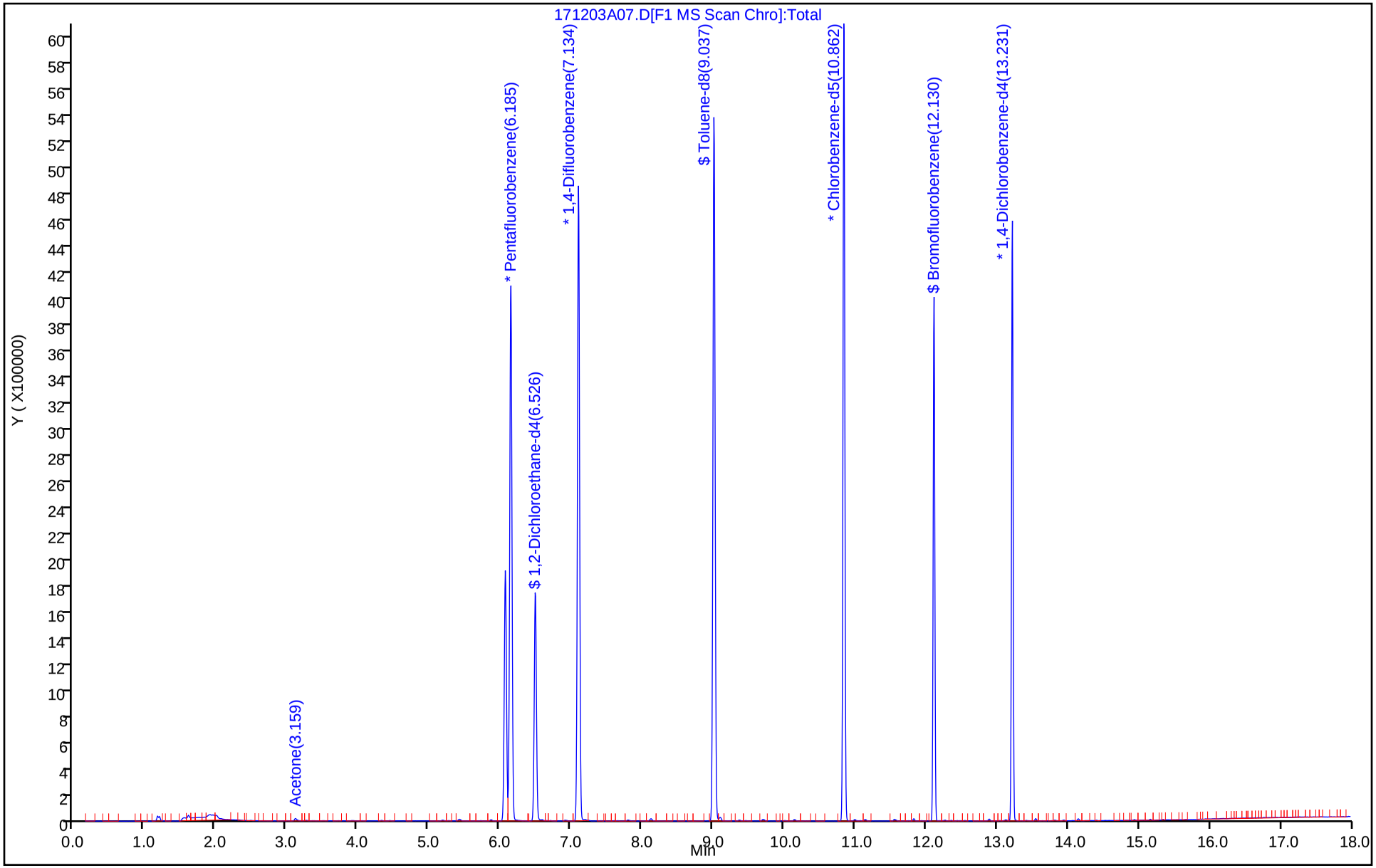
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Review Flags

Report Date: 04-Dec-2019 13:38:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A07.D				
Injection Date:	03-Dec-2019 12:28:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-FB-120129	Lab ID:	UL03010-006		
Sample Info:	17120319, UL03010-006				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

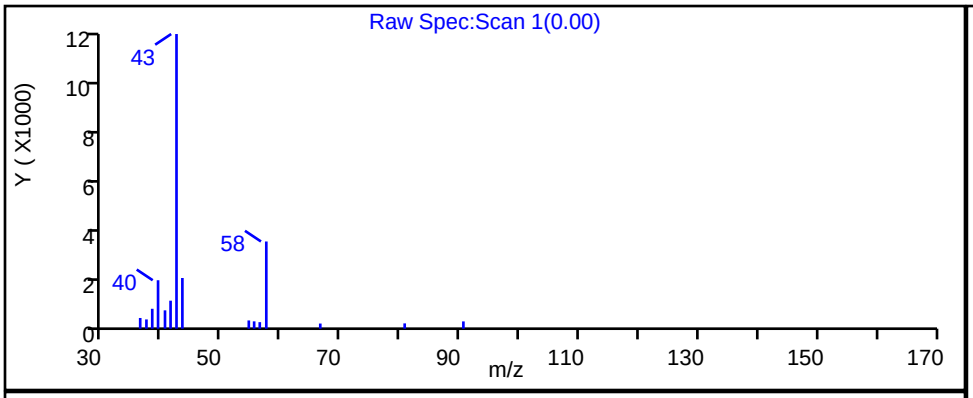


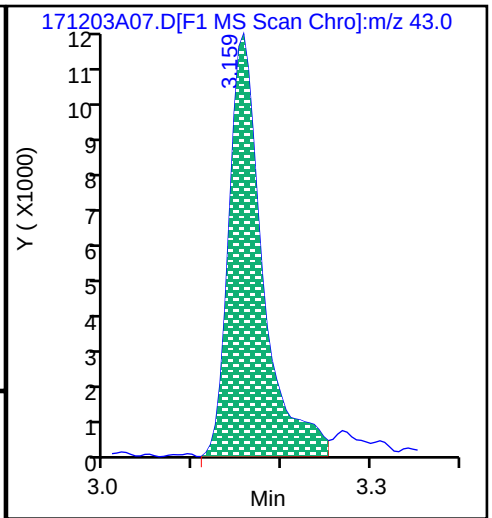
Report Date: 04-Dec-2019 13:38:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

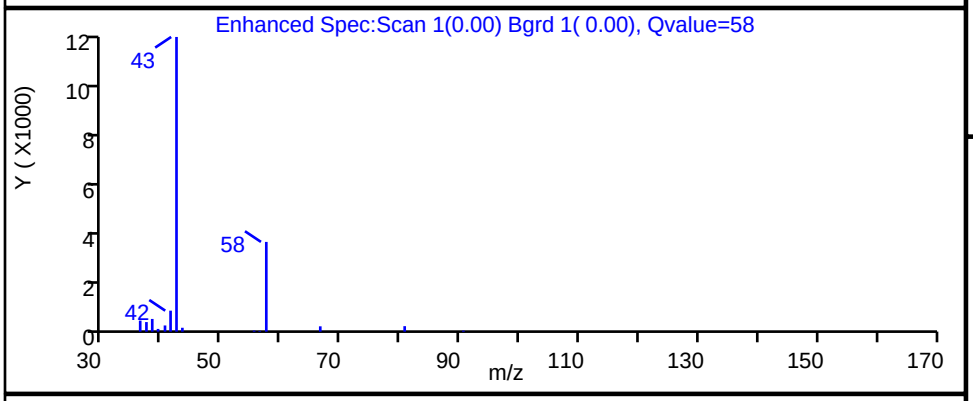
Shealy Environmental Services

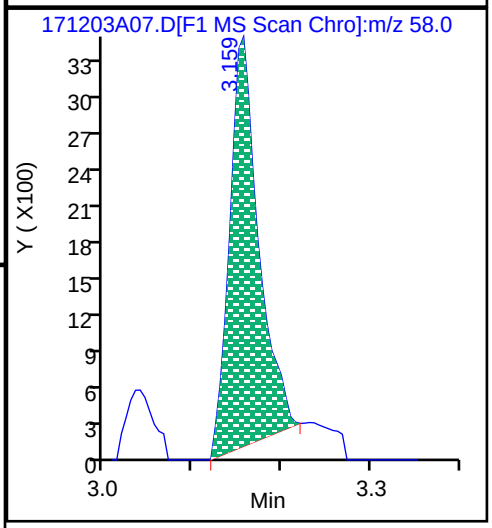
Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A07.D		
Injection Date:	03-Dec-2019 12:28:30	Inst. ID:	msd17.i
Client ID:	MPG1-FB-120129	Lab ID:	UL03010-006
Sample Info:	17120319, UL03010-006		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

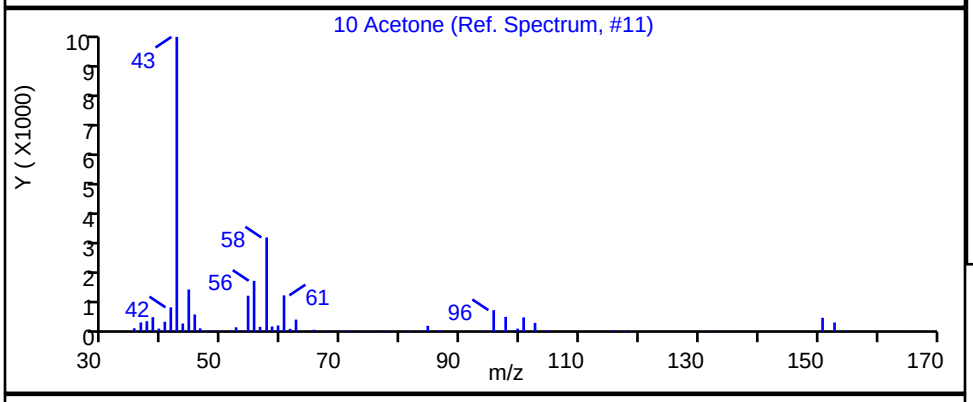
10 Acetone

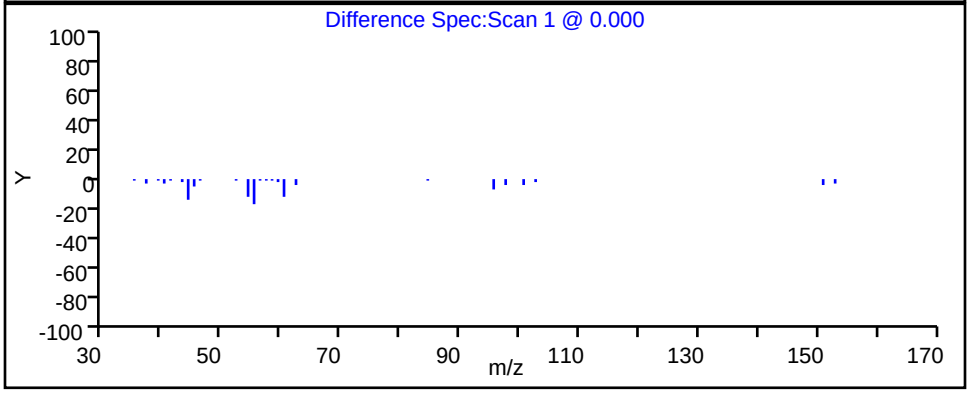












Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-007
Description: MPG1-TB**–120219**
Matrix: Aqueous
Date Sampled: 12/02/2019
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1252	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03010-007
Description: MPG1-TB-**120219**
Matrix: Aqueous
Date Sampled: 12/02/2019
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1252	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		100	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 04-Dec-2019 13:38:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A08.D
Lab Sample ID: UL03010-007 Client Sample ID: MPG1-TB-120129
Injection Date: 03-Dec-2019 12:52:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, UL03010-007
Misc. Info: XRSU02
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Client ALS Bottle: 8
Cpnd Sublist: sample.sb
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.185	6.179	0.005	3393642	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.139	7.128	0.011	4613782	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3742091	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.232	13.226	0.005	1277807	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
10 Acetone	43.0		3.144		ND			
14 Carbon disulfide	76.0		3.306		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			
37 Chloroform	83.0		5.902		ND			
40 1,1,1-Trichloroethane	97.0		6.069		ND			
42 Cyclohexane	41.0		6.143		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.520	0.010	1424684	48.223	48.223	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.531		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
59 Bromodichloromethane	83.0		8.114		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.042	9.032	0.011	4442194	50.519	50.519	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
77 Chlorobenzene	112.0		10.893		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
$ 86 Bromofluorobenzene	95.0	12.130	12.125	0.005	1258865	50.034	50.034	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

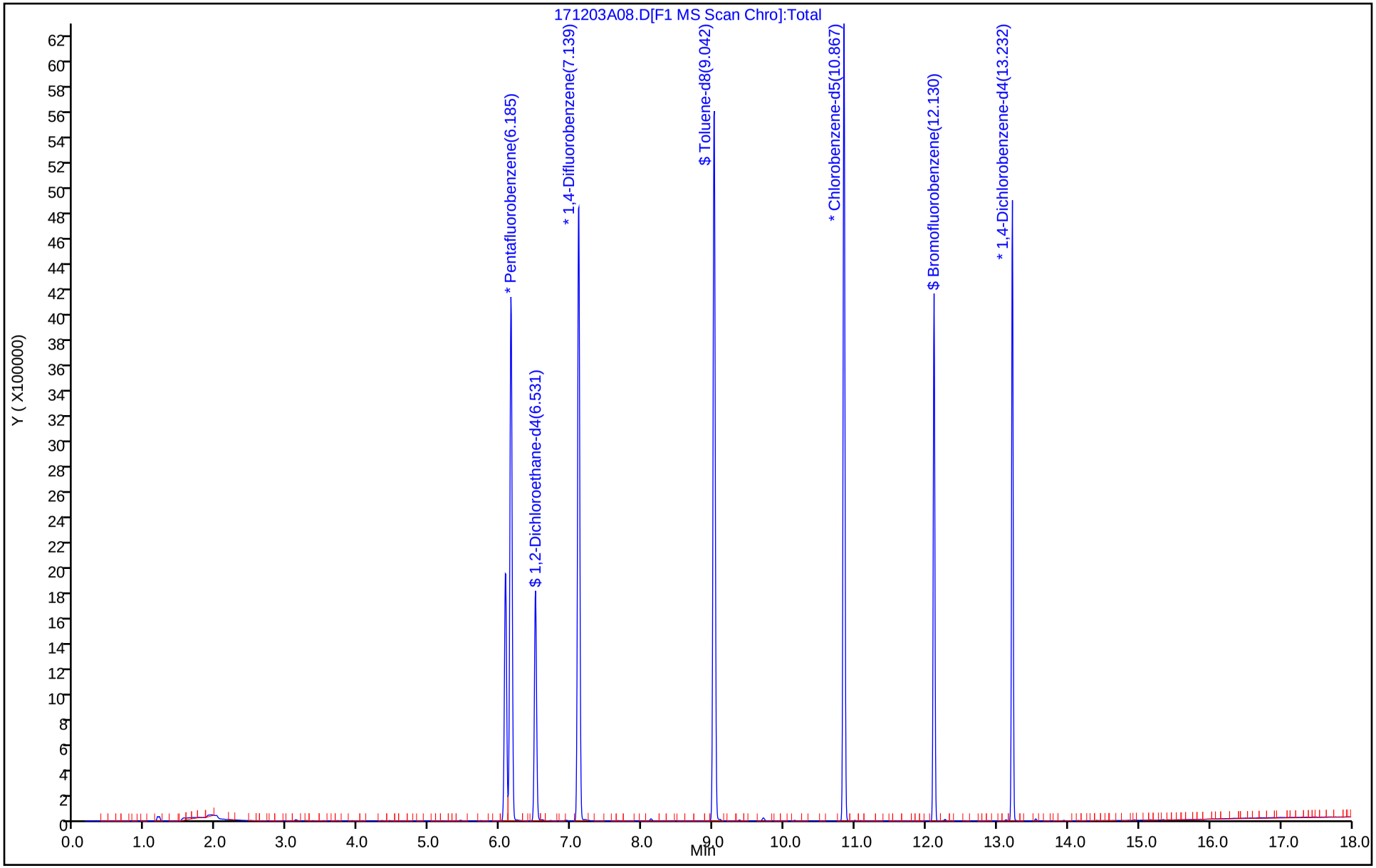
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A08.D				
Injection Date:	03-Dec-2019 12:52:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-TB-120129	Lab ID:	UL03010-007		
Sample Info:	17120319, UL03010-007				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



CALIBRATION DATA

Shealy Environmental Services
Form 6

Batch: \\Organics\DD\chem\msd17.i\17120219B.b
Method: 8260B-17.M Instrument: msd17
Cal Start Date: 03-Dec-2019 01:21:30 Cal End Date: 03-Dec-2019 03:43:30
Last Modified: 04-Dec-2019 13:02:30
No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
S 111 1,2-Dichloroethene (to	0.348905	0.344426	0.376708	0.354733	0.360772	0.347498	0.351603		0.354949	Avg	3.1		
	-1.7	-3	6.1	-0.1	1.6	-2.1	-0.9						
1 Dichlorodifluoromethan	0.182080	0.163507	0.198433	0.171361	0.200969	0.179256	0.183017		0.182660	Avg	7.4		
	-0.3	-10.5	8.6	-6.2	10	-1.9	0.2						
2 Chloromethane	0.157387	0.151149	0.165687	0.152288	0.156657	0.145377	0.147774		0.153760	Avg	4.4		
	2.4	-1.7	7.8	-1	1.9	-5.5	-3.9						
3 Vinyl chloride	0.185375	0.162658	0.193190	0.184366	0.186640	0.173630	0.178035		0.180556	Avg	5.6		
	2.7	-9.9	7	2.1	3.4	-3.8	-1.4						
4 Bromomethane	0.169140	0.175567	0.183802	0.175948	0.178398	0.164080	0.162817		0.172822	Avg	4.5		
	-2.1	1.6	6.4	1.8	3.2	-5.1	-5.8						
5 Chloroethane	0.123969	0.125586	0.135176	0.128882	0.130420	0.123386	0.129622		0.128149	Avg	3.2		
	-3.3	-2	5.5	0.6	1.8	-3.7	1.1						
6 Trichlorofluoromethane	0.375409	0.365114	0.429969	0.392189	0.407030	0.373231	0.376502		0.388492	Avg	5.9		
	-3.4	-6	10.7	1	4.8	-3.9	-3.1						
8 Ethyl ether	0.263282	0.245916	0.277805	0.258557	0.269290	0.253005	0.255721		0.260511	Avg	4.1		
	1.1	-5.6	6.6	-0.8	3.4	-2.9	-1.8						
9 Acrolein	0.068457	0.065745	0.077645	0.077481	0.082978	0.072642	0.069212		0.073452	Avg	8.4		
	-6.8	-10.5	5.7	5.5	13	-1.1	-5.8						
11 1,1-Dichloroethene	0.231110	0.207682	0.250151	0.232469	0.232722	0.211576	0.215113		0.225832	Avg	6.7		
	2.3	-8	10.8	2.9	3.1	-6.3	-4.7						
12 Freon 113	0.214460	0.201071	0.241300	0.222626	0.228202	0.218463	0.231745		0.222552	Avg	5.8		
	-3.6	-9.7	8.4	0	2.5	-1.8	4.1						
10 Acetone	0.197647	0.169574	0.165885	0.151656	0.160749	0.145411	0.141216		0.161734	Avg	11.7		
	22.2	4.8	2.6	-6.2	-0.6	-10.1	-12.7						
13 Methyl iodide	0.448508	0.456977	0.527095	0.498816	0.501769	0.443561	0.449476		0.475172	Avg	7.0		
	-5.6	-3.8	10.9	5	5.6	-6.7	-5.4						
14 Carbon disulfide	0.661810	0.652405	0.781520	0.743652	0.754035	0.673612	0.676101		0.706162	Avg	7.4		
	-6.3	-7.6	10.7	5.3	6.8	-4.6	-4.3						
15 Acetonitrile		0.022461	0.025844	0.023834	0.023577	0.020905	0.021057		0.022946	Avg	8.2		
		-2.1	12.6	3.9	2.7	-8.9	-8.2						
17 Allyl chloride	0.129489	0.122772	0.150856	0.147888	0.150264	0.145416	0.150648		0.142476	Avg	8.1		
	-9.1	-13.8	5.9	3.8	5.5	2.1	5.7						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
16 Methyl Acetate	0.414080	0.393194	0.437419	0.410054	0.431970	0.403292	0.392081		0.411727	Avg	4.3		
	0.6	-4.5	6.2	-0.4	4.9	-2	-4.8						
18 Methylene chloride	0.310827	0.296195	0.314325	0.294815	0.301306	0.262794	0.266155		0.292345	Avg	7.0		
	6.3	1.3	7.5	0.8	3.1	-10.1	-9						
20 Acrylonitrile	0.202232	0.181150	0.203196	0.189258	0.204665	0.185285	0.182953		0.192677	Avg	5.4		
	5	-6	5.5	-1.8	6.2	-3.8	-5						
21 trans-1,2-Dichloroethe	0.314804	0.315624	0.345530	0.326074	0.330720	0.320620	0.325334		0.325529	Avg	3.2		
	-3.3	-3	6.1	0.2	1.6	-1.5	-0.1						
22 tert-Butyl methyl ethe	0.854249	0.790408	0.889280	0.821399	0.859886	0.760656	0.740875		0.816679	Avg	6.7		
	4.6	-3.2	8.9	0.6	5.3	-6.9	-9.3						
23 Hexane	0.446727	0.404762	0.471677	0.430184	0.423037	0.426419	0.430523		0.433333	Avg	4.8		
	3.1	-6.6	8.8	-0.7	-2.4	-1.6	-0.6						
24 1,1-Dichloroethane	0.530719	0.520909	0.596922	0.553513	0.559061	0.536573	0.531062		0.546966	Avg	4.7		
	-3	-4.8	9.1	1.2	2.2	-1.9	-2.9						
25 Vinyl acetate	0.080756	0.075604	0.099662	0.098942	0.101822	0.098884	0.099759		0.093633	Avg	11.4		
	-13.8	-19.3	6.4	5.7	8.7	5.6	6.5						
26 Diisopropyl ether (IPE	0.281890	0.270556	0.281631	0.281709	0.284166	0.274581	0.272126		0.278094	Avg	2.0		
	1.4	-2.7	1.3	1.3	2.2	-1.3	-2.1						
27 Chloroprene	0.392059	0.377844	0.476404	0.433738	0.437997	0.422306	0.421369		0.423102	Avg	7.6		
	-7.3	-10.7	12.6	2.5	3.5	-0.2	-0.4						
31 2,2-Dichloropropane	0.374637	0.365099	0.389438	0.363313	0.355678	0.328164	0.321745		0.356868	Avg	6.8		
	5	2.3	9.1	1.8	-0.3	-8	-9.8						
29 cis-1,2-Dichloroethene	0.383007	0.373228	0.407886	0.383392	0.390825	0.374375	0.377873		0.384369	Avg	3.1		
	-0.4	-2.9	6.1	-0.3	1.7	-2.6	-1.7						
30 2-Butanone (MEK)	0.102036	0.090002	0.091660	0.092452	0.091086	0.088691	0.083595		0.091360	Avg	6.1		
	11.7	-1.5	0.3	1.2	-0.3	-2.9	-8.5						
33 Ethyl Acetate	0.636524	0.630564	0.642459	0.621994	0.598745	0.590411	0.548191		0.609841	Avg	5.5		
	4.4	3.4	5.3	2	-1.8	-3.2	-10.1						
32 Propionitrile	0.087214	0.073566	0.086670	0.078264	0.080762	0.075752	0.068775		0.078715	Avg	8.6		
	10.8	-6.5	10.1	-0.6	2.6	-3.8	-12.6						
34 Methacrylonitrile	0.228273	0.231218	0.236064	0.227677	0.229407	0.216811	0.199574		0.224146	Avg	5.5		
	1.8	3.2	5.3	1.6	2.3	-3.3	-11						
35 Bromochloromethane	0.206832	0.207890	0.228139	0.214738	0.222511	0.211665	0.215103		0.215268	Avg	3.6		
	-3.9	-3.4	6	-0.2	3.4	-1.7	-0.1						
36 Tetrahydrofuran	0.295305	0.257425	0.257968	0.248203	0.247225	0.232456	0.218670		0.251036	Avg	9.6		
	17.6	2.5	2.8	-1.1	-1.5	-7.4	-12.9						
37 Chloroform	0.606489	0.585793	0.644884	0.611842	0.612534	0.586699	0.580431		0.604096	Avg	3.7		
	0.4	-3	6.8	1.3	1.4	-2.9	-3.9						
40 1,1,1-Trichloroethane	0.502880	0.482407	0.551508	0.530542	0.527653	0.516104	0.507779		0.516982	Avg	4.3		
	-2.7	-6.7	6.7	2.6	2.1	-0.2	-1.8						
$ 39 dibromofluoromethane	0.437467	0.382430	0.398440	0.387295	0.394141	0.374159	0.374324		0.392608	Avg	5.6		
	11.4	-2.6	1.5	-1.4	0.4	-4.7	-4.7						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
42 Cyclohexane	0.237817	0.223940	0.258659	0.232059	0.230997	0.219196	0.216450		0.231303	Avg	6.1		
	2.8	-3.2	11.8	0.3	-0.1	-5.2	-6.4						
44 Carbon tetrachloride	0.452455	0.427051	0.510733	0.489294	0.500220	0.493353	0.493155		0.480894	Avg	6.2		
	-5.9	-11.2	6.2	1.7	4	2.6	2.5						
43 1,1-Dichloropropene	0.431413	0.406638	0.478342	0.446119	0.446205	0.436182	0.433998		0.439843	Avg	4.9		
	-1.9	-7.5	8.8	1.4	1.4	-0.8	-1.3						
$ 46 1,2-Dichloroethane-d4	0.380321	0.331253	0.316853	0.310394	0.310845	0.298858	0.292637		0.320166	Avg	9.1		
	18.8	3.5	-1	-3.1	-2.9	-6.7	-8.6						
45 Isobutyl alcohol	0.013703	0.017086	0.019529	0.018401	0.017895	0.016845	0.014935		0.016913	Avg	11.9		
	-19	1	15.5	8.8	5.8	-0.4	-11.7						
48 Benzene	0.907069	0.875401	0.978875	0.940810	0.917794	0.905055	0.852740		0.911106	Avg	4.5		
	-0.4	-3.9	7.4	3.3	0.7	-0.7	-6.4						
50 1,2-Dichloroethane	0.361015	0.341031	0.380906	0.355305	0.355539	0.346938	0.337893		0.354089	Avg	4.1		
	2	-3.7	7.6	0.3	0.4	-2	-4.6						
49 Isopropyl Acetate	0.582705	0.601652	0.606663	0.619308	0.597399	0.616469	0.584759		0.601279	Avg	2.4		
	-3.1	0.1	0.9	3	-0.6	2.5	-2.7						
53 Trichloroethene	0.287038	0.277056	0.314728	0.307296	0.302764	0.305549	0.303757		0.299741	Avg	4.3		
	-4.2	-7.6	5	2.5	1	1.9	1.3						
54 Methylcyclohexane	0.363085	0.352736	0.408730	0.375832	0.379373	0.378899	0.377898		0.376650	Avg	4.6		
	-3.6	-6.3	8.5	-0.2	0.7	0.6	0.3						
55 1,2-Dichloropropane	0.232106	0.223153	0.232964	0.231793	0.220466	0.223925	0.216551		0.225851	Avg	2.9		
	2.8	-1.2	3.1	2.6	-2.4	-0.9	-4.1						
58 1,4-Dioxane	0.003003	0.003423	0.003520	0.003181	0.002911	0.002834	0.002549		0.003060	Avg	11.1		
	-1.9	11.9	15	3.9	-4.9	-7.4	-16.7						
56 Dibromomethane	0.180529	0.173521	0.187731	0.180753	0.182089	0.179295	0.175606		0.179932	Avg	2.6		
	0.3	-3.6	4.3	0.5	1.2	-0.4	-2.4						
57 Methyl methacrylate	0.273790	0.294596	0.298801	0.311363	0.295348	0.302281	0.282206		0.294055	Avg	4.3		
	-6.9	0.2	1.6	5.9	0.4	2.8	-4						
59 Bromodichloromethane	0.303664	0.291443	0.329366	0.328385	0.331030	0.329938	0.324256		0.319726	Avg	4.9		
	-5	-8.8	3	2.7	3.5	3.2	1.4						
60 2-nitropropane	0.146624	0.147495	0.147905	0.153389	0.151123	0.157018	0.148109		0.150238	Avg	2.5		
	-2.4	-1.8	-1.6	2.1	0.6	4.5	-1.4						
61 2-Chloroethylvinyl eth	0.175234	0.192518	0.204955	0.214668	0.205873	0.209417	0.200523		0.200456	Avg	6.5		
	-12.6	-4	2.2	7.1	2.7	4.5	0						
62 cis-1,3-Dichloropropen	0.325672	0.343319	0.387695	0.390247	0.390579	0.385483	0.372574		0.370796	Avg	7.0		
	-12.2	-7.4	4.6	5.2	5.3	4	0.5						
63 4-Methyl-2-pentanone	0.382565	0.402943	0.418045	0.429906	0.401944	0.396534	0.343758		0.396528	Avg	7.0		
	-3.5	1.6	5.4	8.4	1.4	0	-13.3						
$ 64 Toluene-d8	1.418450	1.173283	1.189035	1.155627	1.091233	1.135156	1.061449		1.174890	Avg	9.9		
	20.7	-0.1	1.2	-1.6	-7.1	-3.4	-9.7						
65 Toluene	0.776751	0.727450	0.793470	0.765171	0.729050	0.778974	0.748645		0.759930	Avg	3.4		
	2.2	-4.3	4.4	0.7	-4.1	2.5	-1.5						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
66 trans-1,3-Dichloroprop	0.393677	0.390131	0.434432	0.450698	0.453611	0.477961	0.474066		0.439225	Avg	8.1		
	-10.4	-11.2	-1.1	2.6	3.3	8.8	7.9						
67 Ethyl methacrylate	0.457518	0.450427	0.477998	0.498319	0.476732	0.523376	0.495047		0.482774	Avg	5.2		
	-5.2	-6.7	-1	3.2	-1.3	8.4	2.5						
68 1,1,2-Trichloroethane	0.313252	0.302964	0.322639	0.308396	0.299043	0.312435	0.304020		0.308964	Avg	2.6		
	1.4	-1.9	4.4	-0.2	-3.2	1.1	-1.6						
69 Tetrachloroethene	0.322012	0.286776	0.325817	0.306379	0.294776	0.315210	0.315036		0.309429	Avg	4.6		
	4.1	-7.3	5.3	-1	-4.7	1.9	1.8						
70 1,3-Dichloropropane	0.505937	0.492751	0.496990	0.484294	0.468766	0.482297	0.462137		0.484739	Avg	3.2		
	4.4	1.7	2.5	-0.1	-3.3	-0.5	-4.7						
71 2-Hexanone	0.444081	0.424291	0.437223	0.465247	0.421640	0.450504	0.402919		0.435129	Avg	4.8		
	2.1	-2.5	0.5	6.9	-3.1	3.5	-7.4						
72 Dibromochloromethane	0.301459	0.294137	0.337686	0.346324	0.356076	0.371630	0.368612		0.339418	Avg	9.1		
	-11.2	-13.3	-0.5	2	4.9	9.5	8.6						
73 n-Butyl acetate	0.618169	0.614701	0.652578	0.687419	0.635253	0.680469	0.624252		0.644691	Avg	4.6		
	-4.1	-4.7	1.2	6.6	-1.5	5.5	-3.2						
75 1,2-Dibromoethane (EDB	0.312316	0.316219	0.345332	0.340245	0.341264	0.347822	0.337441		0.334377	Avg	4.2		
	-6.6	-5.4	3.3	1.8	2.1	4	0.9						
77 Chlorobenzene	0.789707	0.782627	0.853351	0.834325	0.809128	0.806610	0.755953		0.804529	Avg	4.0		
	-1.8	-2.7	6.1	3.7	0.6	0.3	-6						
78 1,1,1,2-Tetrachloroeth	0.282721	0.263186	0.299143	0.295046	0.294159	0.307076	0.288692		0.290003	Avg	4.9		
	-2.5	-9.2	3.2	1.7	1.4	5.9	-0.5						
79 Ethylbenzene	0.424889	0.380279	0.453660	0.439059	0.428500	0.436501	0.418648		0.425934	Avg	5.4		
	-0.2	-10.7	6.5	3.1	0.6	2.5	-1.7						
80 m+p-Xylenes	0.480112	0.466034	0.547320	0.529247	0.515352	0.521430	0.498231		0.508247	Avg	5.6		
	-5.5	-8.3	7.7	4.1	1.4	2.6	-2						
81 o-Xylene	0.435576	0.408878	0.489563	0.470720	0.461651	0.459132	0.430166		0.450812	Avg	6.1		
	-3.4	-9.3	8.6	4.4	2.4	1.8	-4.6						
82 Styrene	0.726631	0.646745	0.807601	0.816022	0.815018	0.787760	0.735309		0.762155	Avg	8.2		
	-4.7	-15.1	6	7.1	6.9	3.4	-3.5						
83 Bromoform	0.168901	0.166335	0.203930	0.222687	0.243618	0.249342	0.252511	0.005492	0.249436	WLn	12.7	0.999	
	22.6	-5.9	-12.8	-9.4	-1.8	0.2	1.4						
84 Isopropylbenzene	1.090230	1.043918	1.244328	1.178186	1.140387	1.081223	0.930492		1.101252	Avg	9.1		
	-1	-5.2	13	7	3.6	-1.8	-15.5						
85 Cyclohexanone	0.015359	0.012349	0.013086	0.012057	0.012535	0.011740	0.010538		0.012523	Avg	11.8		
	22.6	-1.4	4.5	-3.7	0.1	-6.3	-15.9						
$ 86 Bromofluorobenzene		0.340238	0.358897	0.335252	0.342641	0.326282	0.313743		0.336176	Avg	4.6		
		1.2	6.8	-0.3	1.9	-2.9	-6.7						
87 Bromobenzene	0.827625	0.865691	0.934687	0.923985	0.899828	0.905685	0.857383		0.887841	Avg	4.4		
	-6.8	-2.5	5.3	4.1	1.4	2	-3.4						
88 1,1,2,2-Tetrachloroeth	0.874755	0.898987	0.945908	0.928545	0.910112	0.911385	0.862171		0.904552	Avg	3.2		
	-3.3	-0.6	4.6	2.7	0.6	0.8	-4.7						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
90 trans-1,4-Dichloro-2-b	0.216205	0.163433	0.213289	0.241376	0.260254	0.263059	0.266720	0.005254	0.263948	WLn	17.7	0.999	
	*34.5	-11.8	-13.9	-7.2	-0.9	-0.1	1.2						
89 1,2,3-Trichloropropane	0.353435	0.376027	0.380715	0.374192	0.369028	0.363043	0.345573		0.366002	Avg	3.5		
	-3.4	2.7	4	2.2	0.8	-0.8	-5.6						
91 n-Propylbenzene	3.430659	3.350524	3.910638	3.742862	3.476054	3.324676	2.807457		3.434696	Avg	10.2		
	-0.1	-2.5	13.9	9	1.2	-3.2	-18.3						
92 2-Chlorotoluene	1.966224	1.981376	2.131141	2.054172	1.942389	1.933796	1.744391		1.964784	Avg	6.1		
	0.1	0.8	8.5	4.5	-1.1	-1.6	-11.2						
93 1,3,5-Trimethylbenzene	2.014883	2.023134	2.393756	2.255680	2.129561	2.098897	1.845996		2.108844	Avg	8.4		
	-4.5	-4.1	13.5	7	1	-0.5	-12.5						
94 4-Chlorotoluene	0.703472	0.672432	0.787585	0.774441	0.751139	0.749439	0.715607		0.736302	Avg	5.6		
	-4.5	-8.7	7	5.2	2	1.8	-2.8						
95 tert-Butylbenzene	1.978792	2.024784	2.250081	2.096244	1.958702	1.907943	1.667304		1.983407	Avg	9.0		
	-0.2	2.1	13.4	5.7	-1.2	-3.8	-15.9						
96 1,2,4-Trimethylbenzene	1.962658	1.887200	2.210207	2.160878	2.036149	2.023435	1.801187		2.011674	Avg	7.2		
	-2.4	-6.2	9.9	7.4	1.2	0.6	-10.5						
97 sec-Butylbenzene	2.696022	2.697511	3.029038	2.858702	2.673445	2.602390	2.235851		2.684709	Avg	9.1		
	0.4	0.5	12.8	6.5	-0.4	-3.1	-16.7						
98 1,3-Dichlorobenzene	1.213414	1.279964	1.326988	1.300233	1.253791	1.297830	1.230272		1.271785	Avg	3.2		
	-4.6	0.6	4.3	2.2	-1.4	2	-3.3						
99 p-Isopropyltoluene	2.100906	2.016872	2.338640	2.265011	2.132998	2.128301	1.872750		2.122211	Avg	7.2		
	-1	-5	10.2	6.7	0.5	0.3	-11.8						
101 1,4-Dichlorobenzene	1.228614	1.234357	1.286456	1.299119	1.242172	1.280203	1.218256		1.255597	Avg	2.6		
	-2.1	-1.7	2.5	3.5	-1.1	2	-3						
102 Benzyl chloride	1.121616	1.098508	1.225598	1.365233	1.403763	1.447984	1.388747		1.293064	Avg	11.0		
	-13.3	-15	-5.2	5.6	8.6	12	7.4						
103 n-Butylbenzene	1.626462	1.550096	1.829436	1.811316	1.740555	1.768913	1.613203		1.705712	Avg	6.4		
	-4.6	-9.1	7.3	6.2	2	3.7	-5.4						
104 1,2-Dichlorobenzene	1.105141	1.123639	1.165779	1.151625	1.104142	1.160090	1.118093		1.132644	Avg	2.3		
	-2.4	-0.8	2.9	1.7	-2.5	2.4	-1.3						
105 1,2-Dibromo-3-chloropr	0.188521	0.173417	0.178704	0.186170	0.187590	0.204838	0.208063		0.189615	Avg	6.7		
	-0.6	-8.5	-5.8	-1.8	-1.1	8	9.7						
106 1,2,4-Trichlorobenzene	0.709756	0.656736	0.685283	0.687728	0.674958	0.753731	0.742287		0.701497	Avg	5.1		
	1.2	-6.4	-2.3	-2	-3.8	7.4	5.8						
107 Hexachlorobutadiene	0.329402	0.325174	0.350128	0.339560	0.329385	0.360049	0.351833		0.340790	Avg	3.9		
	-3.3	-4.6	2.7	-0.4	-3.3	5.7	3.2						
108 Naphthalene	1.891750	1.785367	1.993262	2.042152	2.006928	2.166658	2.058026		1.992020	Avg	6.2		
	-5	-10.4	0.1	2.5	0.7	8.8	3.3						
109 1,2,3-Trichlorobenzene	0.636301	0.632578	0.641761	0.638948	0.632729	0.706914	0.686783		0.653716	Avg	4.6		
	-2.7	-3.2	-1.8	-2.3	-3.2	8.1	5.1						
S 110 Xylenes (total)	0.457844	0.437456	0.518442	0.499984	0.488501	0.490281	0.464198		0.479530	Avg	5.8		
	-4.5	-8.8	8.1	4.3	1.9	2.2	-3.2						

Shealy Environmental Services
Initial Calibration RT Report

Batch: \\Organics\DD\chem\msd17.i\17120219B.b
Method: 8260B-17.M Instrument: msd17
Cal Start Date: 03-Dec-2019 01:21:30 Cal End Date: 03-Dec-2019 03:43:30
Last Modified: 04-Dec-2019 13:02:30
No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
S 111 1,2-Dichloroethene (to	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	
1 Dichlorodifluoromethan	1.398	1.398	1.398	1.398	1.398	1.398	1.398	1.398	0.008	
2 Chloromethane	1.576	1.576	1.576	1.576	1.576	1.576	1.576	1.576	0.007	
3 Vinyl chloride	1.697	1.692	1.697	1.692	1.697	1.691	1.697	1.694	0.159	
4 Bromomethane	2.032	2.027	2.027	2.027	2.027	2.027	2.027	2.028	0.095	
5 Chloroethane	2.147	2.148	2.147	2.148	2.148	2.148	2.142	2.147	0.093	
6 Trichlorofluoromethane	2.436	2.426	2.431	2.431	2.431	2.431	2.431	2.431	0.121	
8 Ethyl ether	2.787	2.782	2.782	2.782	2.782	2.782	2.782	2.783	0.069	
9 Acrolein	2.960	2.960	2.955	2.955	2.955	2.955	2.955	2.956	0.087	
11 1,1-Dichloroethene	3.070	3.065	3.065	3.065	3.065	3.065	3.065	3.066	0.063	
12 Freon 113	3.107	3.107	3.102	3.102	3.107	3.102	3.102	3.104	0.090	
10 Acetone	3.159	3.160	3.154	3.149	3.149	3.149	3.149	3.153	0.158	
13 Methyl iodide	3.243	3.238	3.238	3.238	3.243	3.243	3.243	3.241	0.084	
14 Carbon disulfide	3.317	3.312	3.311	3.312	3.311	3.312	3.311	3.312	0.058	
15 Acetonitrile		3.542	3.537	3.532	3.532	3.526	3.532	3.533	0.154	
17 Allyl chloride	3.568	3.569	3.563	3.563	3.568	3.563	3.568	3.566	0.078	
16 Methyl Acetate	3.584	3.584	3.579	3.579	3.579	3.579	3.579	3.580	0.072	
18 Methylene chloride	3.752	3.747	3.747	3.747	3.747	3.747	3.752	3.748	0.066	
20 Acrylonitrile	4.082	4.082	4.077	4.077	4.077	4.077	4.077	4.079	0.063	
21 trans-1,2-Dichloroethe	4.103	4.098	4.098	4.098	4.103	4.098	4.103	4.100	0.066	
22 tert-Butyl methyl ethe	4.108	4.109	4.103	4.109	4.108	4.108	4.108	4.108	0.049	
23 Hexane	4.481	4.486	4.481	4.481	4.481	4.481	4.481	4.481	0.045	
24 1,1-Dichloroethane	4.690	4.691	4.690	4.691	4.690	4.690	4.690	4.690	0.002	
25 Vinyl acetate	4.738	4.738	4.732	4.733	4.732	4.732	4.732	4.734	0.054	
26 Diisopropyl ether (IPE	4.774	4.769	4.774	4.769	4.774	4.774	4.774	4.773	0.051	
27 Chloroprene	4.780	4.780	4.779	4.780	4.780	4.780	4.780	4.780	0.002	
31 2,2-Dichloropropane	5.435	5.435	5.435	5.435	5.435	5.435	5.435	5.435	0.002	
29 cis-1,2-Dichloroethene	5.445	5.446	5.445	5.446	5.445	5.445	5.445	5.445	0.002	
30 2-Butanone (MEK)	5.461	5.456	5.456	5.451	5.456	5.451	5.456	5.455	0.065	
33 Ethyl Acetate	5.535	5.530	5.529	5.530	5.529	5.529	5.529	5.530	0.035	
32 Propionitrile	5.545	5.545	5.540	5.540	5.540	5.540	5.545	5.542	0.050	
34 Methacrylonitrile	5.729	5.729	5.728	5.729	5.729	5.734	5.739	5.731	0.071	
35 Bromochloromethane	5.744	5.744	5.744	5.745	5.744	5.750	5.750	5.746	0.044	
36 Tetrahydrofuran	5.760	5.760	5.749	5.750	5.750	5.750	5.750	5.753	0.089	
37 Chloroform	5.907	5.907	5.907	5.907	5.907	5.907	5.907	5.907	0.002	
40 1,1,1-Trichloroethane	6.080	6.075	6.075	6.075	6.080	6.075	6.080	6.077	0.045	
$ 39 dibromofluoromethane	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.106	0.002	
42 Cyclohexane	6.148	6.148	6.143	6.148	6.148	6.148	6.148	6.147	0.033	
44 Carbon tetrachloride	6.269	6.269	6.263	6.264	6.269	6.263	6.269	6.266	0.044	
43 1,1-Dichloropropene	6.290	6.290	6.289	6.290	6.290	6.290	6.290	6.290	0.001	
$ 46 1,2-Dichloroethane-d4	6.531	6.526	6.525	6.526	6.526	6.526	6.531	6.527	0.038	
48 Benzene	6.536	6.536	6.536	6.536	6.536	6.536	6.536	6.536	0.001	
45 Isobutyl alcohol	6.536	6.536	6.536	6.536	6.536	6.536	6.536	6.536	0.001	
50 1,2-Dichloroethane	6.630	6.631	6.625	6.625	6.630	6.630	6.630	6.629	0.038	
49 Isopropyl Acetate	6.688	6.688	6.688	6.688	6.688	6.688	6.688	6.688	0.001	
53 Trichloroethene	7.417	7.412	7.412	7.412	7.412	7.412	7.412	7.412	0.026	
54 Methylcyclohexane	7.695	7.695	7.695	7.695	7.695	7.695	7.695	7.695	0.001	
55 1,2-Dichloropropane	7.752	7.753	7.752	7.753	7.752	7.752	7.752	7.752	0.001	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
58 1,4-Dioxane	7.862	7.863	7.862	7.857	7.857	7.857	7.857	7.860	0.035	
56 Dibromomethane	7.862	7.863	7.862	7.863	7.862	7.863	7.862	7.863	0.001	
57 Methyl methacrylate	7.883	7.878	7.878	7.878	7.878	7.878	7.878	7.879	0.024	
59 Bromodichloromethane	8.119	8.120	8.119	8.120	8.119	8.119	8.119	8.119	0.001	
60 2-nitropropane	8.423	8.424	8.423	8.424	8.424	8.424	8.424	8.424	0.001	
61 2-Chloroethylvinyl eth	8.523	8.523	8.523	8.523	8.523	8.523	8.523	8.523	0.001	
62 cis-1,3-Dichloropropen	8.701	8.702	8.701	8.702	8.701	8.701	8.701	8.701	0.001	
63 4-Methyl-2-pentanone	8.922	8.922	8.922	8.922	8.922	8.922	8.922	8.922	0.001	
$ 64 Toluene-d8	9.037	9.037	9.037	9.037	9.037	9.037	9.037	9.037	0.001	
65 Toluene	9.126	9.126	9.126	9.126	9.126	9.126	9.131	9.127	0.021	
66 trans-1,3-Dichloroprop	9.483	9.483	9.483	9.483	9.483	9.483	9.483	9.483	0.001	
67 Ethyl methacrylate	9.582	9.582	9.582	9.582	9.582	9.582	9.587	9.583	0.020	
68 1,1,2-Trichloroethane	9.734	9.735	9.734	9.735	9.734	9.734	9.734	9.734	0.001	
69 Tetrachloroethene	9.808	9.808	9.802	9.803	9.802	9.808	9.808	9.805	0.028	
70 1,3-Dichloropropane	9.933	9.934	9.933	9.934	9.934	9.934	9.934	9.934	0.001	
71 2-Hexanone	10.033	10.033	10.033	10.033	10.033	10.033	10.033	10.033	0.001	
72 Dibromochloromethane	10.190	10.191	10.190	10.191	10.190	10.190	10.190	10.190	0.001	
73 n-Butyl acetate	10.196	10.196	10.196	10.196	10.196	10.196	10.196	10.196	0.001	
75 1,2-Dibromoethane (EDB	10.316	10.316	10.316	10.311	10.316	10.316	10.316	10.316	0.018	
77 Chlorobenzene	10.898	10.898	10.898	10.893	10.893	10.898	10.898	10.897	0.023	
78 1,1,1,2-Tetrachloroeth	11.008	11.009	11.008	11.009	11.008	11.008	11.008	11.008	0.001	
79 Ethylbenzene	11.019	11.019	11.019	11.019	11.019	11.019	11.019	11.019	0.001	
80 m+p-Xylenes	11.166	11.166	11.166	11.166	11.166	11.166	11.166	11.166	0.001	
81 o-Xylene	11.575	11.575	11.575	11.575	11.575	11.575	11.575	11.575	0.001	
82 Styrene	11.596	11.596	11.596	11.596	11.596	11.601	11.601	11.597	0.021	
83 Bromoform	11.774	11.774	11.774	11.774	11.774	11.774	11.774	11.774	0.001	
84 Isopropylbenzene	11.957	11.958	11.957	11.958	11.957	11.957	11.957	11.957	0.001	
85 Cyclohexanone	12.041	12.047	12.041	12.041	12.041	12.041	12.041	12.042	0.017	
$ 86 Bromofluorobenzene		12.131	12.130	12.125	12.130	12.130	12.130	12.130	0.017	
87 Bromobenzene	12.256	12.262	12.256	12.256	12.256	12.256	12.256	12.257	0.016	
88 1,1,2,2-Tetrachloroeth	12.288	12.288	12.288	12.288	12.288	12.288	12.288	12.287	0.014	
90 trans-1,4-Dichloro-2-b	12.319	12.319	12.319	12.319	12.319	12.319	12.319	12.319	0.001	
89 1,2,3-Trichloropropane	12.330	12.330	12.330	12.330	12.330	12.330	12.330	12.330	0.001	
91 n-Propylbenzene	12.372	12.372	12.371	12.372	12.372	12.372	12.372	12.372	0.000	
92 2-Chlorotoluene	12.450	12.450	12.450	12.450	12.450	12.450	12.450	12.450	0.000	
93 1,3,5-Trimethylbenzene	12.555	12.555	12.555	12.555	12.555	12.555	12.555	12.555	0.000	
94 4-Chlorotoluene	12.571	12.571	12.571	12.571	12.571	12.571	12.571	12.571	0.000	
95 tert-Butylbenzene	12.849	12.849	12.849	12.844	12.849	12.849	12.849	12.848	0.014	
96 1,2,4-Trimethylbenzene	12.906	12.901	12.901	12.901	12.901	12.901	12.901	12.902	0.015	
97 sec-Butylbenzene	13.053	13.053	13.053	13.053	13.053	13.053	13.053	13.053	0.000	
98 1,3-Dichlorobenzene	13.158	13.158	13.158	13.158	13.158	13.158	13.158	13.158	0.000	
99 p-Isopropyltoluene	13.200	13.200	13.200	13.195	13.195	13.200	13.200	13.199	0.019	
101 1,4-Dichlorobenzene	13.252	13.253	13.252	13.253	13.252	13.252	13.252	13.252	0.000	
102 Benzyl chloride	13.362	13.357	13.362	13.358	13.357	13.357	13.363	13.360	0.020	
103 n-Butylbenzene	13.562	13.562	13.562	13.562	13.562	13.562	13.562	13.562	0.000	
104 1,2-Dichlorobenzene	13.572	13.572	13.572	13.572	13.572	13.572	13.572	13.572	0.000	
105 1,2-Dibromo-3-chloropr	14.259	14.265	14.259	14.259	14.259	14.259	14.259	14.260	0.014	
106 1,2,4-Trichlorobenzene	14.946	14.946	14.946	14.946	14.946	14.946	14.946	14.946	0.000	
107 Hexachlorobutadiene	15.061	15.067	15.066	15.062	15.067	15.067	15.067	15.065	0.016	
108 Naphthalene	15.166	15.166	15.166	15.166	15.166	15.166	15.166	15.166	0.000	
109 1,2,3-Trichlorobenzene	15.350	15.350	15.350	15.350	15.350	15.350	15.350	15.350	0.000	
S 110 Xylenes (total)	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	0.000	

Shealy Environmental Services
Form 6 Response

Batch: \\Organics\DD\chem\msd17.i\17120219B.b
Method: 8260B-17.M Instrument: msd17
Cal Start Date: 03-Dec-2019 01:21:30 Cal End Date: 03-Dec-2019 03:43:30
Last Modified: 04-Dec-2019 13:02:30
No.Compounds: 112 Integrator: falcon

Internal Standards

* 41 Pentafluorobenzene
* 52 1,4-Difluorobenzene
* 76 Chlorobenzene-d5
* 100 1,4-Dichlorobenzene-d4

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
S 111 1,2-Dichloroethene (to	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	23512	46267	244140	922685	2296181	4653264	9118309	
1 Dichlorodifluoromethan	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6135	10982	64301	222861	639547	1200191	2373130	
2 Chloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5303	10152	53690	198056	498533	973353	1916147	
3 Vinyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6246	10925	62602	239774	593947	1162519	2308531	
4 Bromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5699	11792	59560	228827	567719	1098582	2111210	
5 Chloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4177	8435	43803	167615	415038	826117	1680776	
6 Trichlorofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	12649	24523	139329	510056	1295297	2498925	4882006	
8 Ethyl ether	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8871	16517	90021	336262	856966	1693968	3315867	
9 Acrolein	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	23066	44158	251603	1007673	2640631	4863689	8974564	
11 1,1-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7787	13949	81060	302334	740593	1416586	2789313	
12 Freon 113	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7226	13505	78192	289533	726211	1462695	3004976	
10 Acetone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	13319	22779	107508	394467	1023107	1947171	3662213	
13 Methyl iodide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15112	30693	170802	648728	1596786	2969813	5828245	
14 Carbon disulfide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	22299	43819	253247	967145	2399577	4510096	8766832	
15 Acetonitrile		10.000	50.000	200.00	500.00	1000.00	2000.00	#41
		15086	83745	309972	750305	1399697	2730452	
17 Allyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4363	8246	48884	192334	478186	973614	1953420	
16 Methyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	13952	26409	141743	533290	1374664	2700196	5084019	
18 Methylene chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10473	19894	101855	383417	958850	1759509	3451172	
20 Acrylonitrile	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	13628	24334	131689	492272	1302614	2481118	4744617	
21 trans-1,2-Dichloroethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10607	21199	111967	424070	1052454	2146675	4218519	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
22 tert-Butyl methyl ethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	28783	53088	288166	1068258	2736428	5092892	9606746	
23 Hexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15052	27186	152844	559469	1346235	2855044	5582485	
24 1,1-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	17882	34987	193429	719863	1779108	3592569	6886150	
25 Vinyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	2721	5078	32295	128677	324029	662069	1293544	
26 Diisopropyl ether (IPE	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	9498	18172	91261	366372	904307	1838425	3528585	
27 Chloroprene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	13210	25378	154376	564091	1393844	2827502	5463792	
31 2,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	12623	24522	126195	472501	1131880	2197186	4171986	
29 cis-1,2-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	12905	25068	132173	498615	1243727	2506589	4899790	
30 2-Butanone (MEK)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	6876	12090	59404	240473	579728	1187640	2167918	
33 Ethyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	21447	42352	208185	808925	1905394	3953035	7108255	
32 Propionitrile	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	29386	49411	280848	1017854	2570106	5071890	8917854	
34 Methacrylonitrile	2.5000	5.0000	25.000	100.00	250.00	500.00	1000.00	#41
	38457	77649	382475	1480512	3650228	7258189	12939134	
35 Bromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6969	13963	73927	279274	708100	1417181	2789185	
36 Tetrahydrofuran	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	9950	17290	83593	322797	786748	1556386	2835436	
37 Chloroform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	20435	39345	208971	795722	1949276	3928181	7526300	
40 1,1,1-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	16944	32401	178713	689988	1679158	3455520	6584242	
$ 39 dibromofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	14740	25686	129112	503690	1254282	2505142	4853760	
42 Cyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8013	15041	83817	301801	735105	1467605	2806655	
44 Carbon tetrachloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15245	28683	165500	636344	1591858	3303191	6394619	
43 1,1-Dichloropropene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	14536	27312	155004	580193	1419965	2920412	5627550	
$ 46 1,2-Dichloroethane-d4	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	17454	30254	144034	559925	1382348	2701958	5084959	
48 Benzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	41628	79952	444974	1697144	4081483	8182557	14817501	
45 Isobutyl alcohol	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	4617	11476	63283	239314	569467	1127863	1936545	
50 1,2-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	16568	31147	173151	640940	1581103	3136651	5871343	
49 Isopropyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	26742	54950	275775	1117180	2656669	5573467	10160964	
53 Trichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	13173	25304	143068	554336	1346410	2762453	5278191	
54 Methylcyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	16663	32216	185799	677969	1687093	3425612	6566474	
55 1,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	10652	20381	105900	418136	980427	2024493	3762868	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
58 1,4-Dioxane	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#52
	1378	3126	16001	57375	129450	256242	442922	
56 Dibromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8285	15848	85338	326063	809760	1620995	3051384	
57 Methyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	12565	26906	135828	561673	1313430	2732904	4903710	
59 Bromodichloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	13936	26618	149722	592379	1472112	2982954	5634388	
60 2-nitropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	6729	13471	67234	276701	672053	1419591	2573594	
61 2-Chloroethylvinyl eth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8042	17583	93168	387244	915530	1893326	3484357	
62 cis-1,3-Dichloropropen	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	14946	31356	176237	703974	1736926	3485135	6473979	
63 4-Methyl-2-pentanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#52
	35114	73603	380067	1551031	3574934	7170097	11946522	
$ 64 Toluene-d8	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	50036	84800	438810	1730006	4018533	7918709	14001260	
65 Toluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	27400	52577	292828	1145483	2684771	5434023	9875154	
66 trans-1,3-Dichloroprop	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	13887	28197	160326	674707	1670450	3334196	6253270	
67 Ethyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	16139	32555	176404	745997	1755594	3651004	6530022	
68 1,1,2-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11050	21897	119069	461677	1101244	2179511	4010238	
69 Tetrachloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11359	20727	120242	458658	1085533	2198863	4155542	
70 1,3-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	17847	35614	183413	725002	1726261	3364444	6095912	
71 2-Hexanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	31330	61332	322712	1392977	3105429	6285319	10629568	
72 Dibromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	10634	21259	124622	518456	1311274	2592445	4862252	
73 n-Butyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	21806	44428	240832	1029085	2339358	4746864	8234321	
75 1,2-Dibromoethane (EDB	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11017	22855	127444	509357	1256726	2426360	4451082	
77 Chlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	27857	56565	314927	1249008	2979665	5626810	9971560	
78 1,1,1,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9973	19022	110398	441692	1083259	2142123	3808056	
79 Ethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	14988	27485	167422	657284	1577977	3044974	5522259	
80 m+p-Xylenes	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	16936	33683	201987	792298	1897816	3637433	6572017	
81 o-Xylene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	15365	29552	180672	704681	1700059	3202850	5674194	
82 Styrene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	25632	46744	298043	1221608	3001354	5495314	9699240	
83 Bromoform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5958	12022	75260	333368	897137	1739382	3330795	
84 Isopropylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	38458	75450	459216	1763777	4199548	7542480	12273854	
85 Cyclohexanone	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#76
	5418	8925	48292	180499	461621	818976	1390034	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
$ 86 Bromofluorobenzene		1.0000	5.0000	20.000	50.000	100.00	200.00	#76
		24591	132450	501881	1261797	2276106	4138495	
87 Bromobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	9746	20462	117861	474529	1185488	2195832	3999693	
88 1,1,2,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	10301	21249	119276	476871	1199036	2209652	4022030	
90 trans-1,4-Dichloro-2-b	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2546	3863	26895	123963	342874	637787	1244251	
89 1,2,3-Trichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	4162	8888	48007	192173	486180	880196	1612099	
91 n-Propylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	40399	79195	493119	1922214	4579562	8060671	13096785	
92 2-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23154	46833	268730	1054957	2559020	4688484	8137584	
93 1,3,5-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23727	47820	301845	1158445	2805611	5088772	8611570	
94 4-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	8284	15894	99312	397728	989595	1817013	3338305	
95 tert-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23302	47859	283728	1076564	2580512	4625803	7777974	
96 1,2,4-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23112	44607	278700	1109758	2682545	4905815	8402539	
97 sec-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	31748	63760	381952	1468138	3522157	6309490	10430245	
98 1,3-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	14289	30254	167329	667758	1651820	3146586	5739220	
99 p-Isopropyltoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	24740	47672	294895	1163237	2810139	5160062	8736378	
101 1,4-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	14468	29176	162218	667186	1636512	3103850	5683162	
102 Benzyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	13208	25965	154544	701140	1849401	3510634	6478505	
103 n-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	19153	36639	230686	930234	2293112	4288725	7525593	
104 1,2-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	13014	26559	147001	591438	1454663	2812636	5215905	
105 1,2-Dibromo-3-chloropr	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2220	4099	22534	95611	247142	496629	970612	
106 1,2,4-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	8358	15523	86412	353195	889230	1827420	3462767	
107 Hexachlorobutadiene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	3879	7686	44150	174387	433952	872938	1641302	
108 Naphthalene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	22277	42200	251344	1048784	2644047	5253059	9600692	
109 1,2,3-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	7493	14952	80924	328143	833595	1713911	3203845	
S 110 Xylenes (total)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	32301	63235	382659	1496979	3597875	6840283	12246211	

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\DD\chem\msd17.i\17120219B.b		
Method:	8260B-17.M	Instrument:	msd17
Cal Start Date:	03-Dec-2019 01:21:30	Cal End Date:	03-Dec-2019 03:43:30
Last Modified:	04-Dec-2019 13:02:30		
No.Compounds:	112	Integrator:	falcon
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

No. Cal Levels: 7 No. Cal Levels: 7

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	VSTD0.5BQ	03-Dec-2019 01:21:30	17120219B.b	171202B05.D	std.sub	49375428	32127224
2	2	VSTD001BQ	03-Dec-2019 01:44:30	17120219B.b	171202B06.D	std.sub	49375428	32127226
3	3	VSTD005BQ	03-Dec-2019 02:08:30	17120219B.b	171202B07.D	std.sub	49375428	32127225
4	4	VSTD020BQ	03-Dec-2019 02:32:30	17120219B.b	171202B08.D	std.sub	49375428	32127227
5	5	VSTD050BQ	03-Dec-2019 02:56:30	17120219B.b	171202B09.D	std.sub	49375428	32127221
6	6	VSTD100BQ	03-Dec-2019 03:19:30	17120219B.b	171202B10.D	std.sub	49375428	32127228
7	7	VSTD200BQ	03-Dec-2019 03:43:30	17120219B.b	171202B11.D	std.sub	49375428	32127229

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D
Lab Sample ID: VSTD0.5BQ Client Sample ID: 1mL/100mL VSTD050
Injection Date: 03-Dec-2019 01:21:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD0.5BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 1 ALS Bottle: 5
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:43:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	6135	0.50000	0.49841	
2 Chloromethane	50.0	1.576	1.577	0.000	5303	0.50000	0.51180	
3 Vinyl chloride	62.0	1.697	1.697	0.000	6246	0.50000	0.51334	Q
4 Bromomethane	94.0	2.032	2.027	0.006	5699	0.50000	0.48935	M
5 Chloroethane	64.0	2.147	2.148	0.000	4177	0.50000	0.48369	
6 Trichlorofluoromethane	101.0	2.436	2.431	0.005	12649	0.50000	0.48316	
8 Ethyl ether	59.0	2.787	2.782	0.006	8871	0.50000	0.50532	M
9 Acrolein	56.0	2.960	2.955	0.006	23066	5.0000	4.6600	M
10 Acetone	43.0	3.159	3.149	0.011	13319	1.0000	1.2220	M
11 1,1-Dichloroethene	96.0	3.070	3.066	0.005	7787	0.50000	0.51169	
12 Freon 113	101.0	3.107	3.107	0.000	7226	0.50000	0.48182	
13 Methyl iodide	142.0	3.243	3.244	0.000	15112	0.50000	0.47194	
14 Carbon disulfide	76.0	3.317	3.312	0.005	22299	0.50000	0.46860	
15 Acetonitrile	40.0	3.537	3.532	0.005	11127	5.0000	7.1958	QM
17 Allyl chloride	76.0	3.568	3.569	0.000	4363	0.50000	0.45442	M
16 Methyl Acetate	43.0	3.584	3.579	0.006	13952	0.50000	0.50286	M
18 Methylene chloride	84.0	3.752	3.747	0.005	10473	0.50000	0.53161	
20 Acrylonitrile	53.0	4.082	4.077	0.006	13628	1.0000	1.0496	M
21 trans-1,2-Dichloroethene	96.0	4.103	4.104	0.000	10607	0.50000	0.48353	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.109	0.000	28783	0.50000	0.52300	M
23 Hexane	57.0	4.481	4.481	0.000	15052	0.50000	0.51546	
24 1,1-Dichloroethane	63.0	4.690	4.691	0.000	17882	0.50000	0.48515	
25 Vinyl acetate	86.0	4.738	4.733	0.005	2721	0.50000	0.43124	M
26 Diisopropyl ether (IPE)	87.0	4.774	4.775	0.000	9498	0.50000	0.50683	Q
27 Chloroprene	53.0	4.780	4.780	0.000	13210	0.50000	0.46331	
29 cis-1,2-Dichloroethene	96.0	5.445	5.446	0.000	12905	0.50000	0.49823	
30 2-Butanone (MEK)	72.0	5.461	5.456	0.006	6876	1.0000	1.1169	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	12623	0.50000	0.52490	M
32 Propionitrile	54.0	5.545	5.540	0.005	29386	5.0000	5.5399	
33 Ethyl Acetate	43.0	5.535	5.530	0.005	21447	0.50000	0.52188	Q
34 Methacrylonitrile	67.0	5.729	5.729	0.000	38457	2.5000	2.5460	
35 Bromochloromethane	128.0	5.744	5.745	0.000	6969	0.50000	0.48041	
36 Tetrahydrofuran	42.0	5.760	5.750	0.010	9950	0.50000	0.58817	M
37 Chloroform	83.0	5.907	5.907	0.000	20435	0.50000	0.50198	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	14740	0.50000	0.55713	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	16944	0.50000	0.48636	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3369394	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.149	0.000	8013	0.50000	0.51408	Q
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	14536	0.50000	0.49042	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	15245	0.50000	0.47043	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	4617	5.0000	4.0508	M
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.526	0.005	17454	0.50000	0.59394	
48 Benzene	78.0	6.536	6.536	0.000	41628	0.50000	0.49778	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	26742	0.50000	0.48455	M
50 1,2-Dichloroethane	62.0	6.630	6.631	0.000	16568	0.50000	0.50978	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4589286	50.000	50.000	
53 Trichloroethene	130.0	7.417	7.412	0.005	13173	0.50000	0.47881	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	16663	0.50000	0.48199	
55 1,2-Dichloropropane	63.0	7.752	7.753	0.000	10652	0.50000	0.51385	
56 Dibromomethane	93.0	7.862	7.863	0.000	8285	0.50000	0.50166	
57 Methyl methacrylate	41.0	7.883	7.879	0.005	12565	0.50000	0.46554	M
58 1,4-Dioxane	88.0	7.862	7.858	0.005	1378	5.0000	4.9063	Q
59 Bromodichloromethane	83.0	8.119	8.119	0.000	13936	0.50000	0.47488	
60 2-nitropropane	43.0	8.423	8.423	0.000	6729	0.50000	0.48797	M
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	8042	0.50000	0.43709	
62 cis-1,3-Dichloropropene	75.0	8.701	8.702	0.000	14946	0.50000	0.43915	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	35114	1.0000	0.96479	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	50036	0.50000	0.60365	
65 Toluene	92.0	9.126	9.127	0.000	27400	0.50000	0.51107	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	13887	0.50000	0.44815	M
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	16139	0.50000	0.47384	
68 1,1,2-Trichloroethane	97.0	9.734	9.735	0.000	11050	0.50000	0.50694	M
69 Tetrachloroethene	164.0	9.808	9.803	0.005	11359	0.50000	0.52033	
70 1,3-Dichloropropane	76.0	9.933	9.934	0.000	17847	0.50000	0.52187	
71 2-Hexanone	43.0	10.033	10.034	0.000	31330	1.0000	1.0206	
72 Dibromochloromethane	129.0	10.190	10.191	0.000	10634	0.50000	0.44408	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	21806	0.50000	0.47943	M
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.317	0.000	11017	0.50000	0.46701	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3527512	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.894	0.005	27857	0.50000	0.49079	M
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.009	0.000	9973	0.50000	0.48744	
79 Ethylbenzene	106.0	11.019	11.019	0.000	14988	0.50000	0.49877	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	16936	0.50000	0.47232	
81 o-Xylene	106.0	11.575	11.575	0.000	15365	0.50000	0.48310	
82 Styrene	104.0	11.596	11.596	0.000	25632	0.50000	0.47670	
83 Bromoform	173.0	11.774	11.774	0.000	5958	0.50000	0.61314	
84 Isopropylbenzene	105.0	11.957	11.958	0.000	38458	0.50000	0.49500	
85 Cyclohexanone	55.0	12.041	12.042	0.000	5418	5.0000	6.1322	M

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.131	0.000	18082	0.50000	0.76240	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	10301	0.50000	0.48353	
87 Bromobenzene	156.0	12.256	12.257	0.000	9746	0.50000	0.46609	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	4162	0.50000	0.48283	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	2546	0.50000	0.67226	Q
91 n-Propylbenzene	91.0	12.372	12.372	0.000	40399	0.50000	0.49941	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	23154	0.50000	0.50037	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	23727	0.50000	0.47772	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	8284	0.50000	0.47771	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	23302	0.50000	0.49884	
96 1,2,4-Trimethylbenzene	105.0	12.906	12.902	0.005	23112	0.50000	0.48782	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	31748	0.50000	0.50211	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	14289	0.50000	0.47705	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.005	24740	0.50000	0.49498	M
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.232	0.000	1177587	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.253	0.000	14468	0.50000	0.48926	Q
102 Benzyl chloride	91.0	13.362	13.358	0.005	13208	0.50000	0.43370	M
103 n-Butylbenzene	91.0	13.562	13.562	0.000	19153	0.50000	0.47677	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	13014	0.50000	0.48786	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.260	0.000	2220	0.50000	0.49712	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	8358	0.50000	0.50589	
107 Hexachlorobutadiene	225.0	15.061	15.067	-0.004	3879	0.50000	0.48329	
108 Naphthalene	128.0	15.166	15.167	0.000	22277	0.50000	0.47483	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	7493	0.50000	0.48668	
S 110 Xylenes (total)	106.0	16.000		0.000		1.0000	0.95542	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		1.0000	0.98175	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

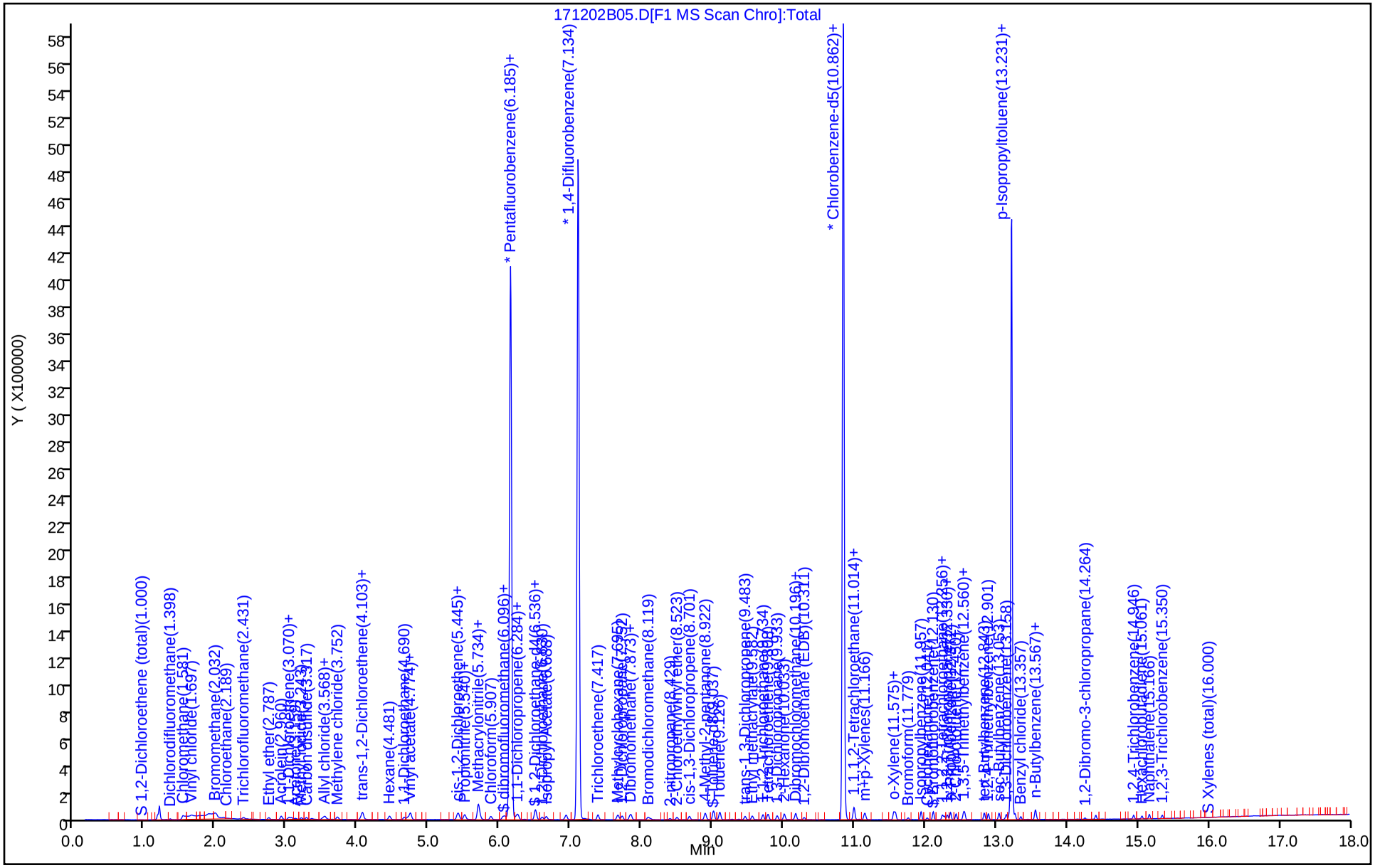
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D				
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ		
Sample Info:	17120219B, VSTD0.5BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

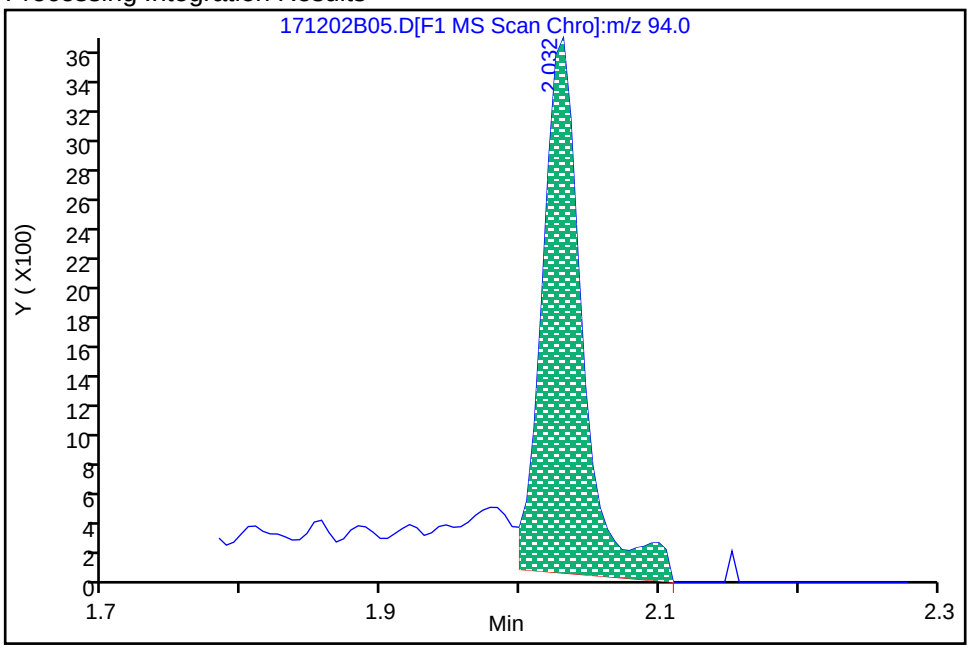
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

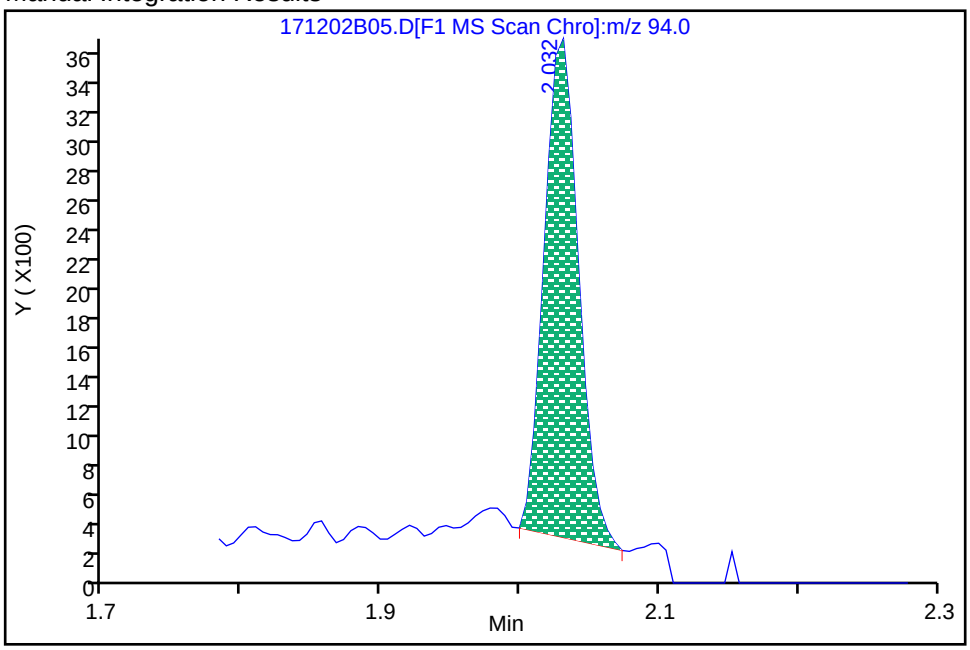
Processing Integration Results

RT: 2.032
Area: 7188
Amount: 0.54459
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.032
Area: 5699
Amount: 0.48935
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:39:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

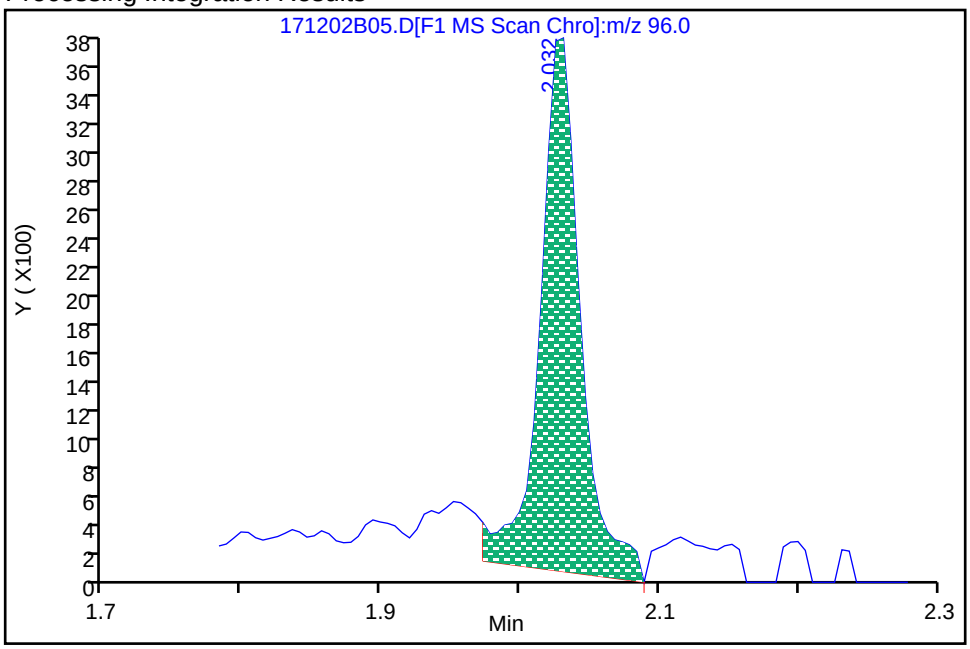
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

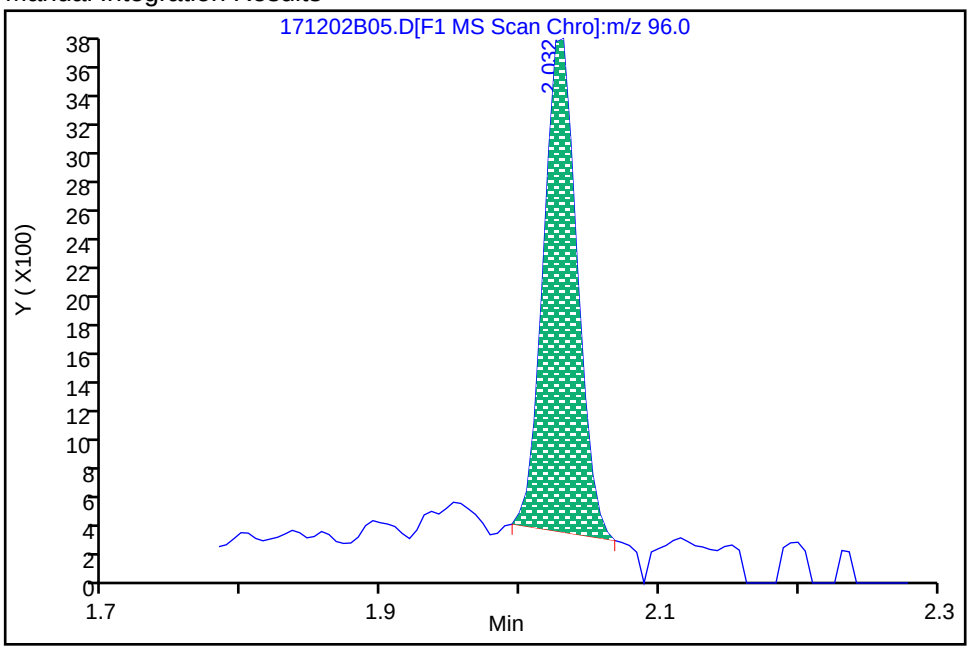
Processing Integration Results

RT: 2.032
Area: 7375
Amount: 0.54459
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.032
Area: 5615
Amount: 0.48935
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:39:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

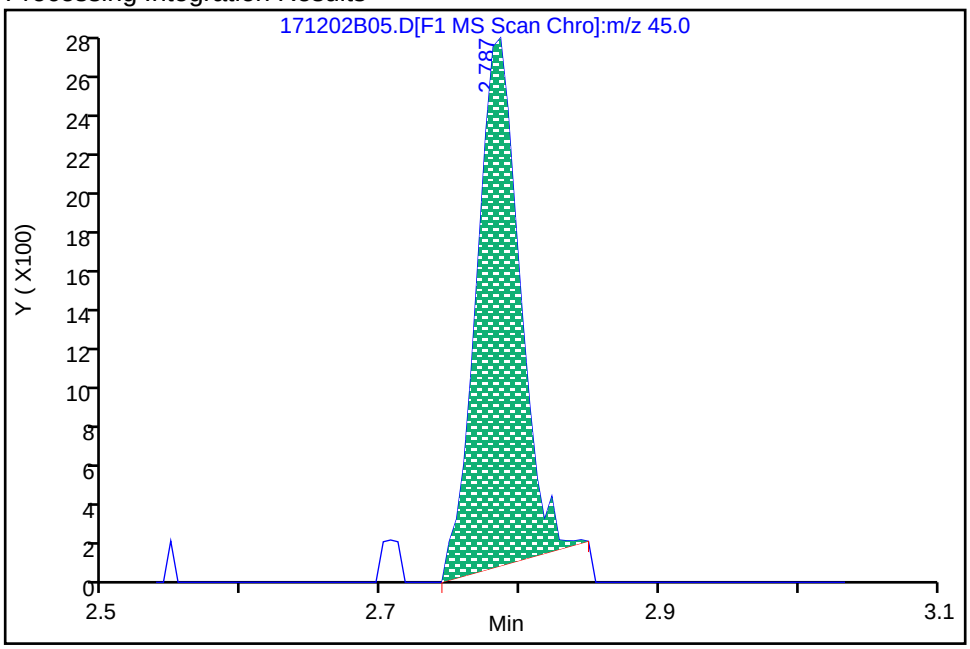
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

8 Ethyl ether, CAS: 60-29-7

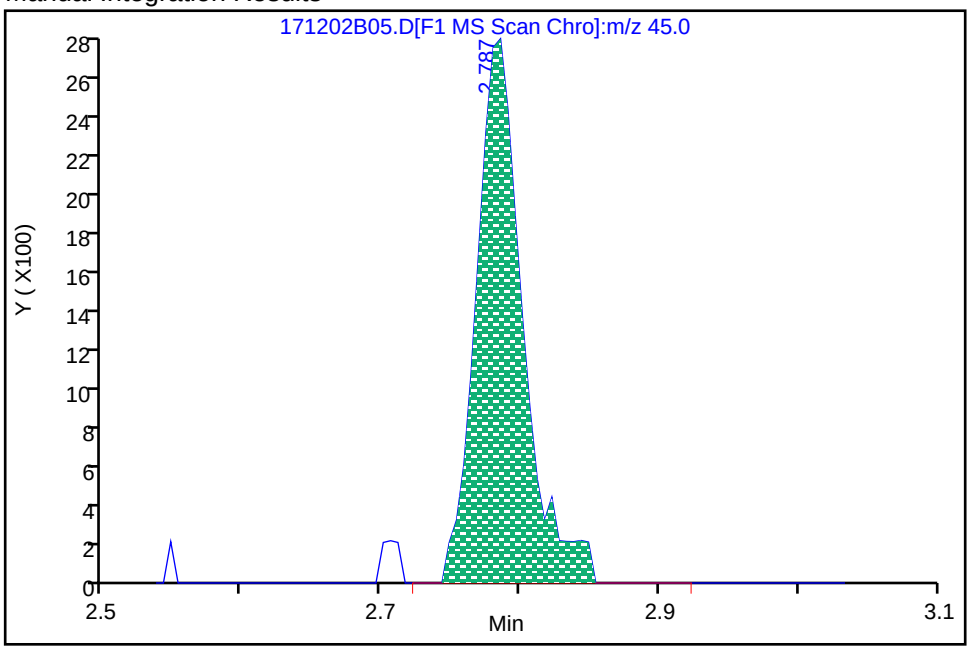
Processing Integration Results

RT: 2.787
Area: 5744
Amount: 0.49436
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.787
Area: 6430
Amount: 0.50532
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

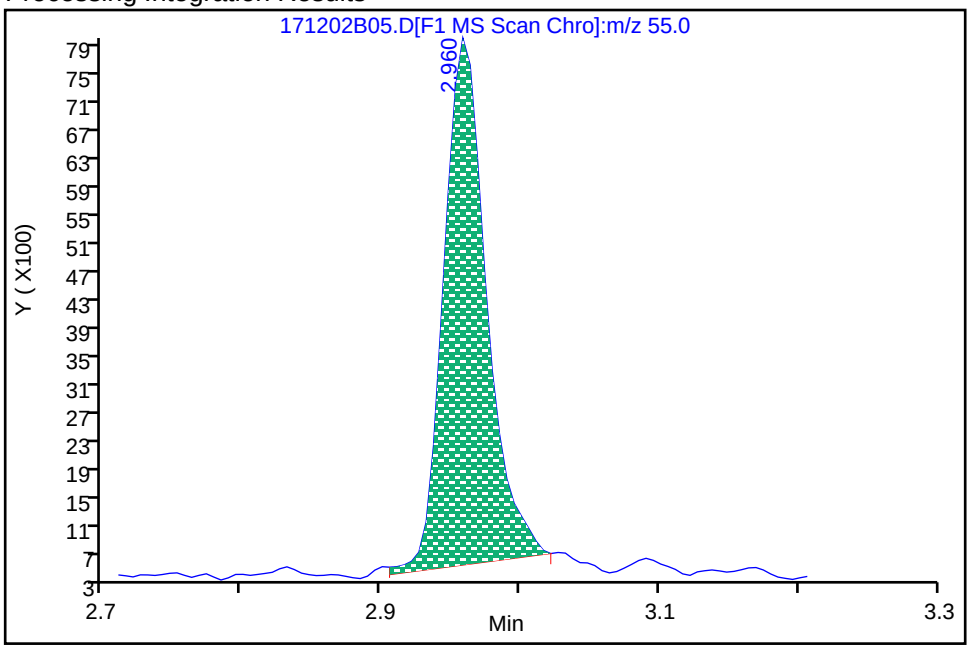
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

9 Acrolein, CAS: 107-02-8

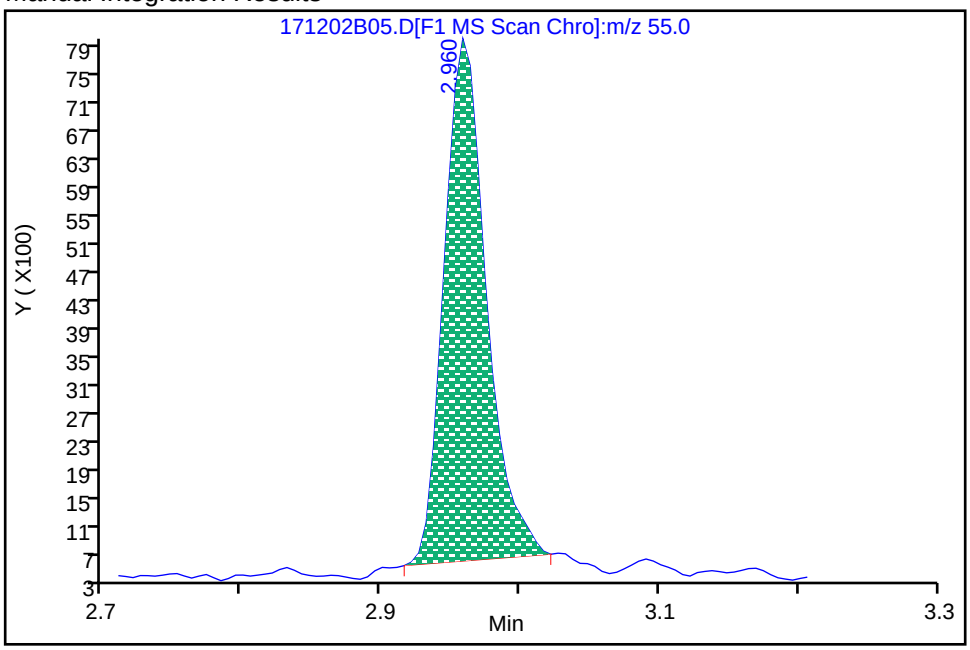
Processing Integration Results

RT: 2.960
Area: 15817
Amount: 4.7429
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.960
Area: 15403
Amount: 4.6600
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

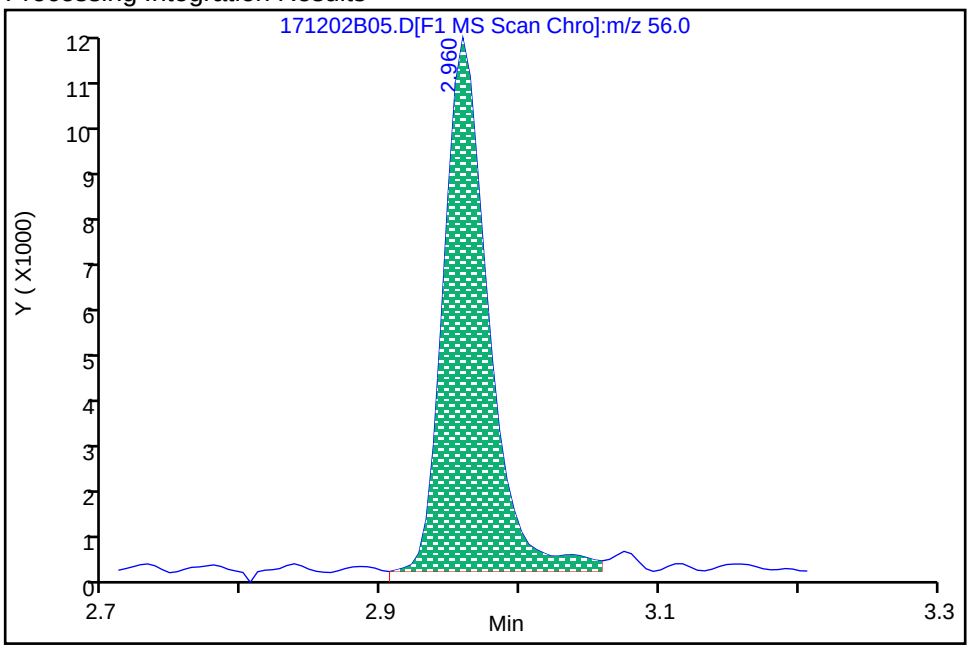
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

9 Acrolein, CAS: 107-02-8

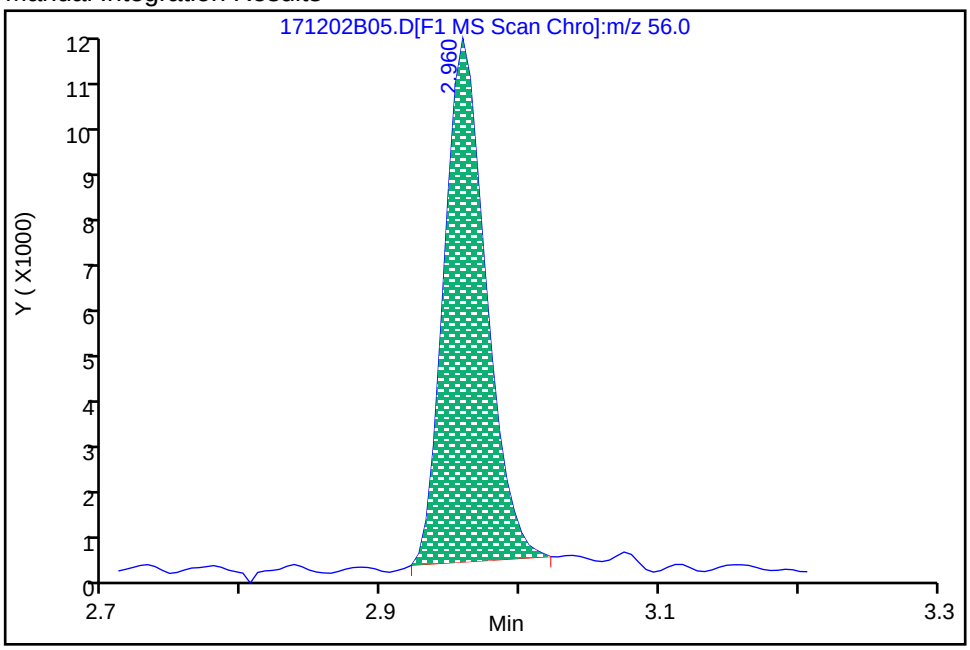
Processing Integration Results

RT: 2.960
Area: 25224
Amount: 4.7429
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.960
Area: 23066
Amount: 4.6600
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

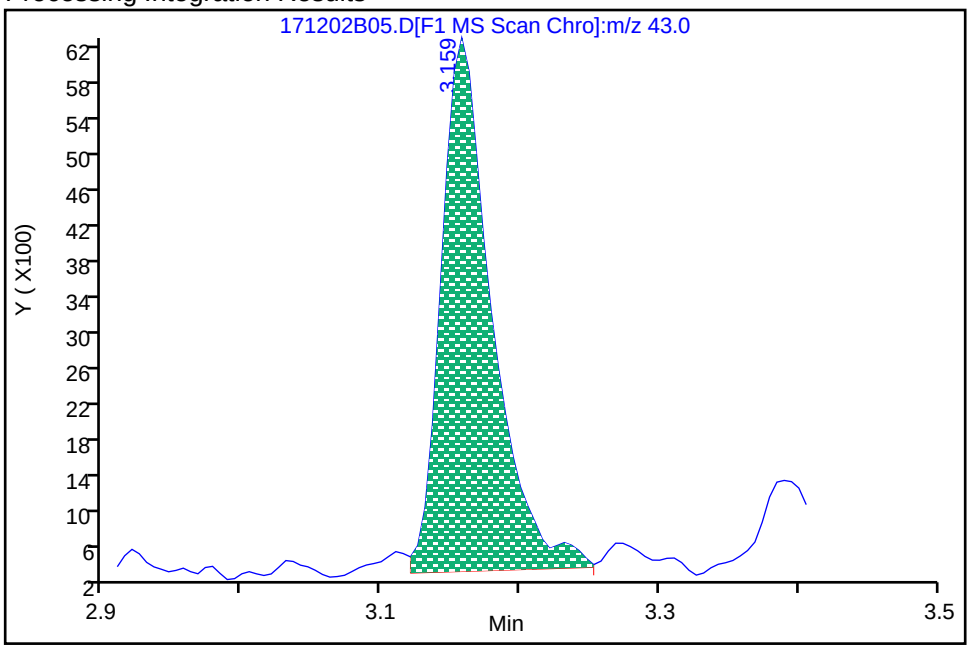
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

10 Acetone, CAS: 67-64-1

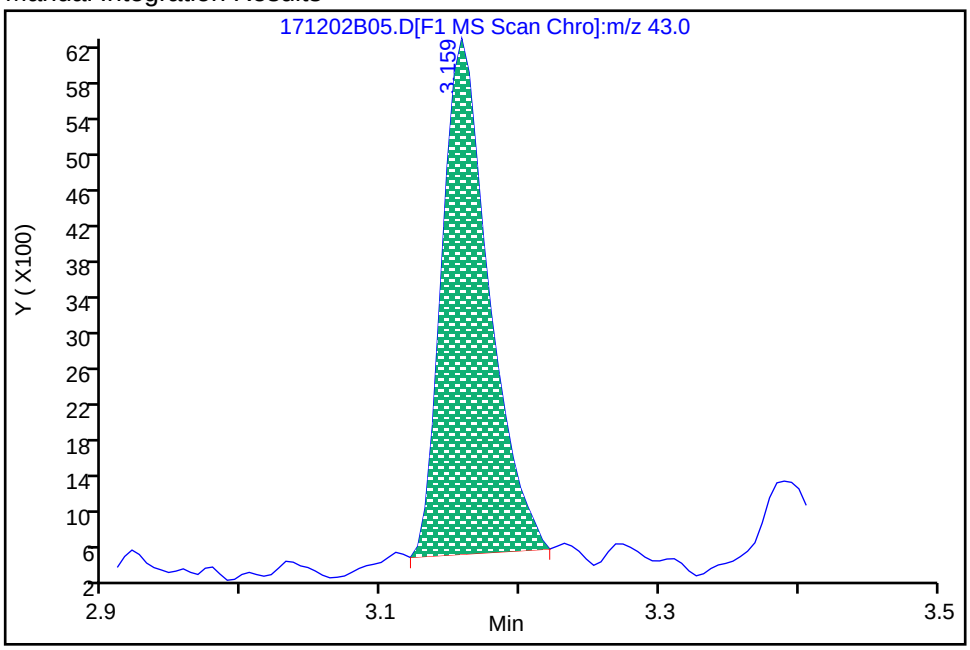
Processing Integration Results

RT: 3.159
Area: 14915
Amount: 1.1586
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.159
Area: 13319
Amount: 1.2220
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

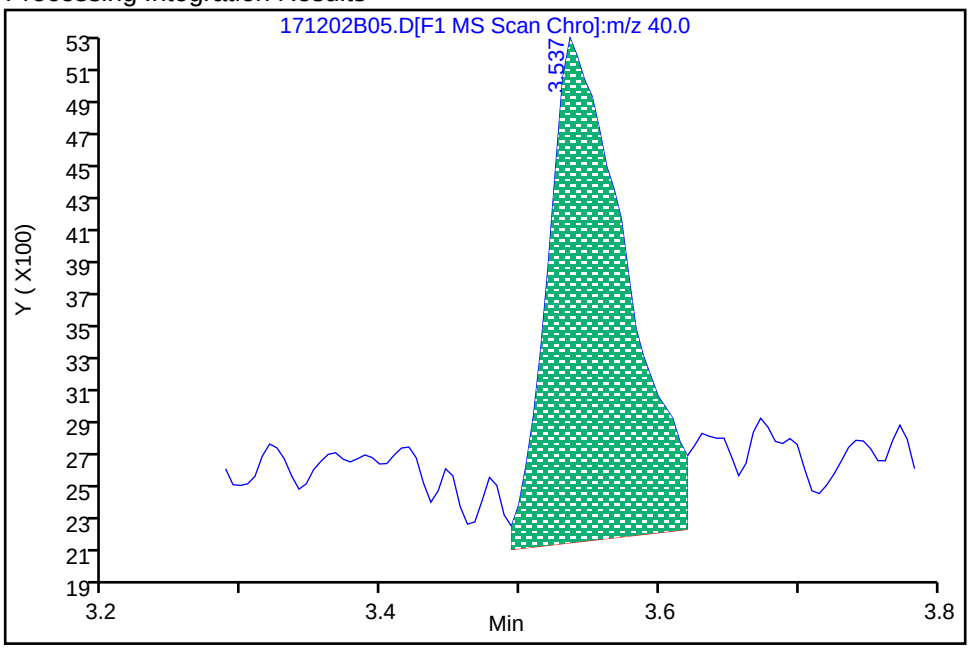
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

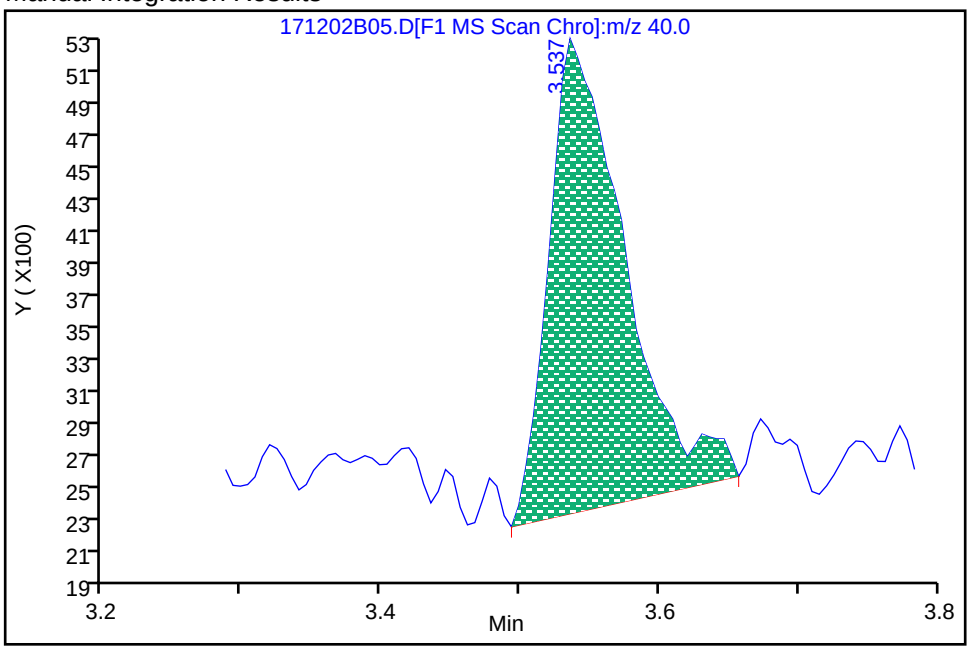
Processing Integration Results

RT: 3.537
Area: 12167
Amount: 6.0499
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 11127
Amount: 7.1958
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

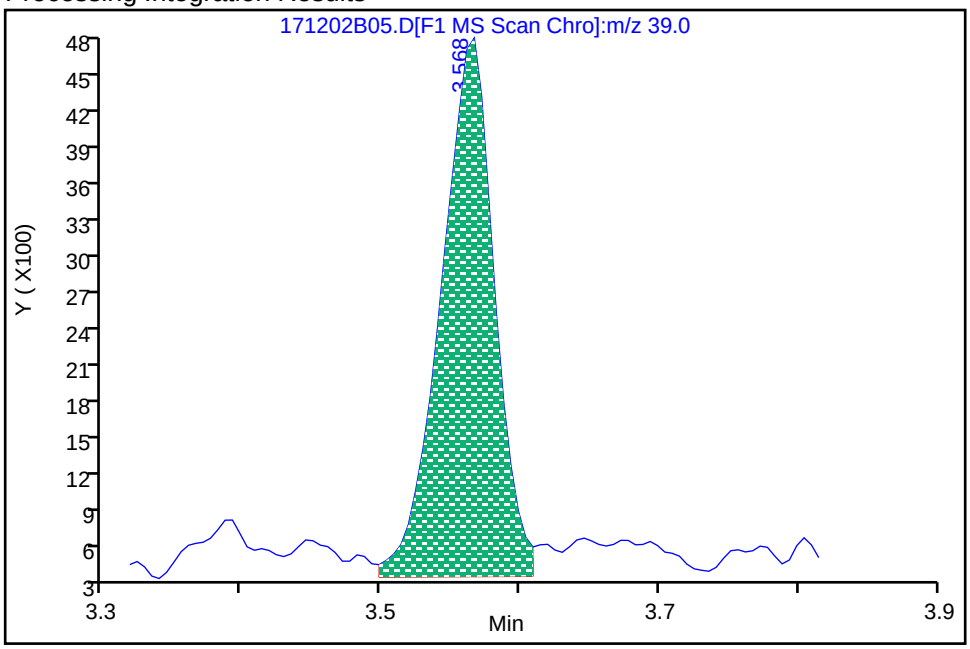
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

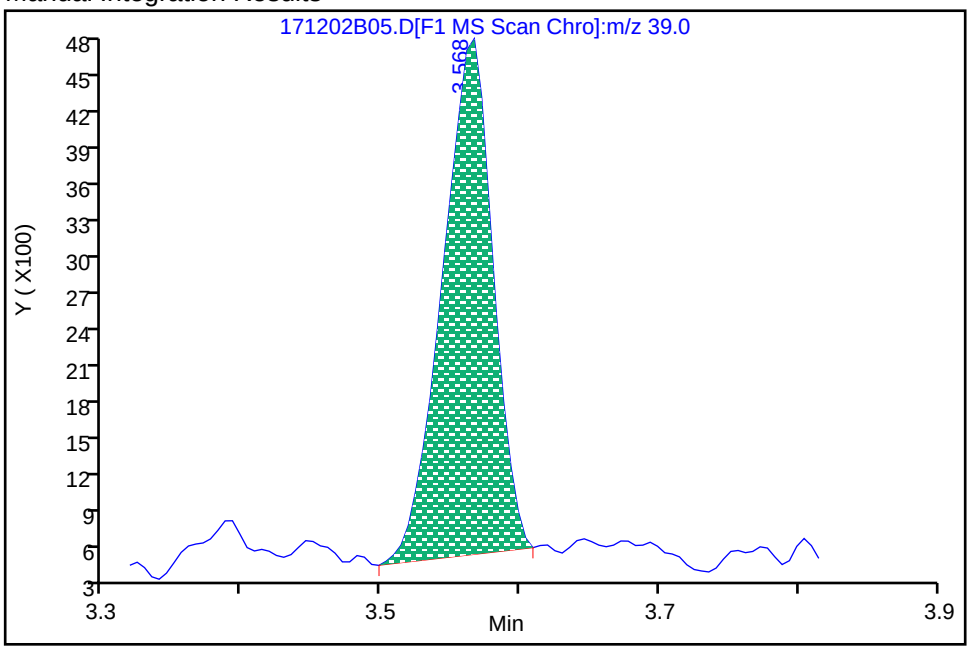
Processing Integration Results

RT: 3.568
Area: 11840
Amount: 6.0499
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.568
Area: 10692
Amount: 7.1958
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

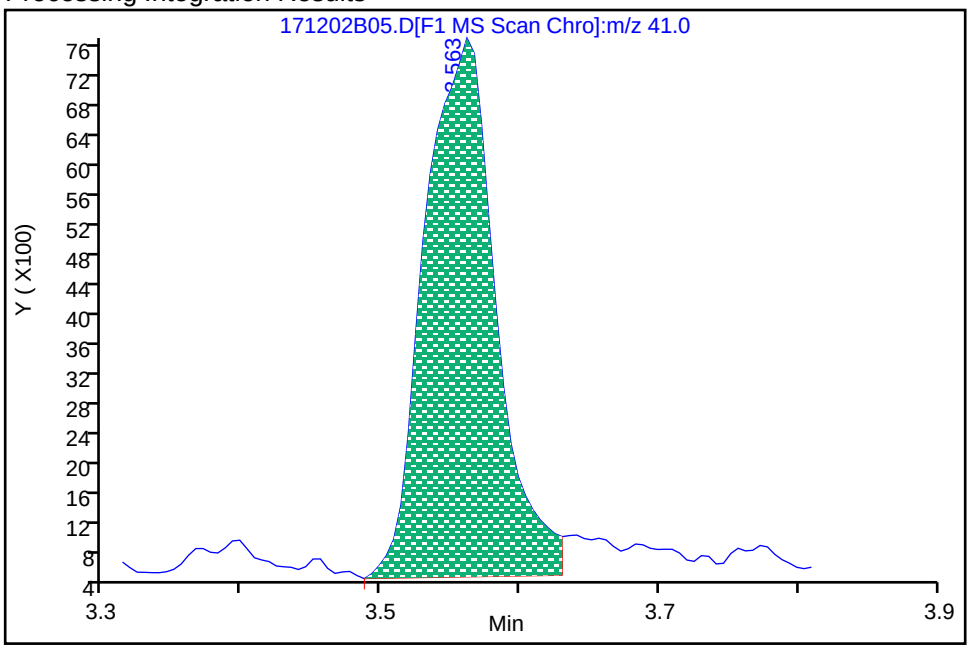
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

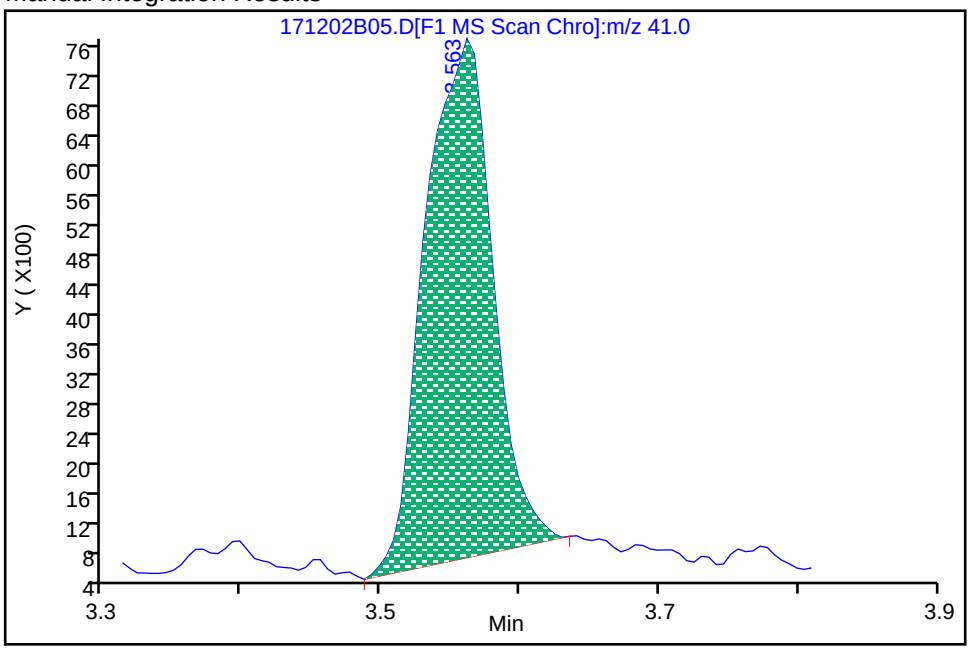
Processing Integration Results

RT: 3.563
Area: 25412
Amount: 6.0499
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 23254
Amount: 7.1958
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

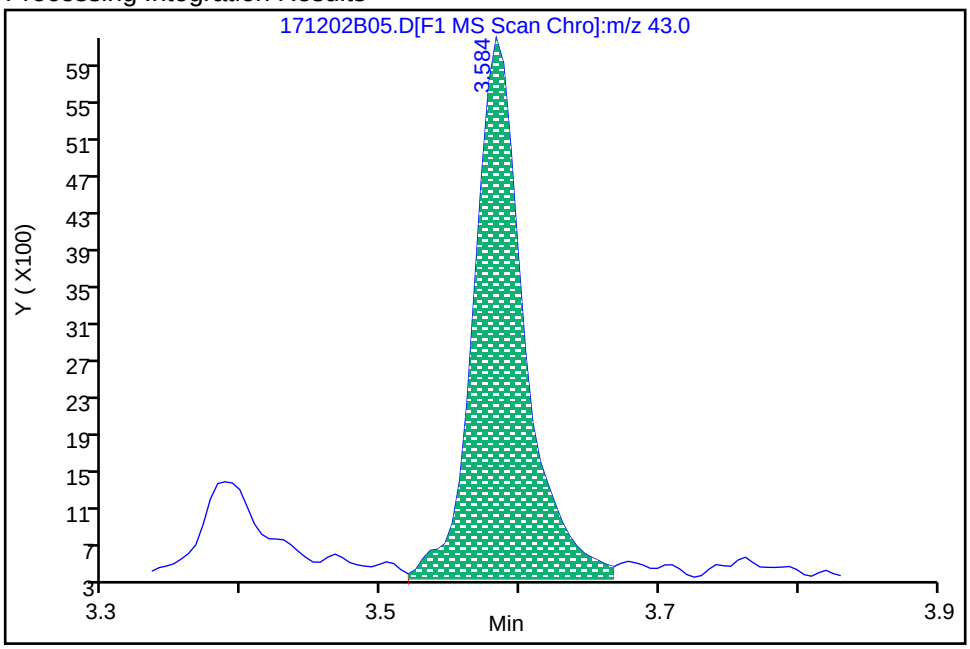
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

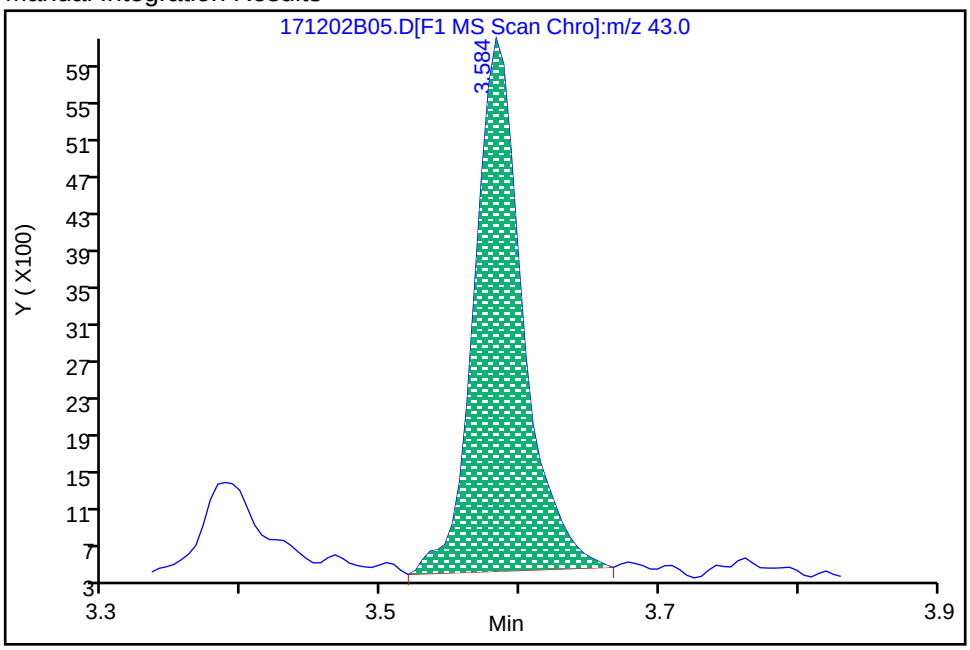
Processing Integration Results

RT: 3.584
Area: 14789
Amount: 0.50399
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.584
Area: 13952
Amount: 0.50286
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:50:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

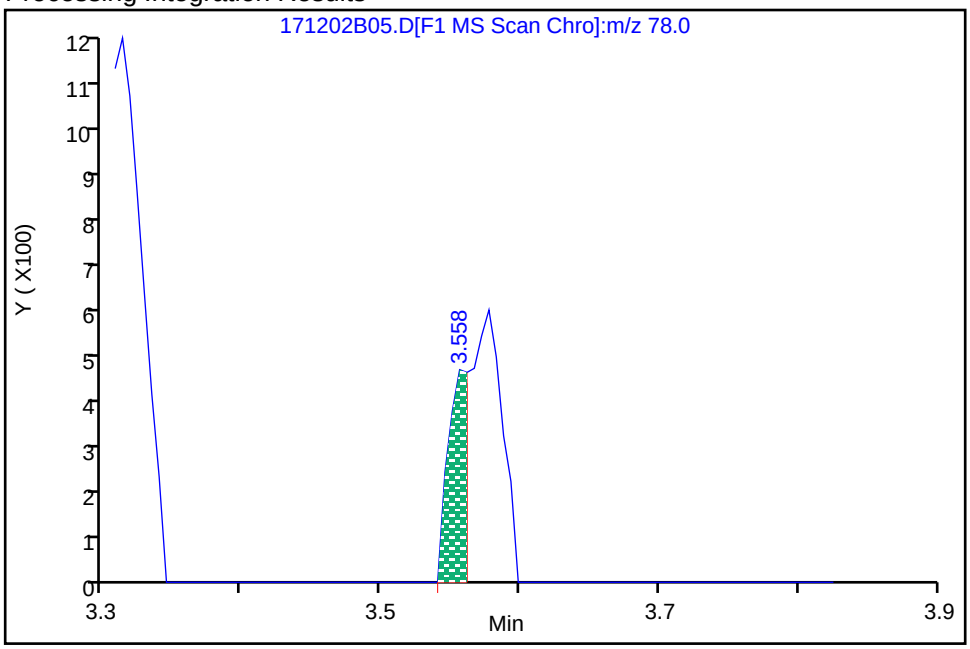
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

17 Allyl chloride, CAS: 107-05-1

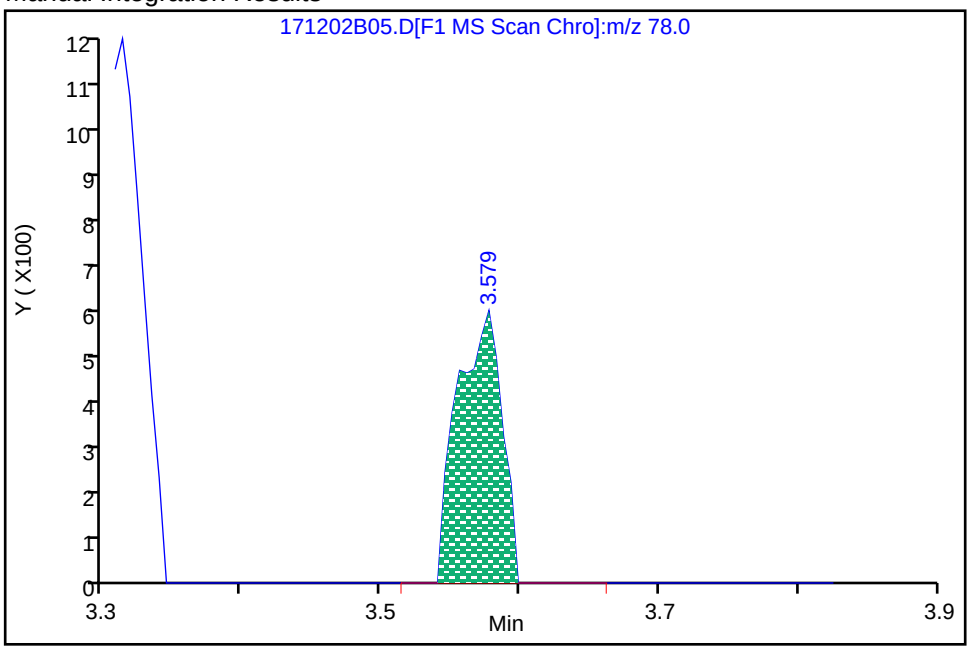
Processing Integration Results

RT: 3.558
Area: 414
Amount: 0.46287
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.579
Area: 1317
Amount: 0.45442
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

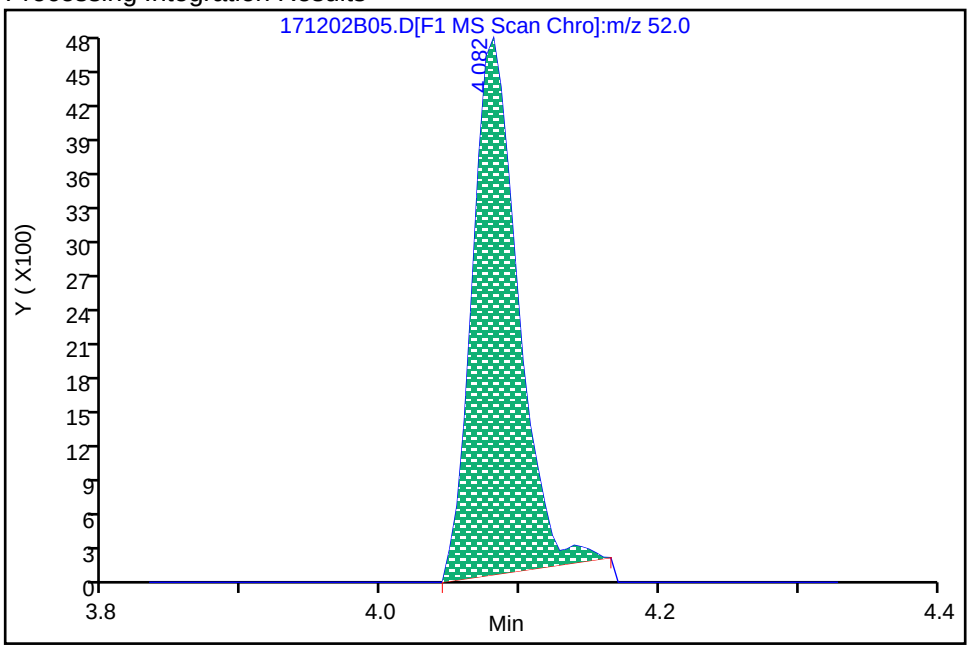
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

20 Acrylonitrile, CAS: 107-13-1

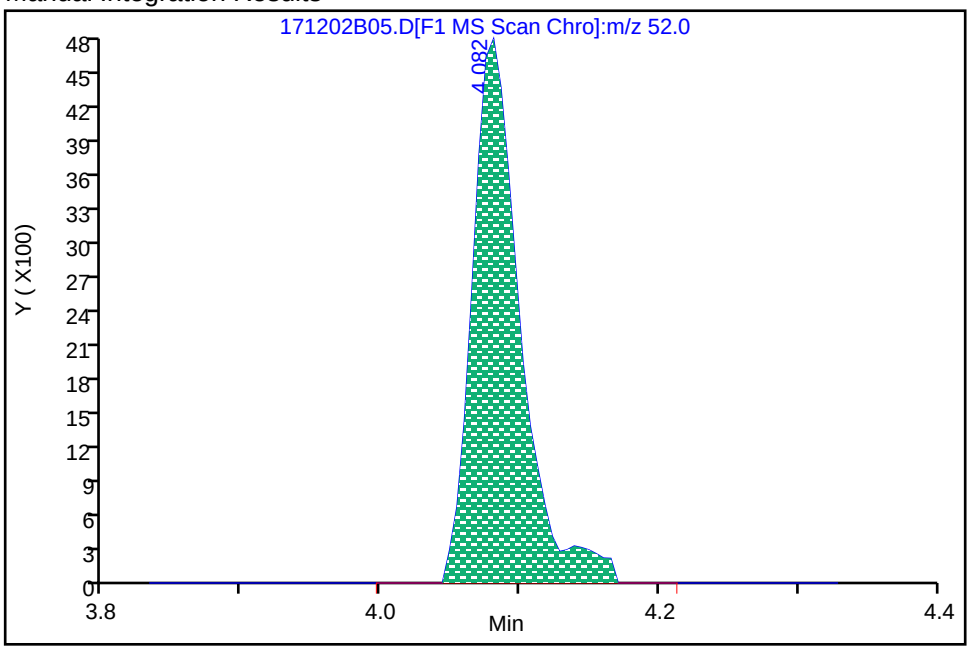
Processing Integration Results

RT: 4.082
Area: 10552
Amount: 1.0076
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.082
Area: 11360
Amount: 1.0496
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

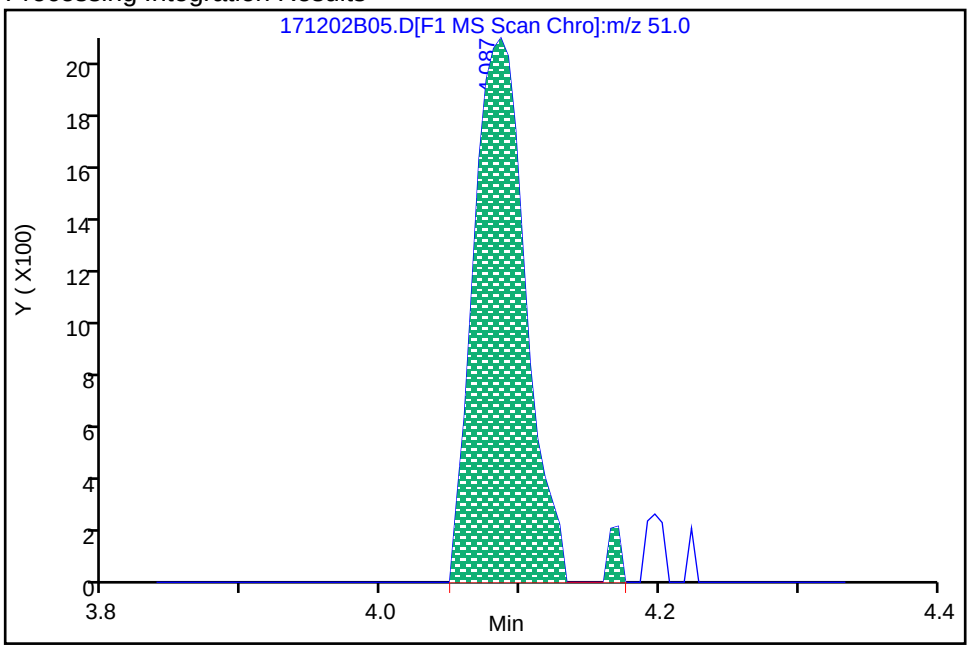
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

20 Acrylonitrile, CAS: 107-13-1

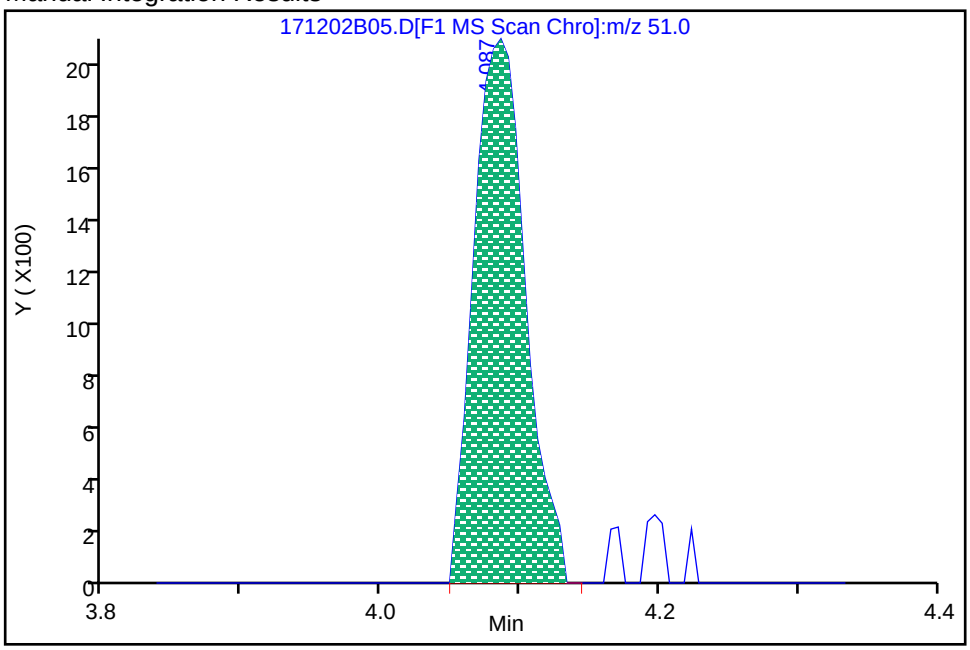
Processing Integration Results

RT: 4.087
Area: 5403
Amount: 1.0076
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.087
Area: 5274
Amount: 1.0496
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

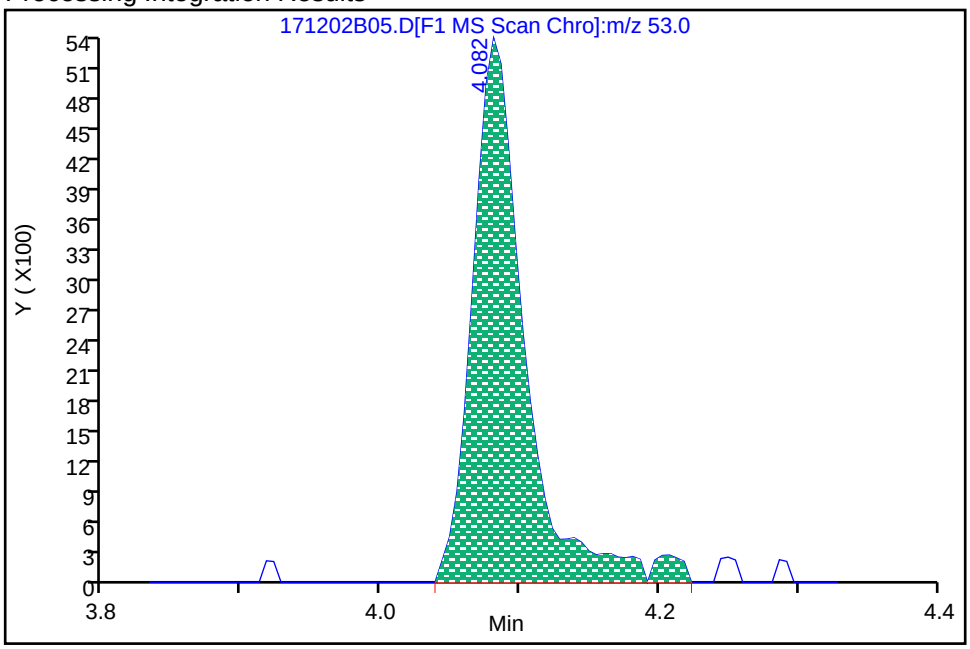
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

20 Acrylonitrile, CAS: 107-13-1

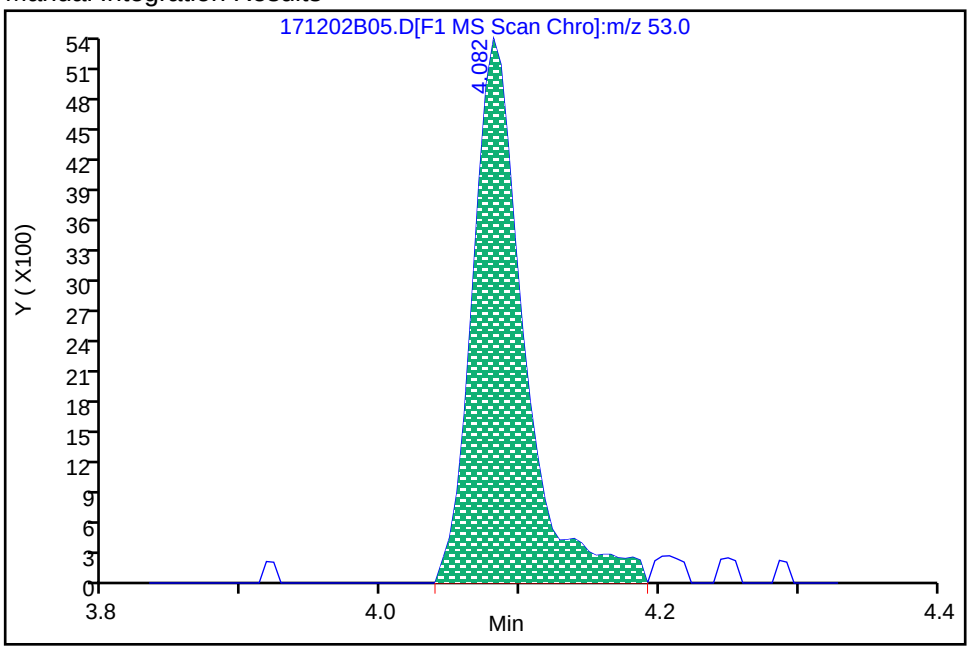
Processing Integration Results

RT: 4.082
Area: 14002
Amount: 1.0076
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.082
Area: 13628
Amount: 1.0496
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

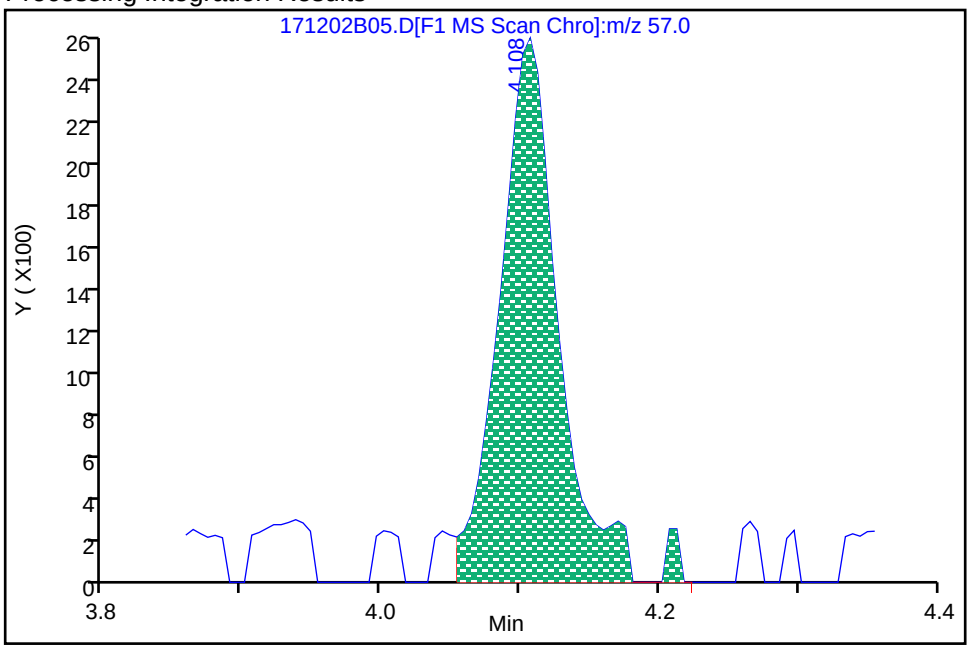
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

22 tert-Butyl methyl ether(MTBE), CAS: 1634-04-4

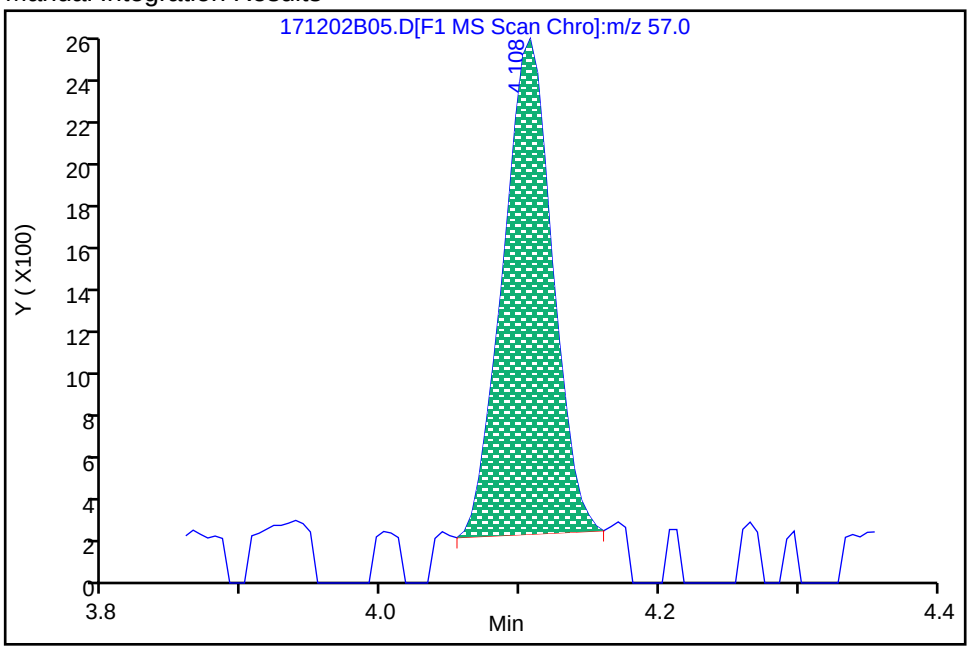
Processing Integration Results

RT:	4.108
Area:	7469
Amount:	0.49836
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	4.108
Area:	5615
Amount:	0.52300
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:41:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

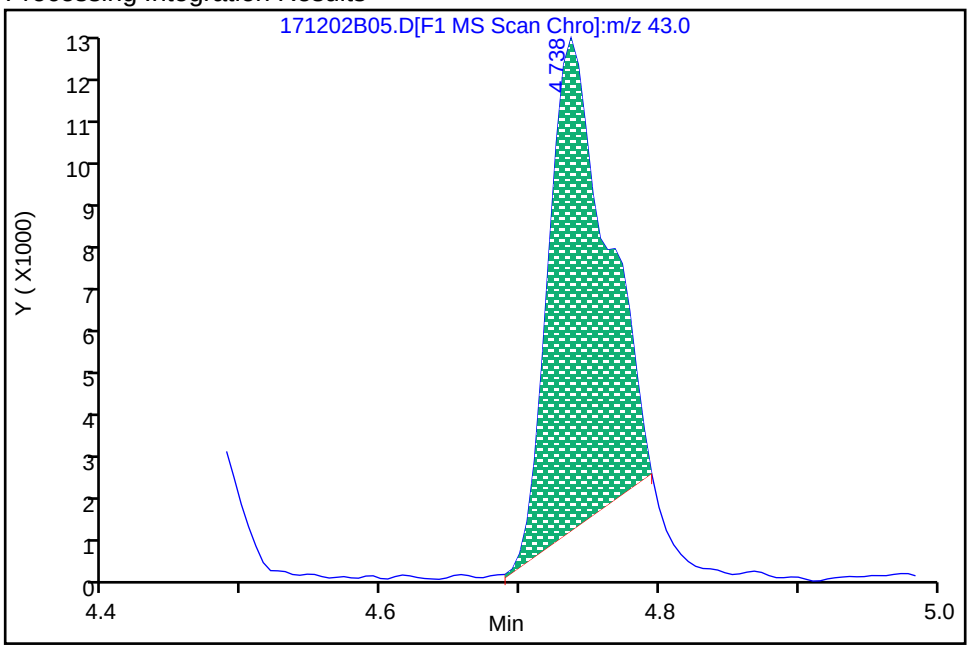
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

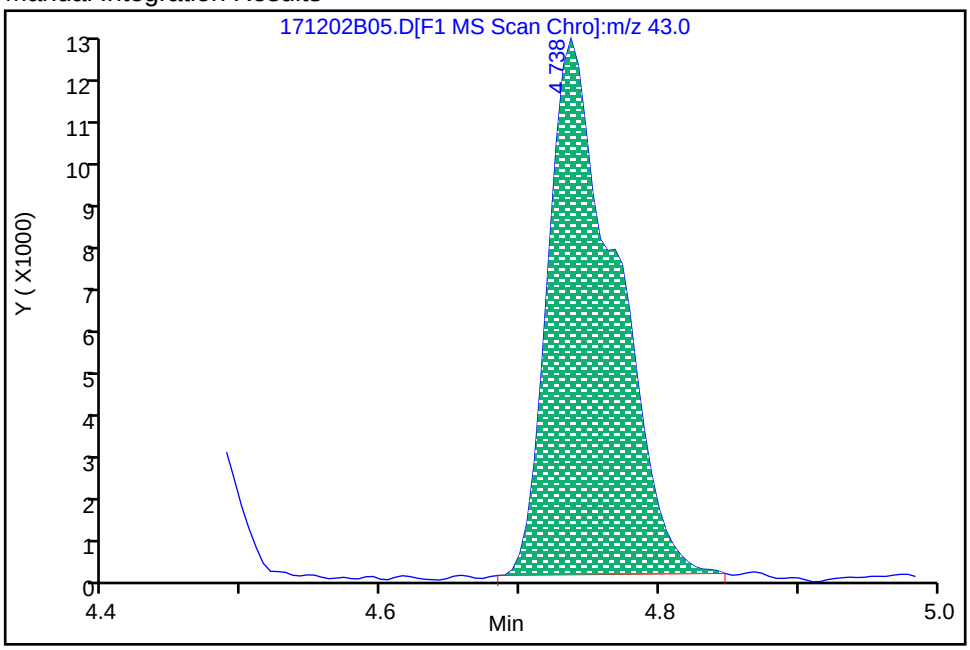
Processing Integration Results

RT: 4.738
Area: 31566
Amount: 0.44231
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.738
Area: 39983
Amount: 0.43124
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

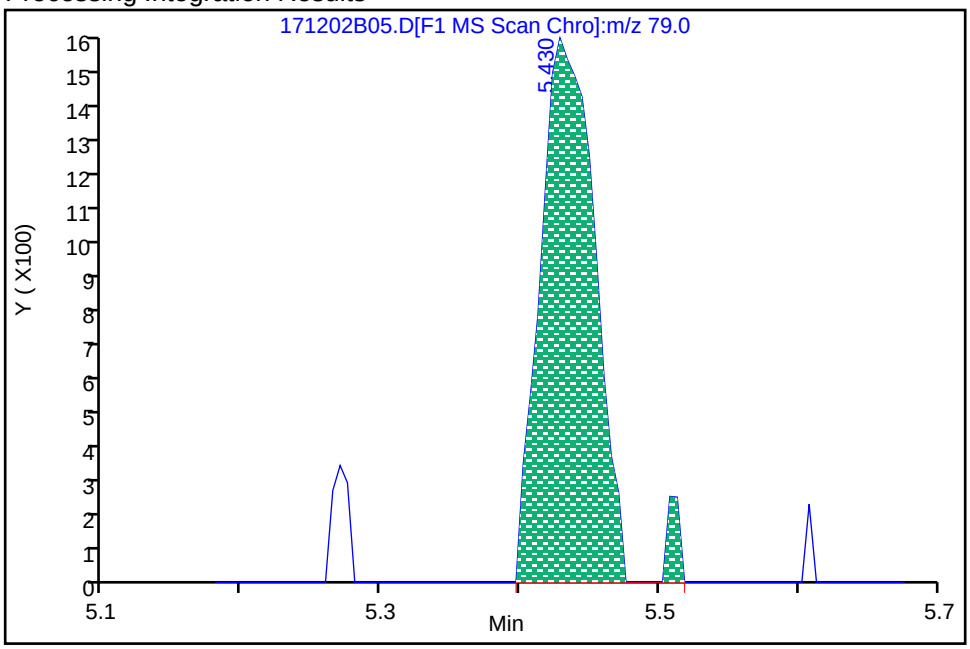
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

31 2,2-Dichloropropane, CAS: 594-20-7

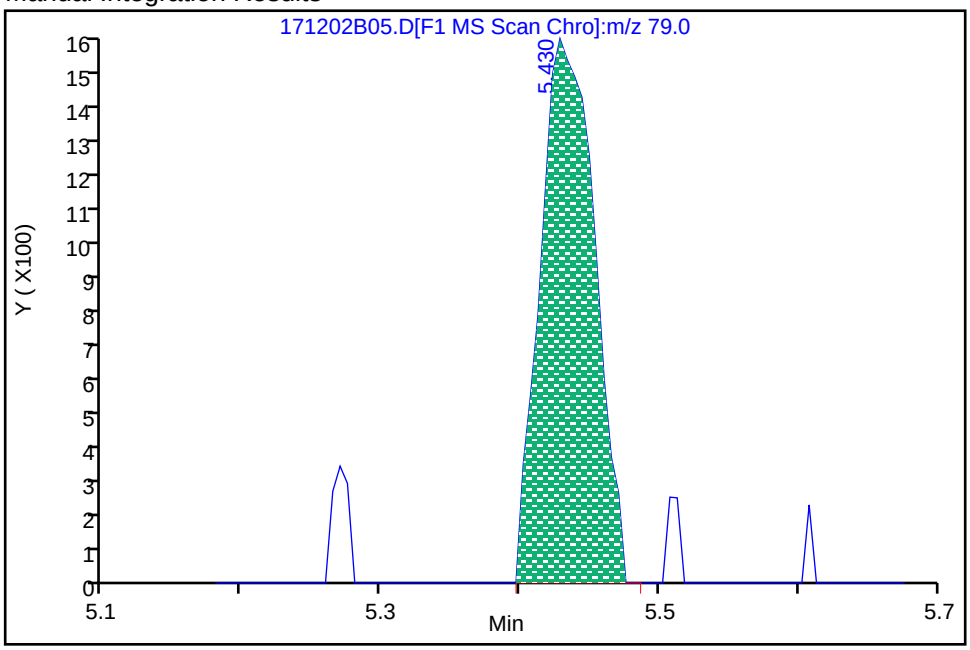
Processing Integration Results

RT: 5.430
Area: 4364
Amount: 0.51298
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.430
Area: 4211
Amount: 0.52490
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

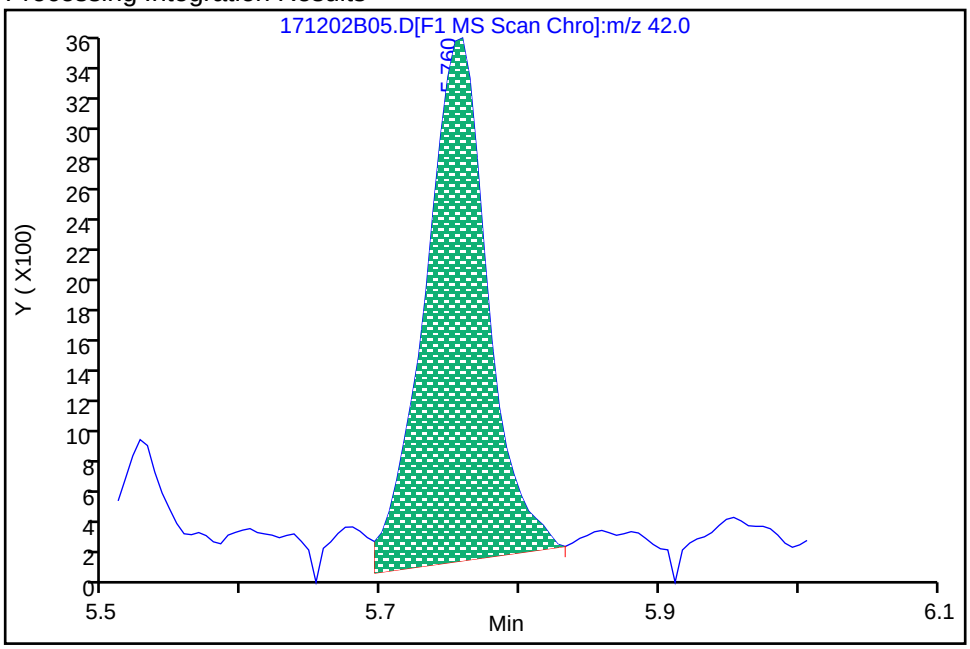
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

36 Tetrahydrofuran, CAS: 109-99-9

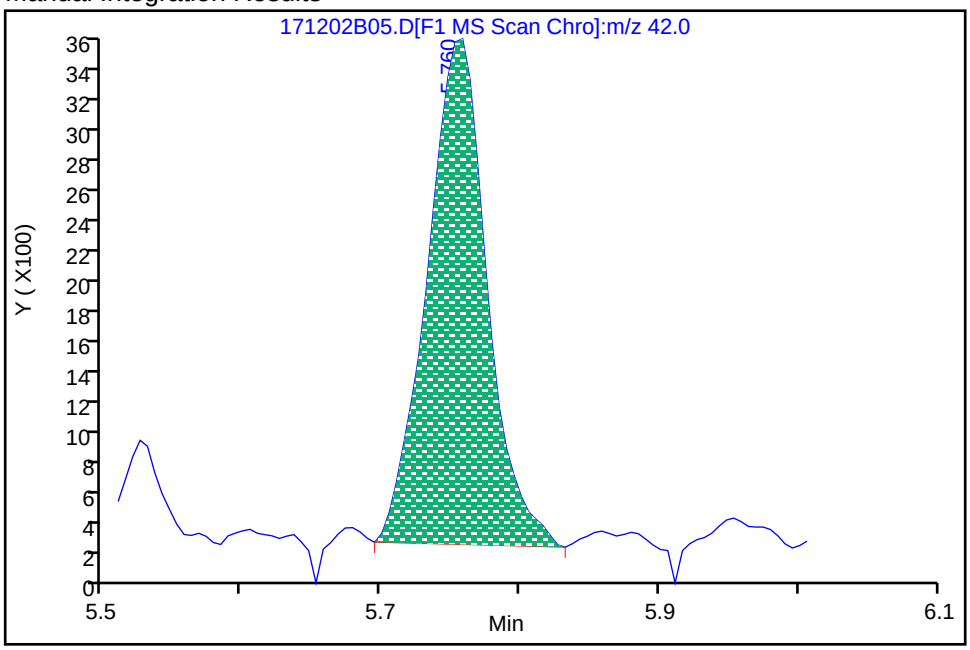
Processing Integration Results

RT: 5.760
Area: 10804
Amount: 0.56465
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.760
Area: 9950
Amount: 0.58817
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

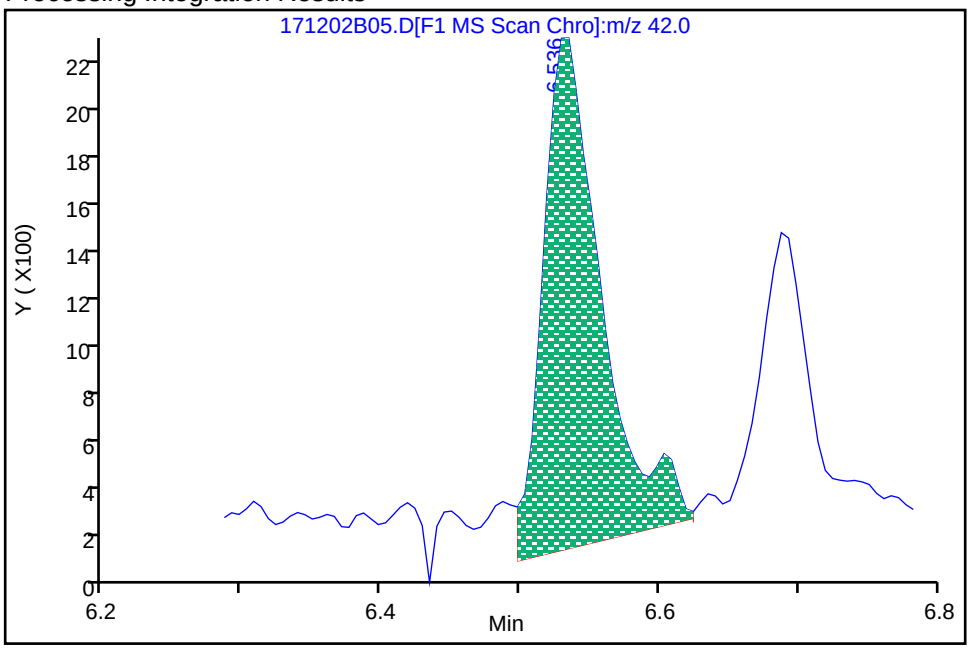
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

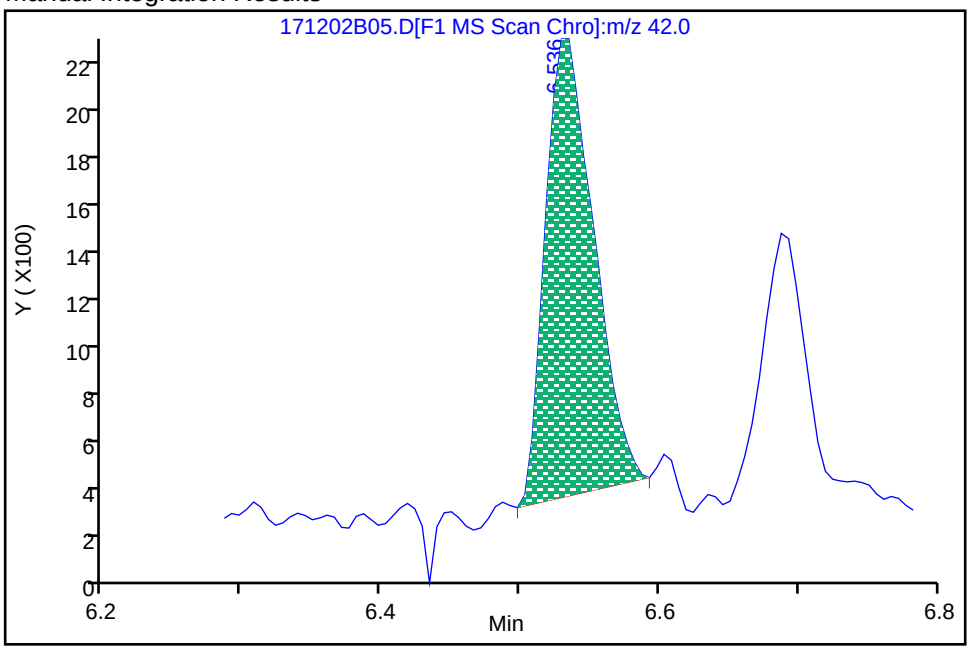
Processing Integration Results

RT: 6.536
Area: 6234
Amount: 5.0834
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.536
Area: 4617
Amount: 4.0508
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

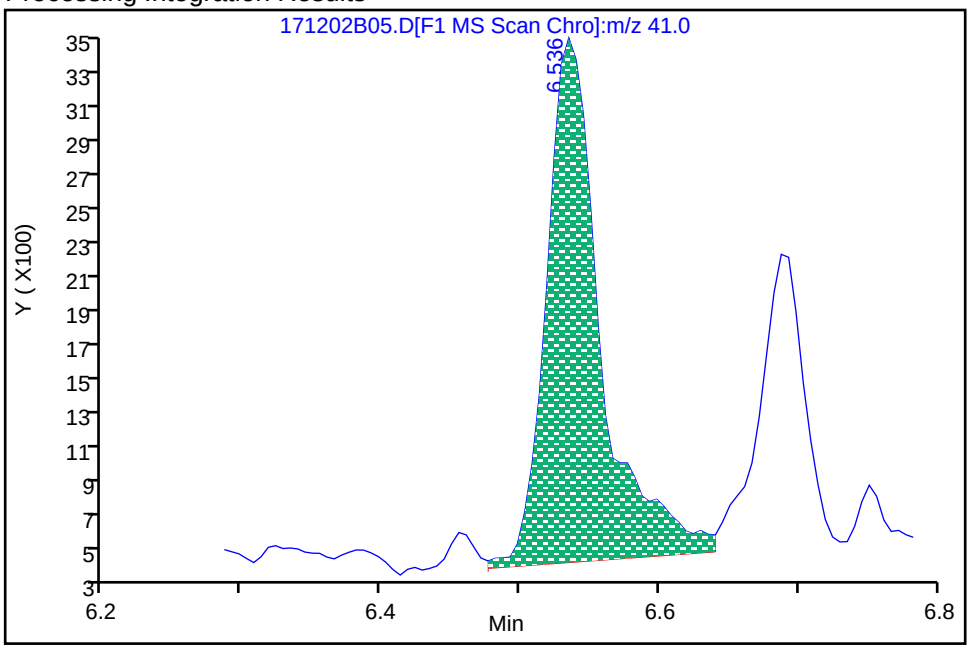
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

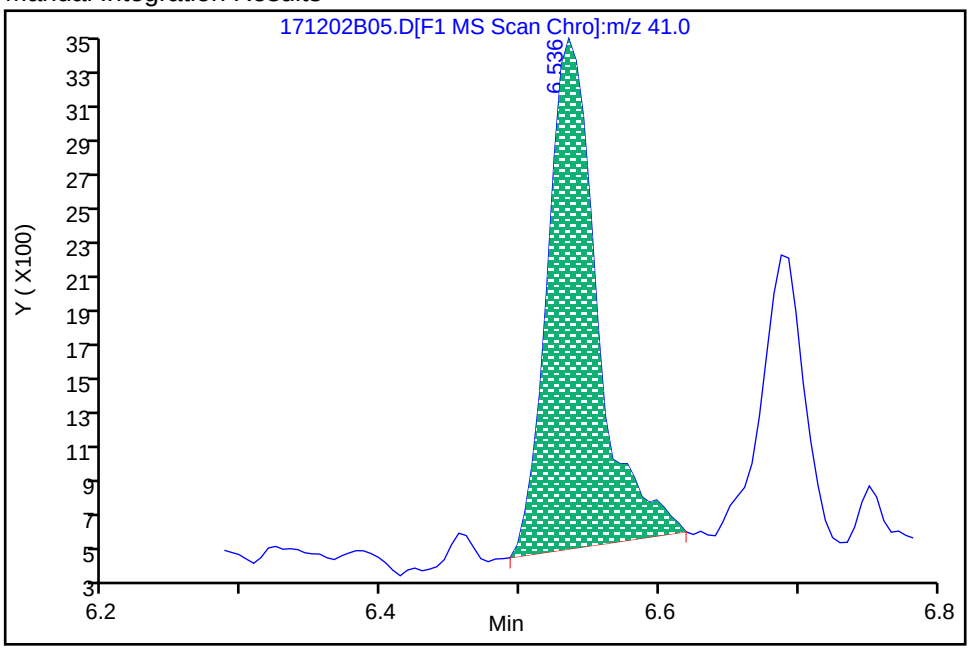
Processing Integration Results

RT: 6.536
Area: 8008
Amount: 5.0834
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.536
Area: 7123
Amount: 4.0508
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

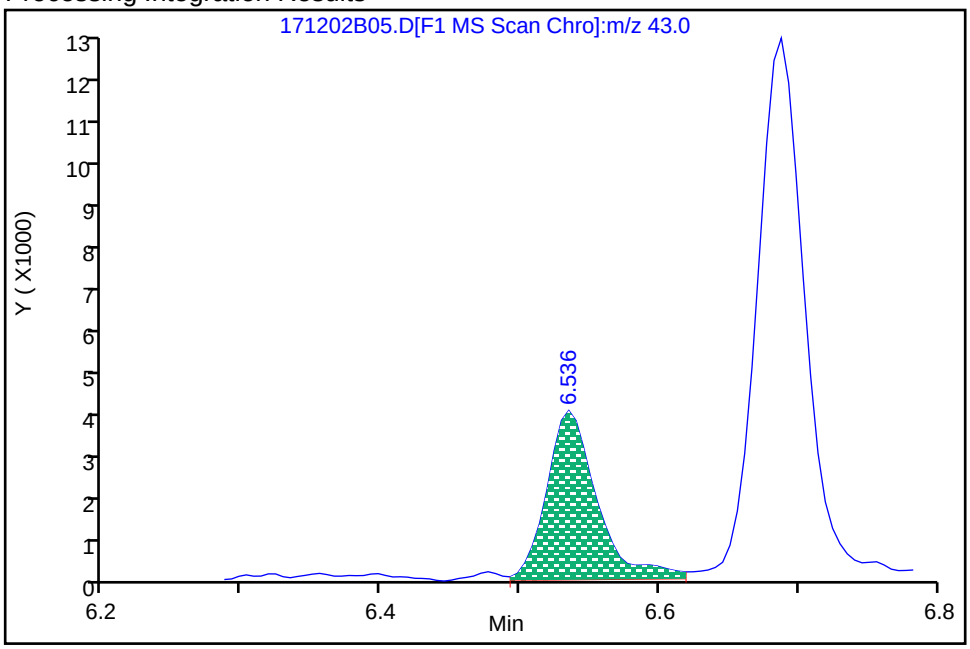
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

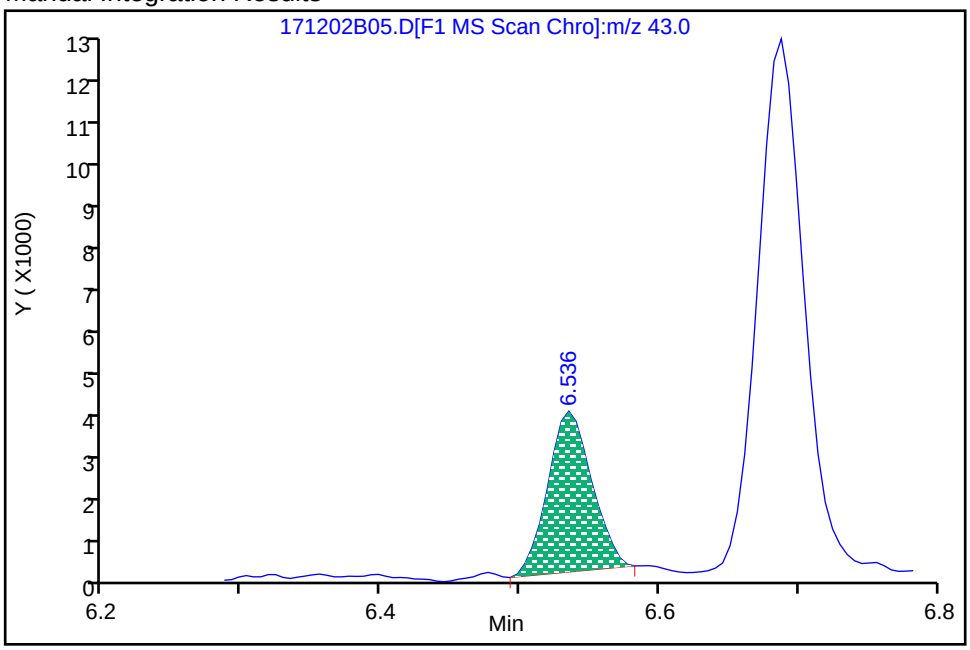
Processing Integration Results

RT: 6.536
Area: 9235
Amount: 5.0834
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.536
Area: 7664
Amount: 4.0508
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

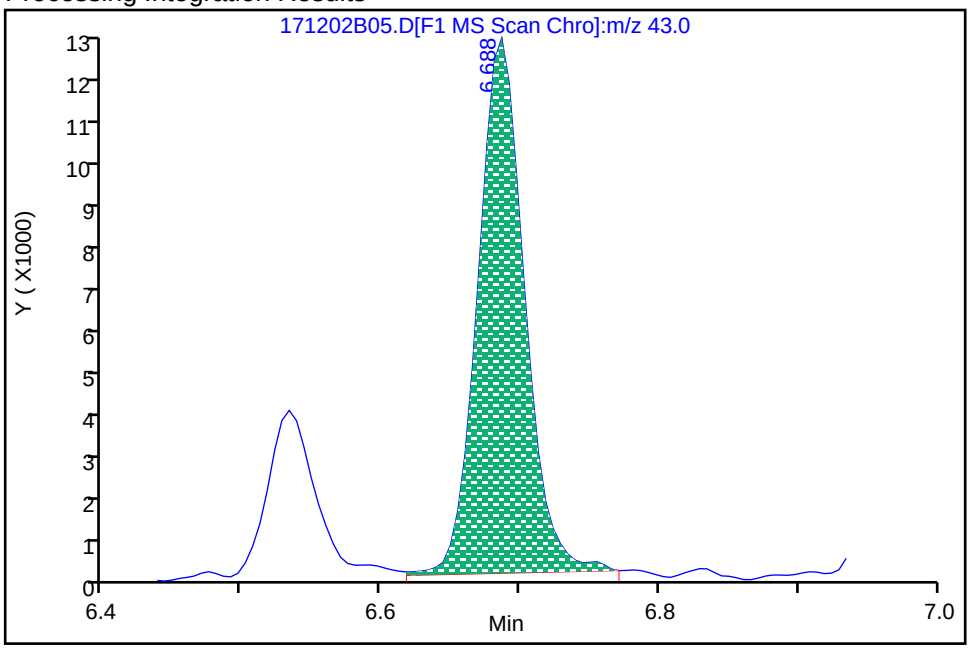
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

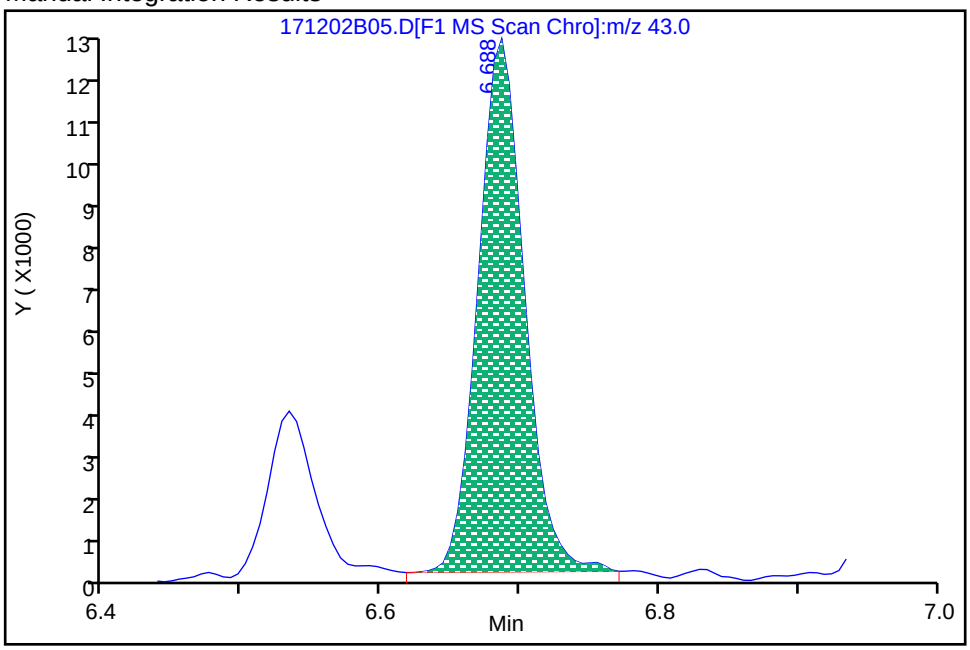
Processing Integration Results

RT: 6.688
Area: 27098
Amount: 0.48974
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 26742
Amount: 0.48455
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

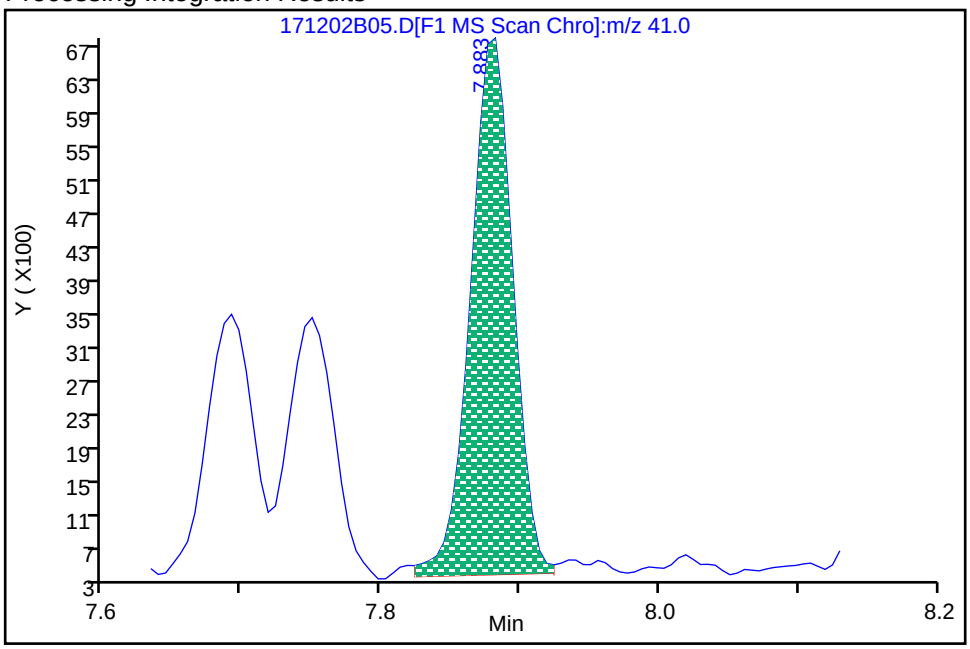
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

57 Methyl methacrylate, CAS: 80-62-6

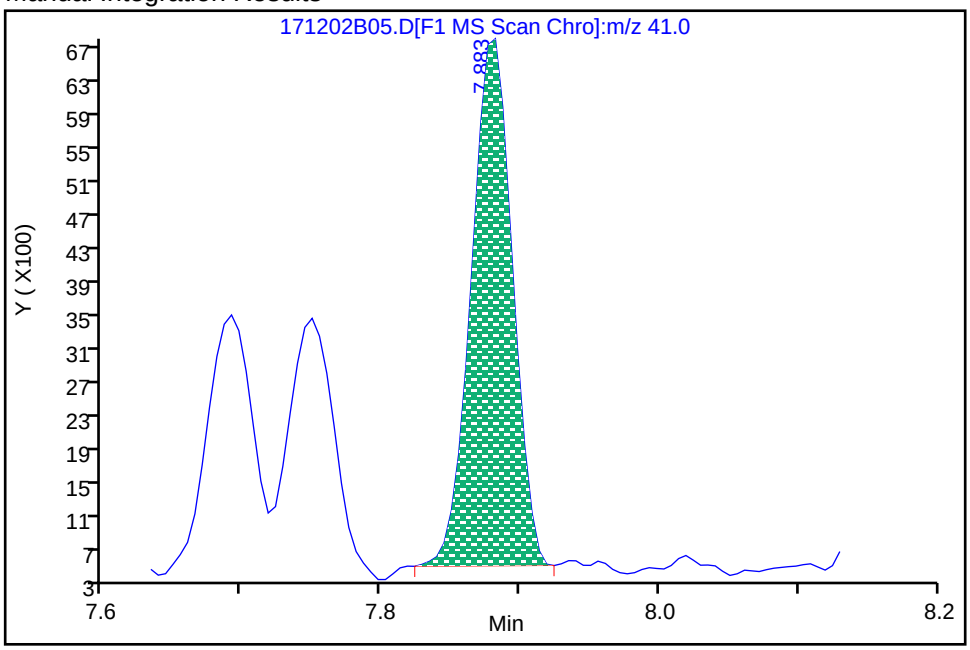
Processing Integration Results

RT: 7.883
Area: 13250
Amount: 0.49432
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 7.883
Area: 12565
Amount: 0.46554
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

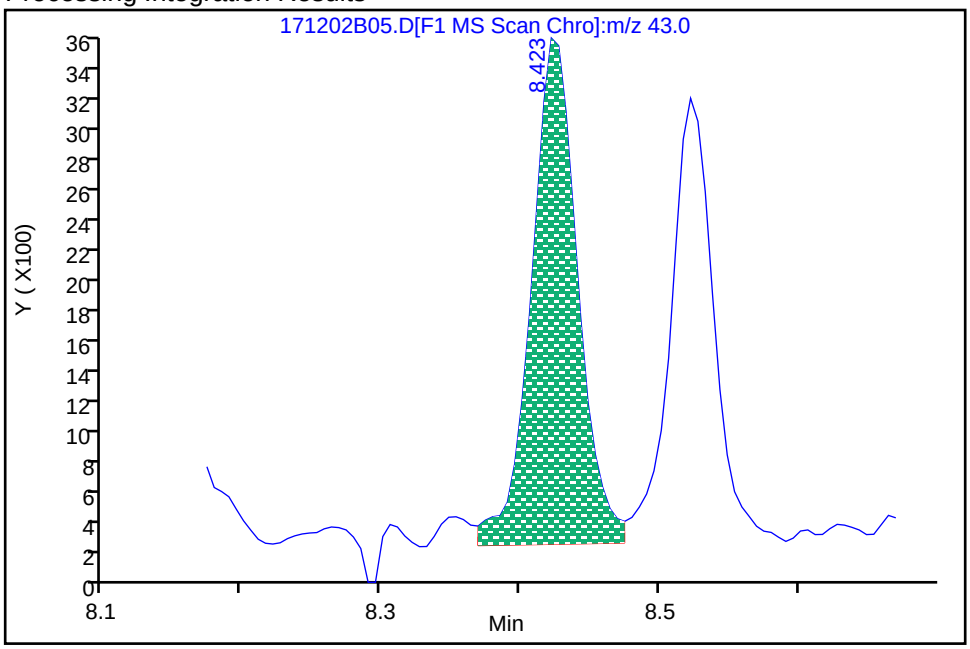
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

60 2-nitropropane, CAS: 79-46-9

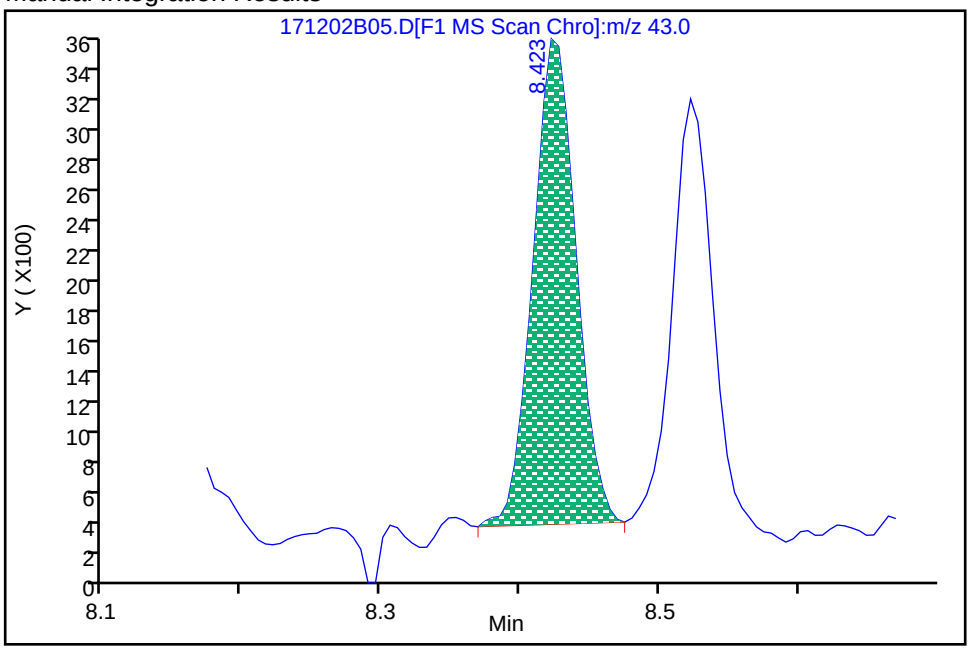
Processing Integration Results

RT: 8.423
Area: 7568
Amount: 0.52181
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 8.423
Area: 6729
Amount: 0.48797
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

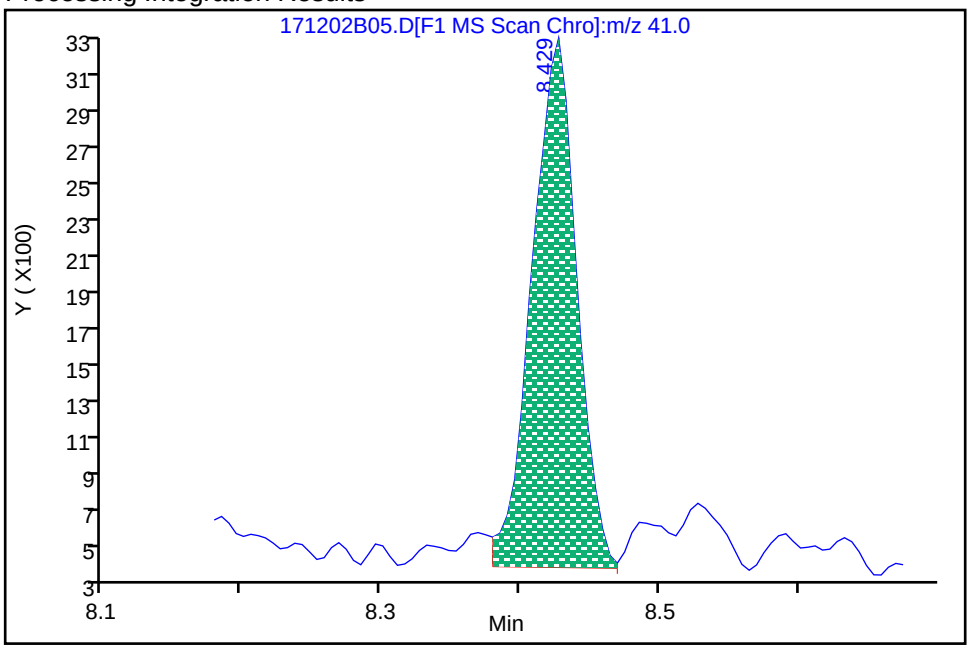
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

60 2-nitropropane, CAS: 79-46-9

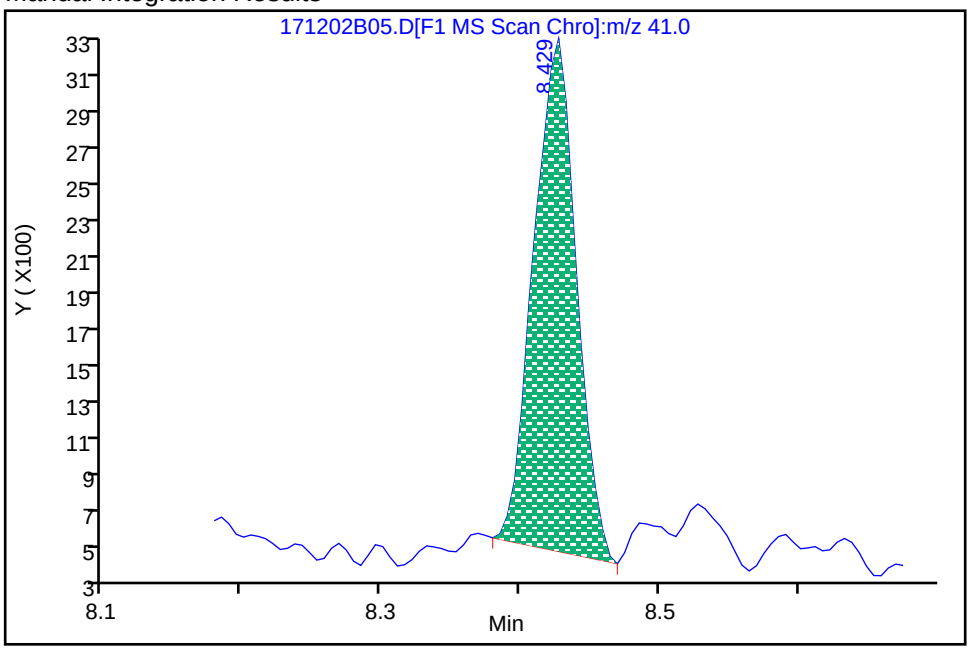
Processing Integration Results

RT: 8.429
Area: 6200
Amount: 0.52181
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 8.429
Area: 5711
Amount: 0.48797
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

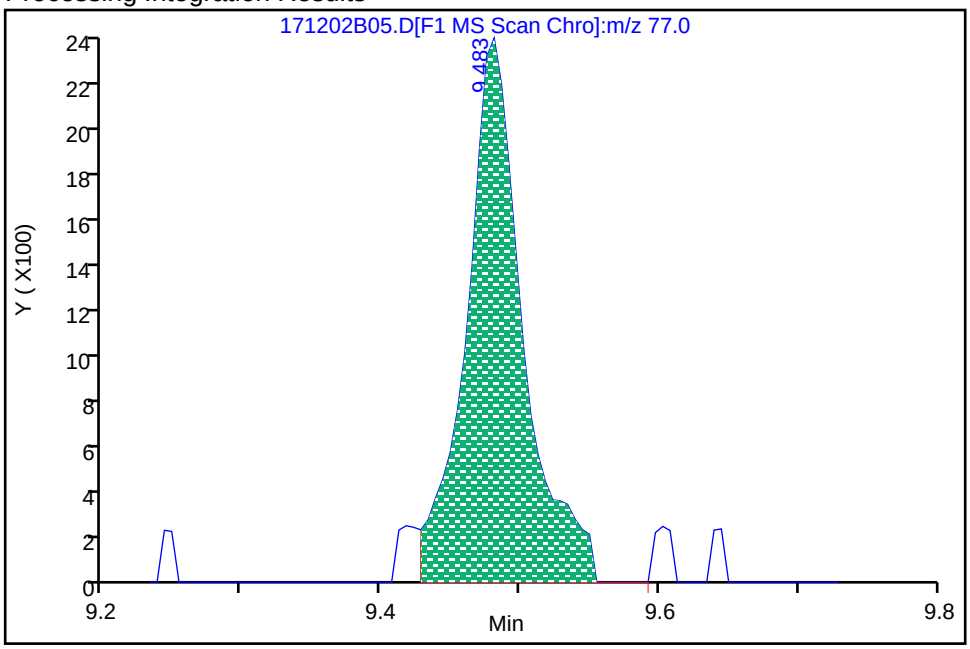
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

66 trans-1,3-Dichloropropene, CAS: 10061-02-6

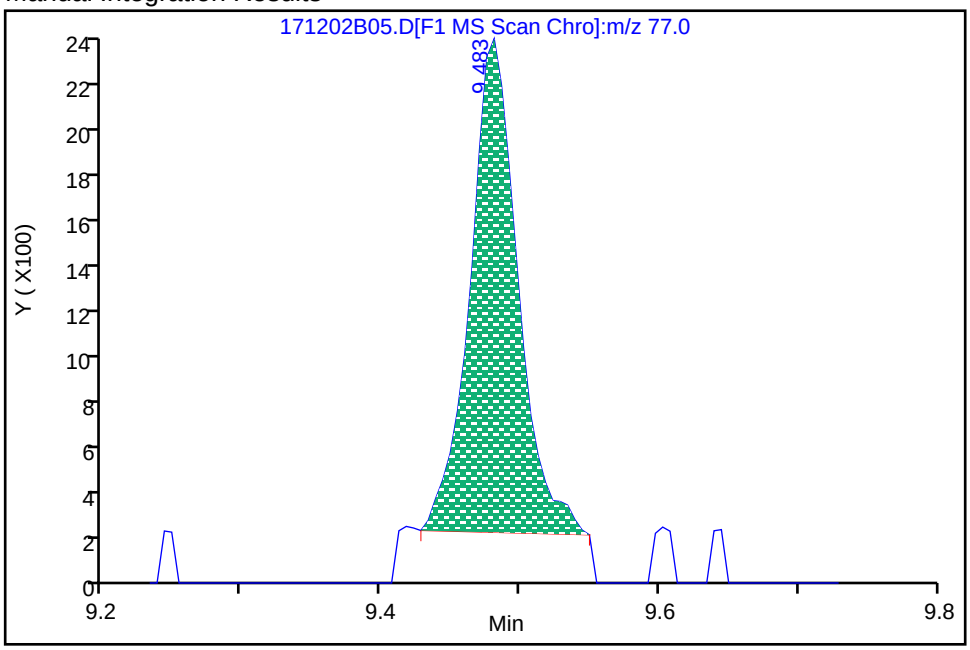
Processing Integration Results

RT: 9.483
Area: 6717
Amount: 0.46463
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 9.483
Area: 5103
Amount: 0.44815
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

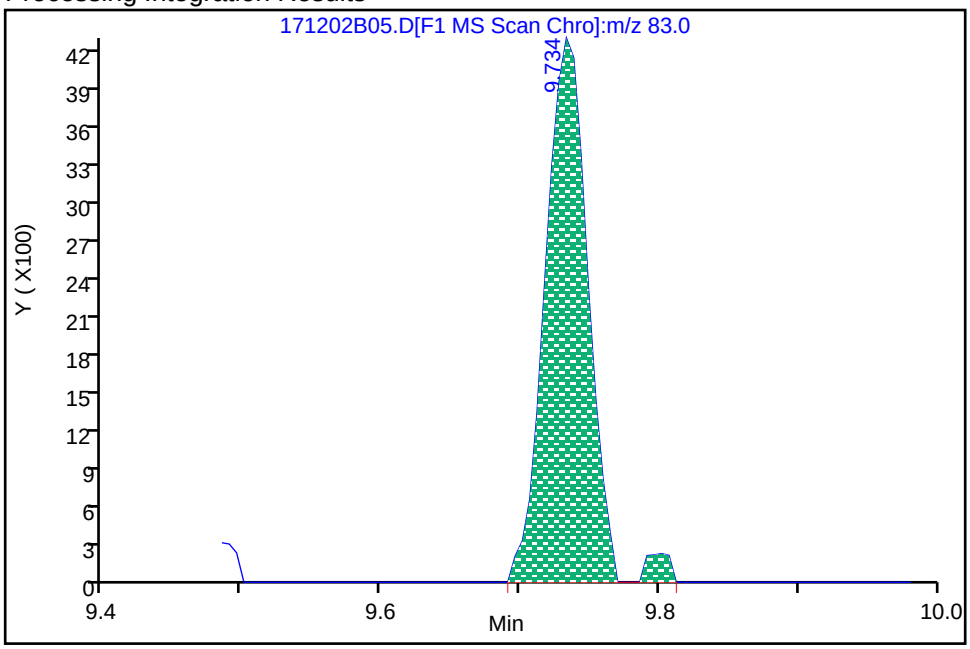
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

68 1,1,2-Trichloroethane, CAS: 79-00-5

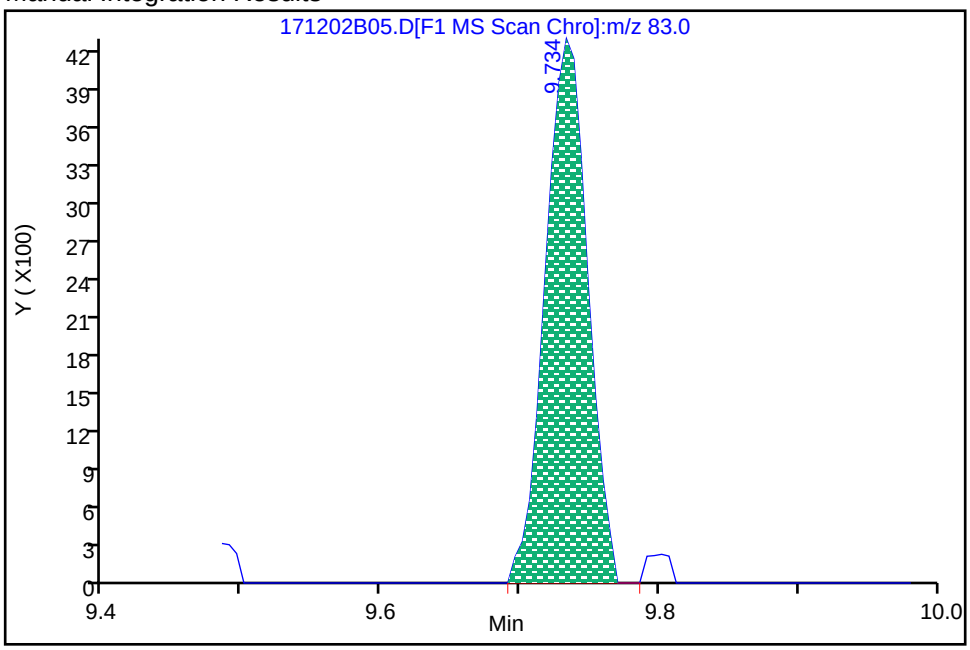
Processing Integration Results

RT: 9.734
Area: 9189
Amount: 0.51160
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 9.734
Area: 8922
Amount: 0.50694
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

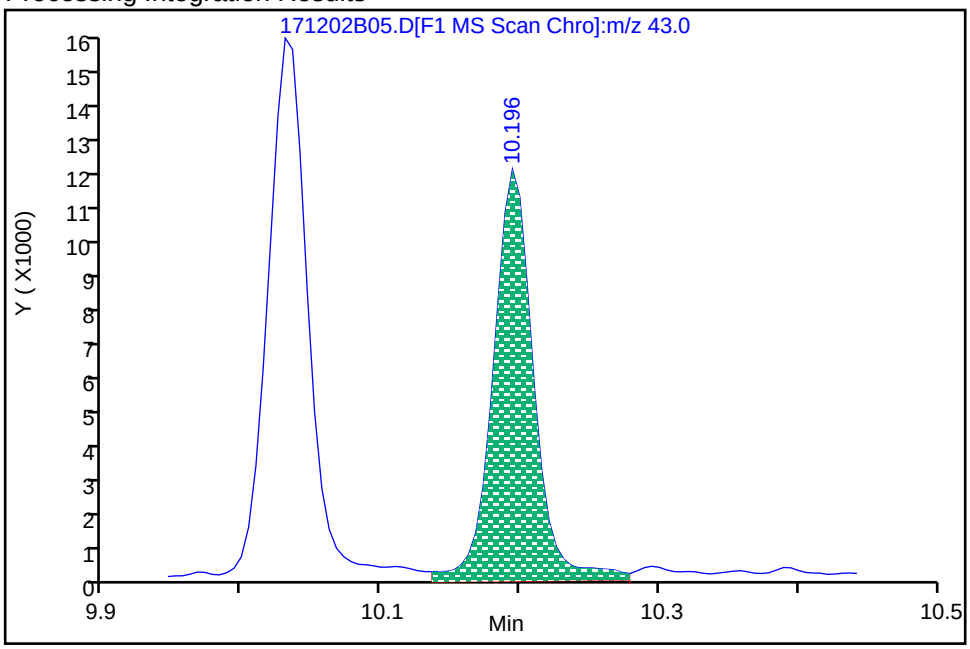
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

73 n-Butyl acetate, CAS: 123-86-4

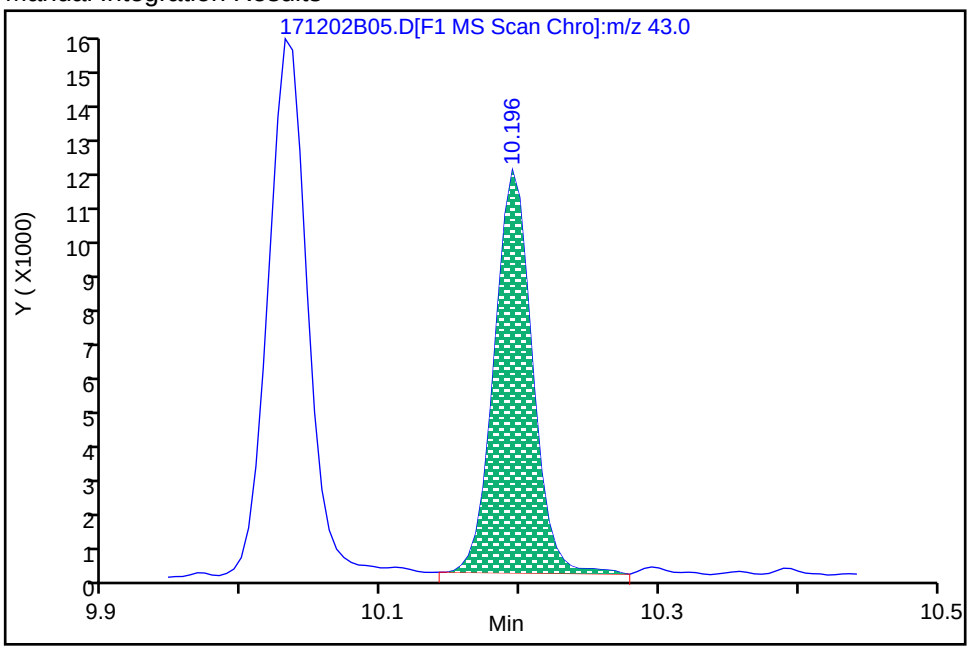
Processing Integration Results

RT:	10.196
Area:	23905
Amount:	0.51615
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	10.196
Area:	21806
Amount:	0.47943
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:53:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

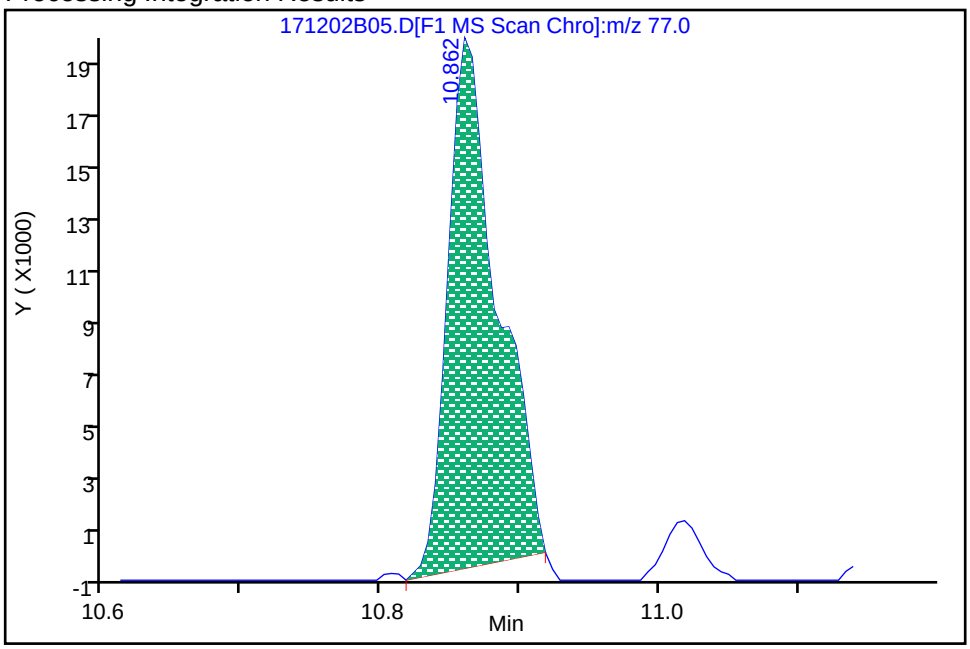
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

77 Chlorobenzene, CAS: 108-90-7

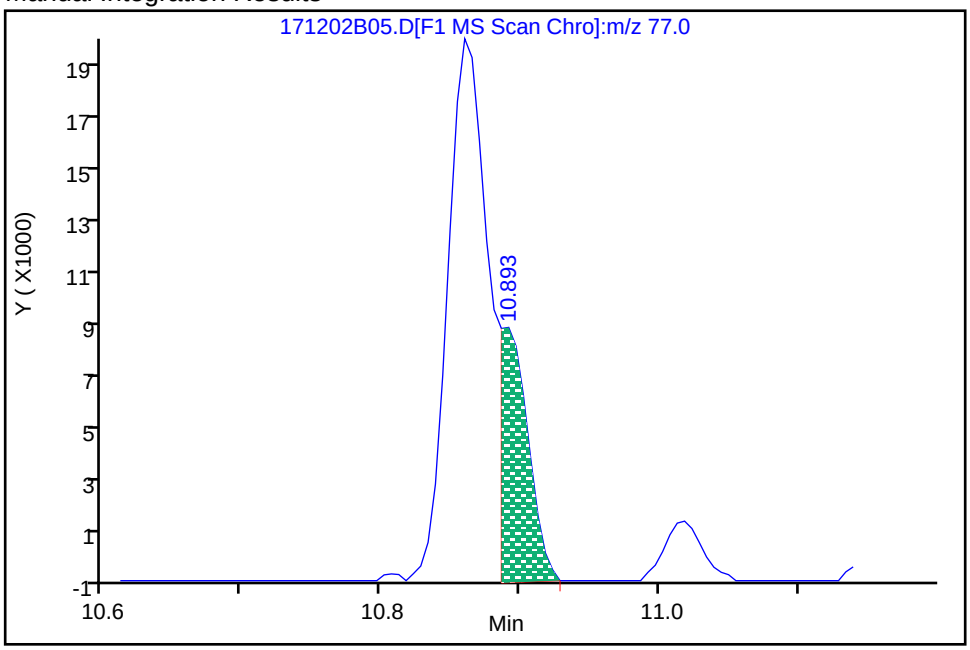
Processing Integration Results

RT: 10.862
Area: 46397
Amount: 0.49393
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.893
Area: 12923
Amount: 0.49079
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:47:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

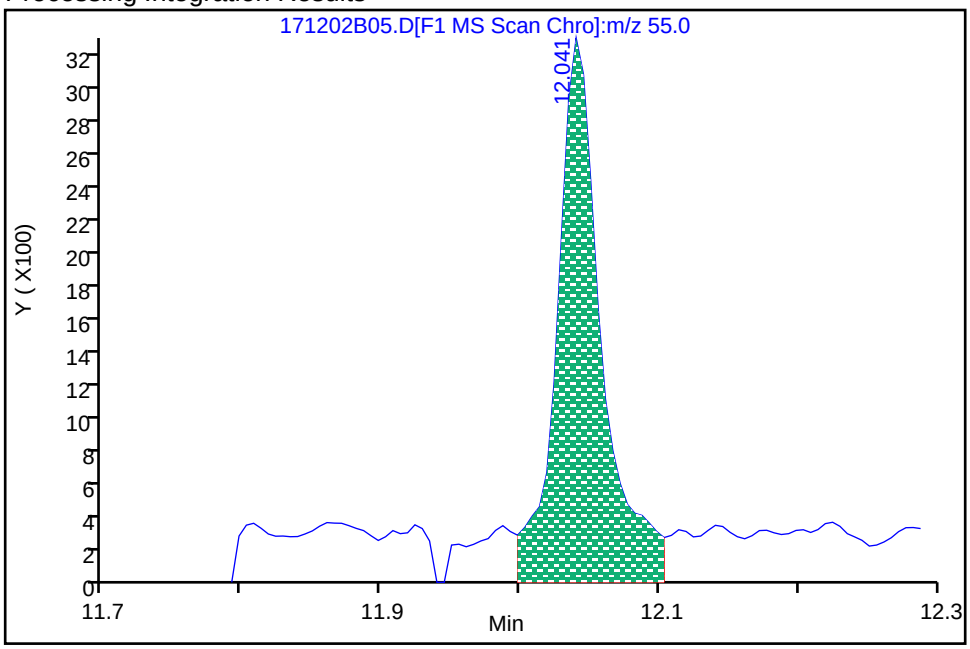
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

85 Cyclohexanone, CAS: 108-94-1

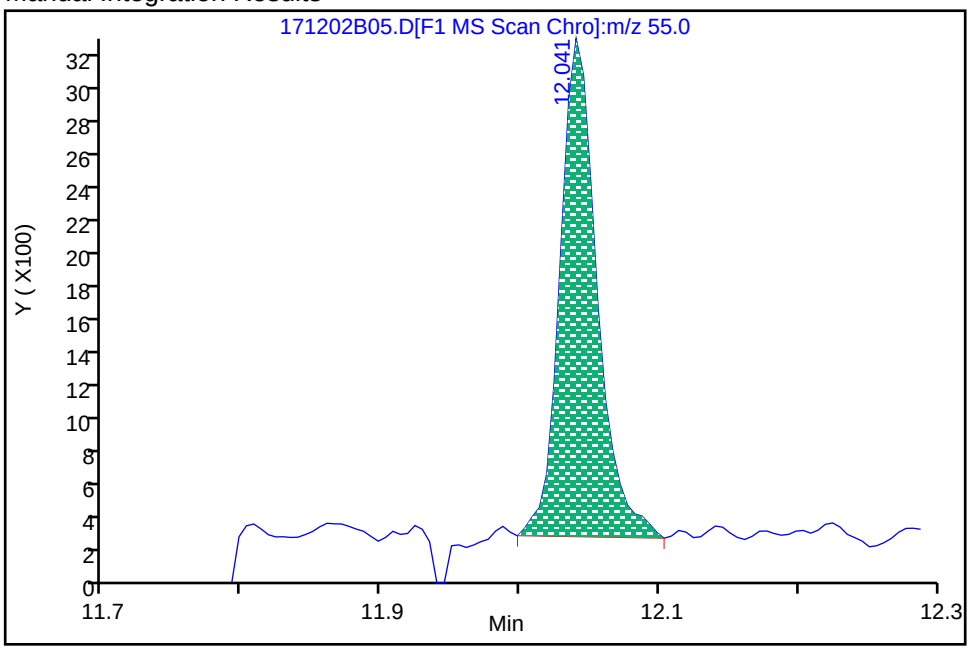
Processing Integration Results

RT:	12.041
Area:	7120
Amount:	6.1689
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	12.041
Area:	5418
Amount:	6.1322
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:43:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

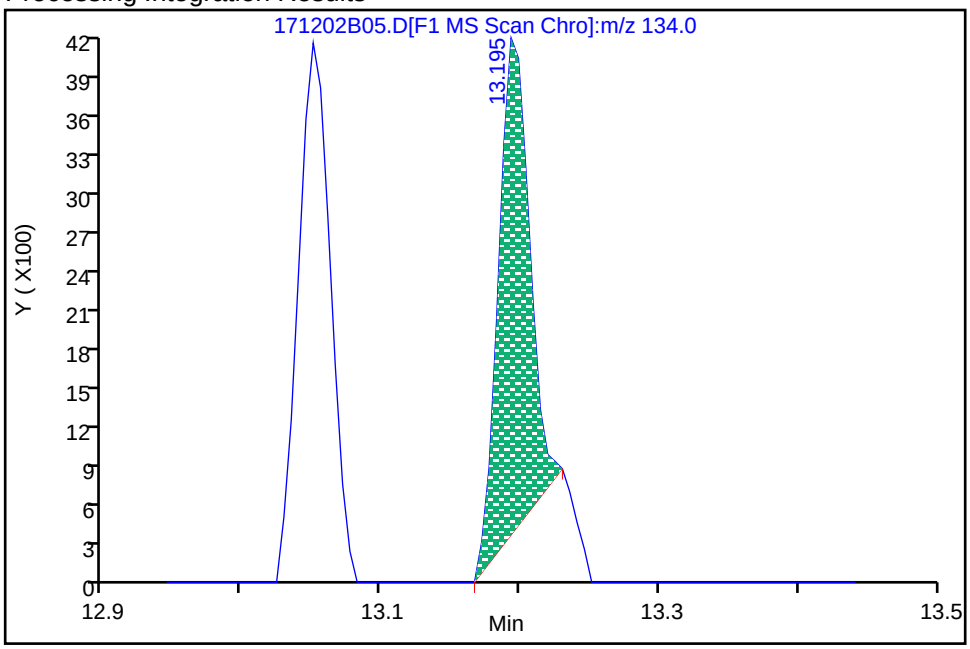
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

99 p-Isopropyltoluene, CAS: 99-87-6

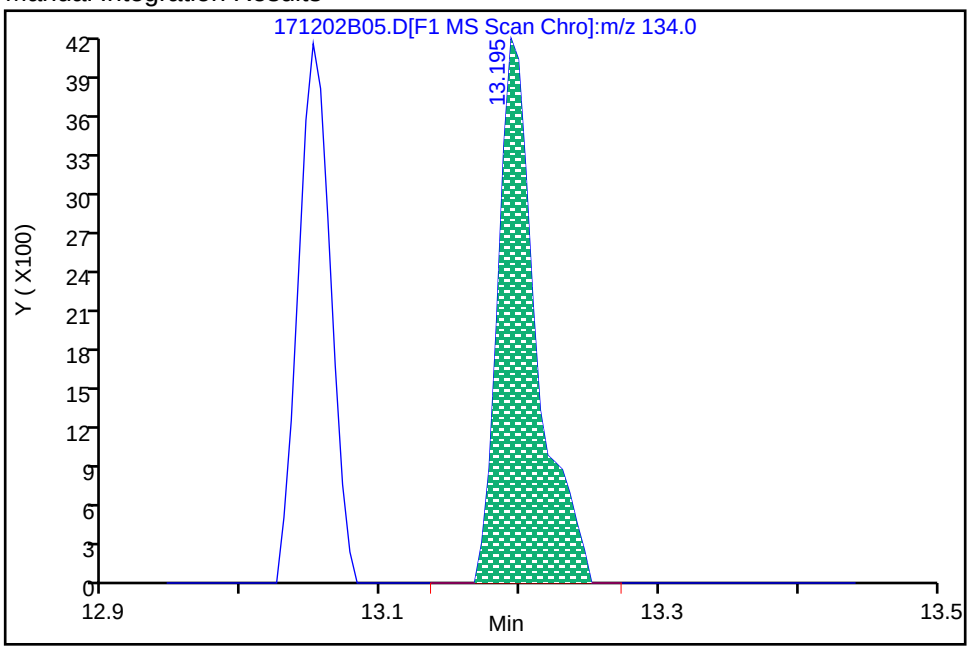
Processing Integration Results

RT: 13.195
Area: 5845
Amount: 0.49621
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 13.195
Area: 8078
Amount: 0.49498
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:43:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

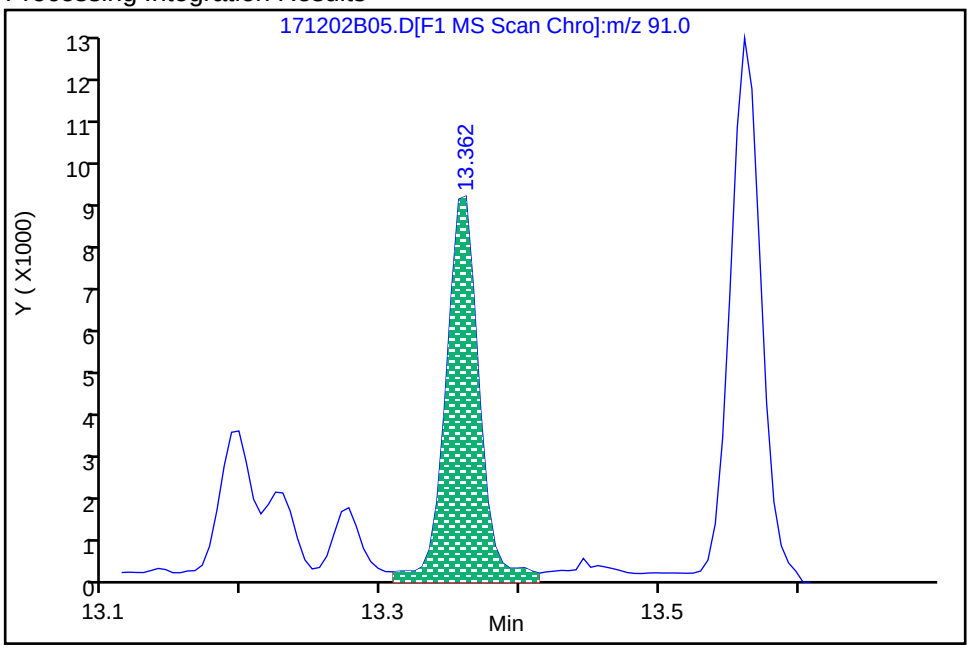
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

102 Benzyl chloride, CAS: 100-44-7

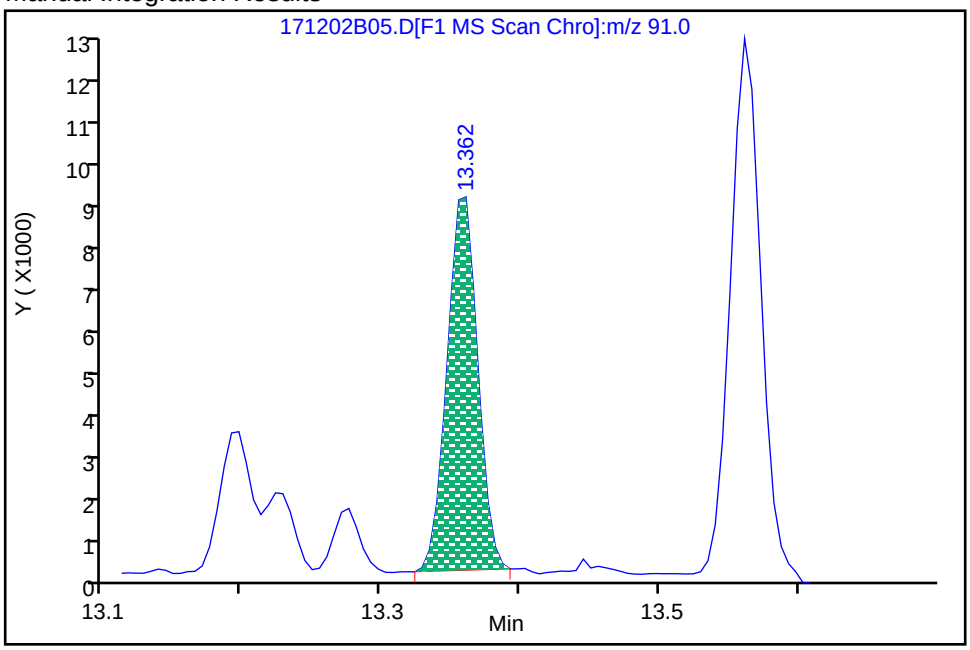
Processing Integration Results

RT: 13.362
Area: 15029
Amount: 0.47621
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 13.362
Area: 13208
Amount: 0.43370
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:43:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D
Lab Sample ID: VSTD001BQ Client Sample ID: 2mL/100mL VSTD050
Injection Date: 03-Dec-2019 01:44:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD001BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 2 ALS Bottle: 6
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:45:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	10982	1.0000	0.89514	
2 Chloromethane	50.0	1.576	1.577	0.000	10152	1.0000	0.98302	
3 Vinyl chloride	62.0	1.692	1.697	-0.004	10925	1.0000	0.90087	
4 Bromomethane	94.0	2.027	2.027	0.001	11792	1.0000	1.0159	
5 Chloroethane	64.0	2.148	2.148	0.000	8435	1.0000	0.98000	M
6 Trichlorofluoromethane	101.0	2.426	2.431	-0.004	24523	1.0000	0.93982	
8 Ethyl ether	59.0	2.782	2.782	0.001	16517	1.0000	0.94398	
9 Acrolein	56.0	2.960	2.955	0.006	44158	10.000	8.9508	
10 Acetone	43.0	3.160	3.149	0.011	22779	2.0000	2.0970	M
11 1,1-Dichloroethene	96.0	3.065	3.066	0.000	13949	1.0000	0.91963	
12 Freon 113	101.0	3.107	3.107	0.001	13505	1.0000	0.90348	
13 Methyl iodide	142.0	3.238	3.244	-0.004	30693	1.0000	0.96171	
14 Carbon disulfide	76.0	3.312	3.312	0.000	43819	1.0000	0.92387	
15 Acetonitrile	40.0	3.542	3.532	0.011	15086	10.000	9.7884	M
17 Allyl chloride	76.0	3.569	3.569	0.000	8246	1.0000	0.86170	M
16 Methyl Acetate	43.0	3.584	3.579	0.006	26409	1.0000	0.95499	M
18 Methylene chloride	84.0	3.747	3.747	0.000	19894	1.0000	1.0132	
20 Acrylonitrile	53.0	4.082	4.077	0.006	24334	2.0000	1.8803	
21 trans-1,2-Dichloroethene	96.0	4.098	4.104	-0.004	21199	1.0000	0.96957	
22 tert-Butyl methyl ether(MTBE)	73.0	4.109	4.109	0.000	53088	1.0000	0.96783	
23 Hexane	57.0	4.486	4.481	0.006	27186	1.0000	0.93407	
24 1,1-Dichloroethane	63.0	4.691	4.691	0.000	34987	1.0000	0.95236	
25 Vinyl acetate	86.0	4.738	4.733	0.005	5078	1.0000	0.80746	
26 Diisopropyl ether (IPE)	87.0	4.769	4.775	-0.004	18172	1.0000	0.97289	
27 Chloroprene	53.0	4.780	4.780	0.000	25378	1.0000	0.89303	
29 cis-1,2-Dichloroethene	96.0	5.446	5.446	0.000	25068	1.0000	0.97101	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.001	12090	2.0000	1.9703	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.001	24522	1.0000	1.0231	
32 Propionitrile	54.0	5.545	5.540	0.006	49411	10.000	9.3459	
33 Ethyl Acetate	43.0	5.530	5.530	0.000	42352	1.0000	1.0340	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	77649	5.0000	5.1577	
35 Bromochloromethane	128.0	5.744	5.745	0.000	13963	1.0000	0.96573	
36 Tetrahydrofuran	42.0	5.760	5.750	0.011	17290	1.0000	1.0254	
37 Chloroform	83.0	5.907	5.907	0.001	39345	1.0000	0.96970	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	25686	1.0000	0.97407	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	32401	1.0000	0.93312	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3358266	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.149	0.000	15041	1.0000	0.96817	Q
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	27312	1.0000	0.92451	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	28683	1.0000	0.88803	
45 Isobutyl alcohol	42.0	6.536	6.536	0.001	11476	10.000	10.102	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	30254	1.0000	1.0346	
48 Benzene	78.0	6.536	6.536	0.001	79952	1.0000	0.96081	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	54950	1.0000	1.0006	M
50 1,2-Dichloroethane	62.0	6.631	6.631	0.000	31147	1.0000	0.96312	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4566594	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	25304	1.0000	0.92432	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	32216	1.0000	0.93651	
55 1,2-Dichloropropane	63.0	7.753	7.753	0.000	20381	1.0000	0.98805	
56 Dibromomethane	93.0	7.863	7.863	0.000	15848	1.0000	0.96437	
57 Methyl methacrylate	41.0	7.878	7.879	0.000	26906	1.0000	1.0018	
58 1,4-Dioxane	88.0	7.863	7.858	0.005	3126	10.000	11.185	
59 Bromodichloromethane	83.0	8.120	8.119	0.000	26618	1.0000	0.91154	
60 2-nitropropane	43.0	8.424	8.423	0.000	13471	1.0000	0.98175	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	17583	1.0000	0.96040	
62 cis-1,3-Dichloropropene	75.0	8.702	8.702	0.000	31356	1.0000	0.92590	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	73603	2.0000	2.0324	
$ 64 Toluene-d8	98.0	9.037	9.037	0.001	84800	1.0000	0.9986	
65 Toluene	92.0	9.126	9.127	0.000	52577	1.0000	0.95726	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	28197	1.0000	0.88822	
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	32555	1.0000	0.93300	
68 1,1,2-Trichloroethane	97.0	9.735	9.735	0.000	21897	1.0000	0.98058	
69 Tetrachloroethene	164.0	9.808	9.803	0.005	20727	1.0000	0.92679	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	35614	1.0000	1.0165	
71 2-Hexanone	43.0	10.033	10.034	0.000	61332	2.0000	1.9502	
72 Dibromochloromethane	129.0	10.191	10.191	0.000	21259	1.0000	0.86659	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	44428	1.0000	0.95348	M
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.317	0.000	22855	1.0000	0.94570	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3613790	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.894	0.005	56565	1.0000	0.97278	M
78 1,1,1,2-Tetrachloroethane	131.0	11.009	11.009	0.000	19022	1.0000	0.90753	
79 Ethylbenzene	106.0	11.019	11.019	0.001	27485	1.0000	0.89281	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	33683	1.0000	0.91695	
81 o-Xylene	106.0	11.575	11.575	0.000	29552	1.0000	0.90698	
82 Styrene	104.0	11.596	11.596	0.000	46744	1.0000	0.84857	
83 Bromoform	173.0	11.774	11.774	0.001	12022	1.0000	0.94142	
84 Isopropylbenzene	105.0	11.958	11.958	0.000	75450	1.0000	0.94794	
85 Cyclohexanone	55.0	12.047	12.042	0.005	8925	10.000	9.8603	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.131	12.131	0.000	24591	1.0000	1.0121	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	21249	1.0000	0.9938	M
87 Bromobenzene	156.0	12.262	12.257	0.005	20462	1.0000	0.97505	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	8888	1.0000	1.0274	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	3863	1.0000	0.88189	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	79195	1.0000	0.97549	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	46833	1.0000	1.0084	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	47820	1.0000	0.95936	
94 4-Chlorotoluene	126.0	12.571	12.571	0.001	15894	1.0000	0.91326	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	47859	1.0000	1.0209	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.902	0.000	44607	1.0000	0.93812	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	63760	1.0000	1.0048	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	30254	1.0000	1.0064	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.006	47672	1.0000	0.95036	
* 100 1,4-Dichlorobenzene-d4	152.0	13.232	13.232	0.000	1181830	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.253	13.253	0.000	29176	1.0000	0.98308	Q
102 Benzyl chloride	91.0	13.357	13.358	0.000	25965	1.0000	0.84954	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	36639	1.0000	0.90877	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	26559	1.0000	0.9920	
105 1,2-Dibromo-3-chloropropane	75.0	14.265	14.260	0.005	4099	1.0000	0.91458	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.001	15523	1.0000	0.93619	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	7686	1.0000	0.95418	
108 Naphthalene	128.0	15.166	15.167	0.000	42200	1.0000	0.89626	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	14952	1.0000	0.96766	
S 110 Xylenes (total)	106.0	16.000		0.000		2.0000	1.8239	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		2.0000	1.9406	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

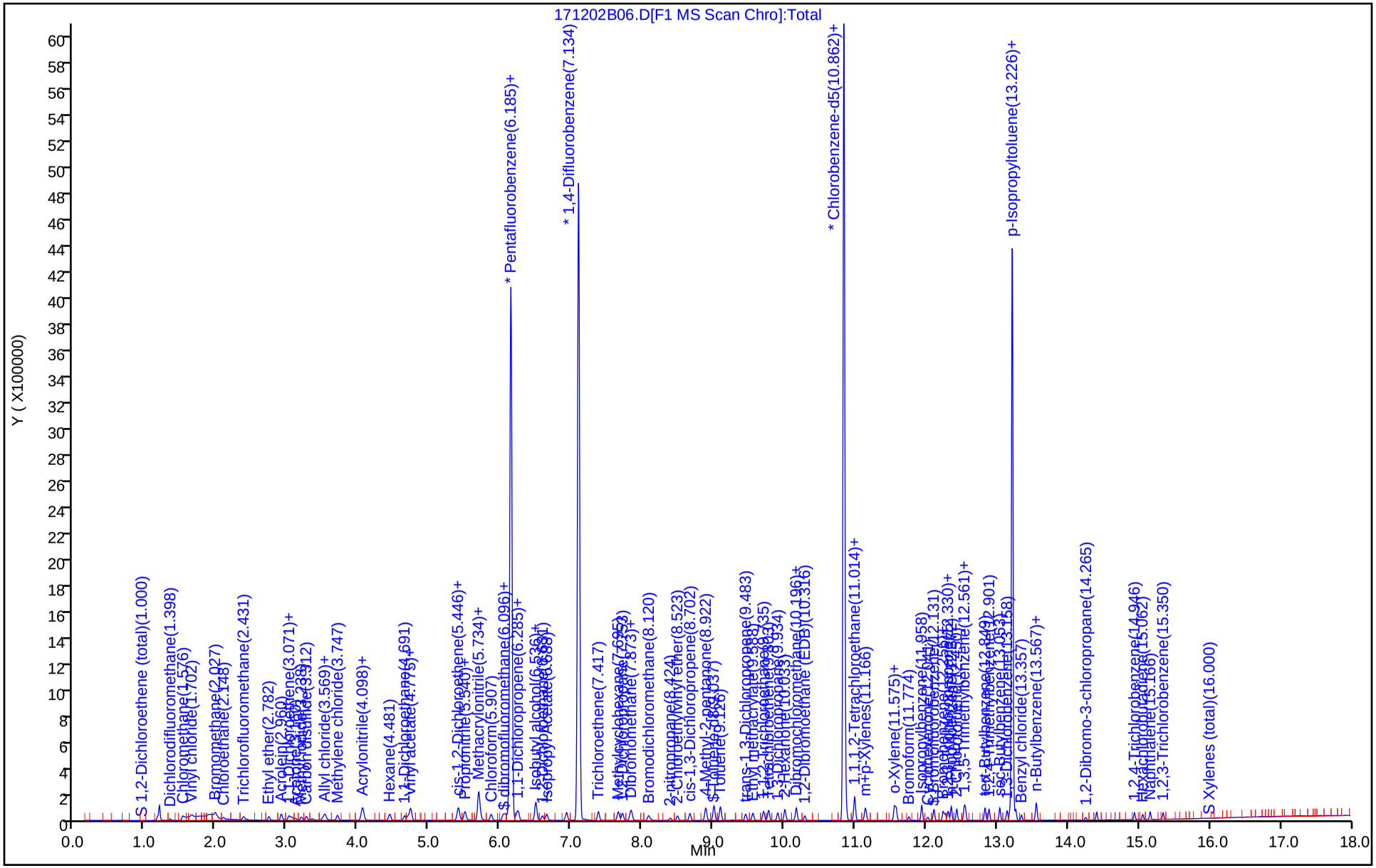
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D				
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ		
Sample Info:	17120219B, VSTD001BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

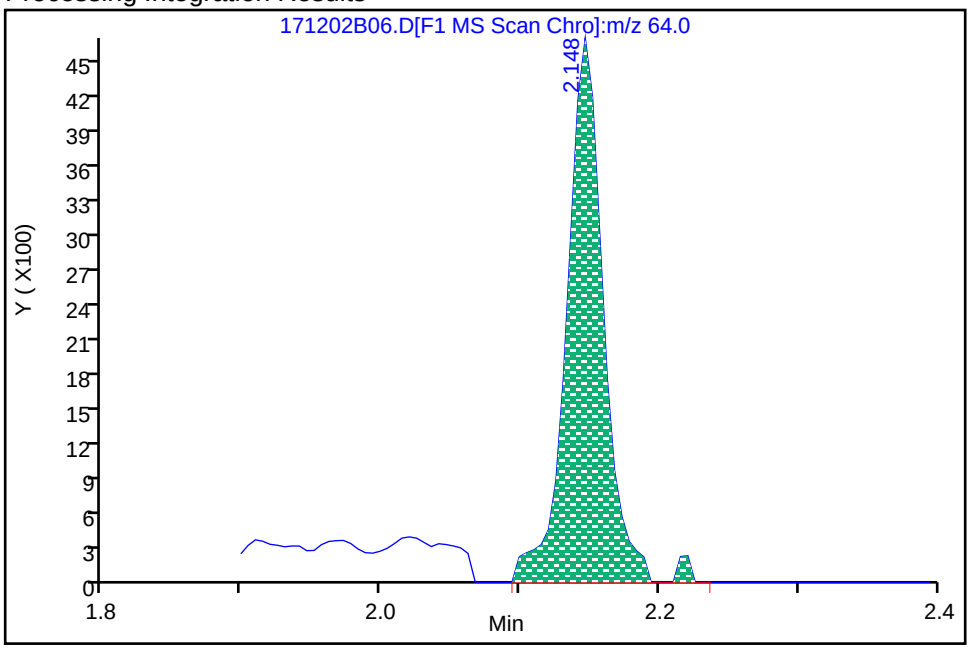
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

5 Chloroethane, CAS: 75-00-3

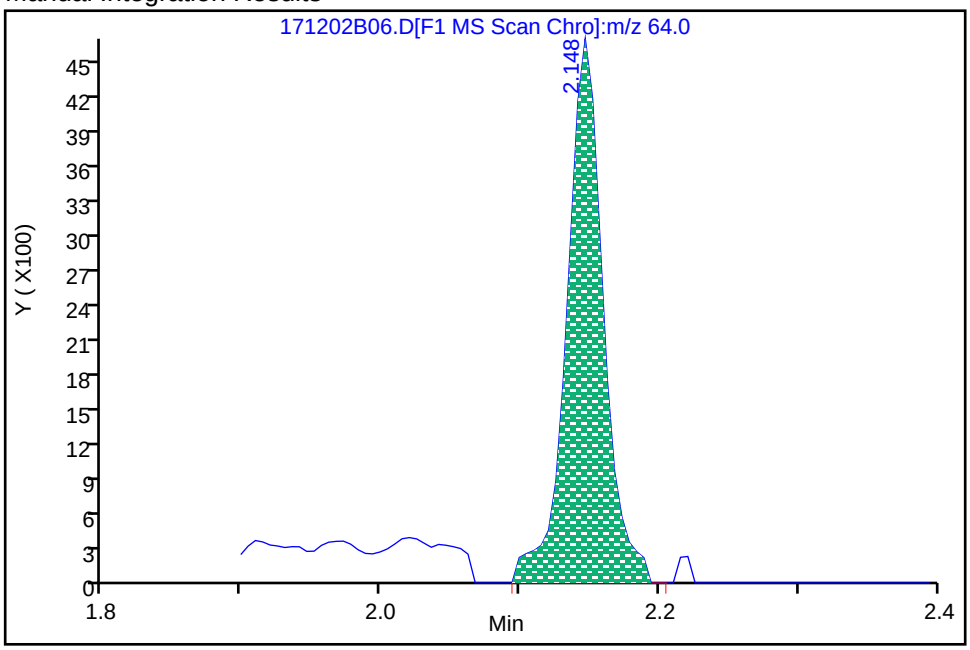
Processing Integration Results

RT: 2.148
Area: 8575
Amount: 1.0025
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.148
Area: 8435
Amount: 0.98000
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:43:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

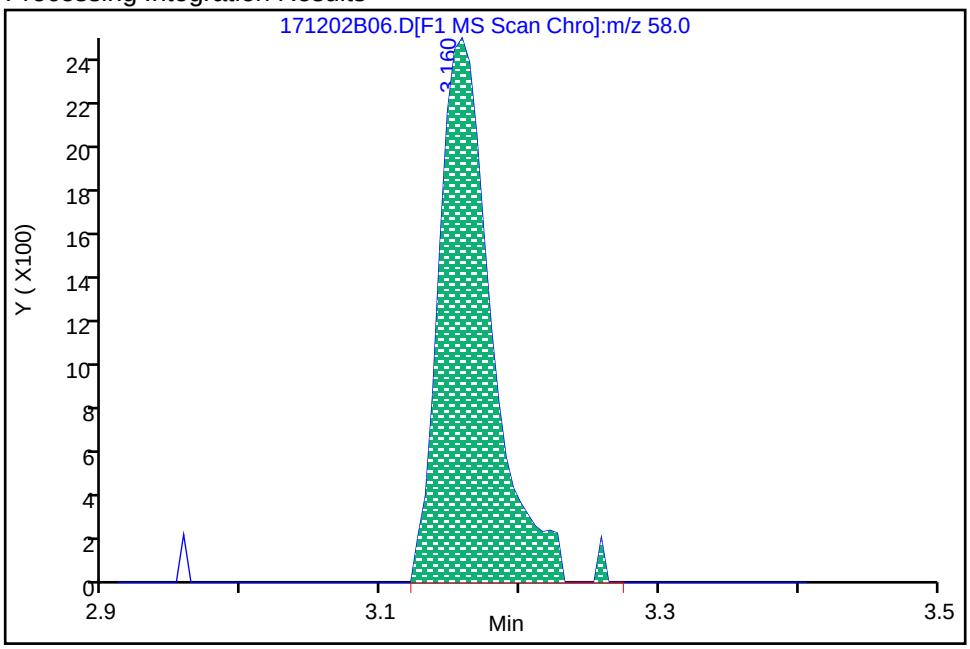
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

10 Acetone, CAS: 67-64-1

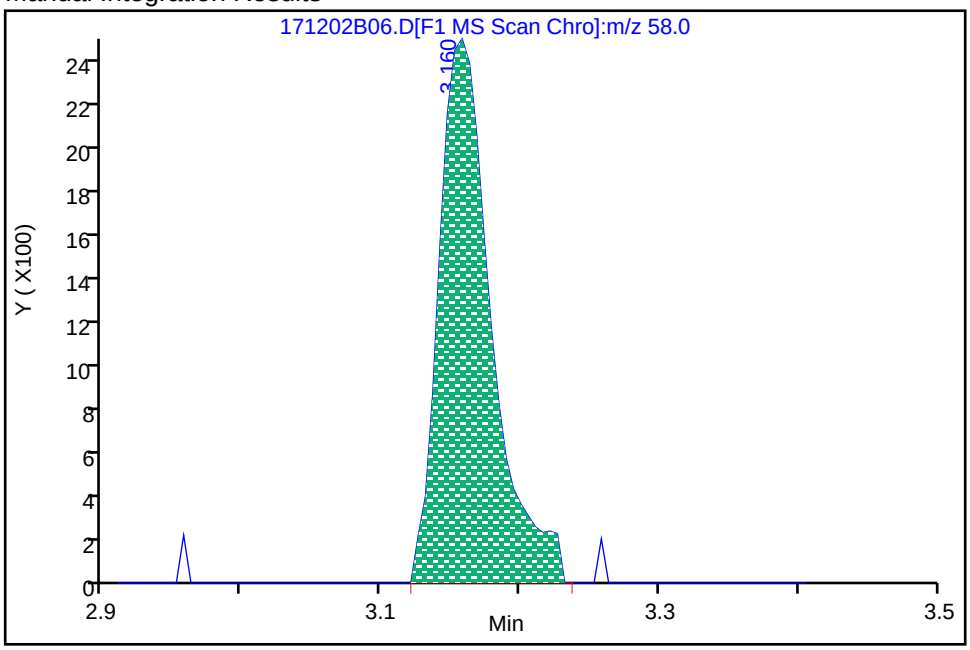
Processing Integration Results

RT: 3.160
Area: 6599
Amount: 1.8444
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.160
Area: 6535
Amount: 2.0970
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

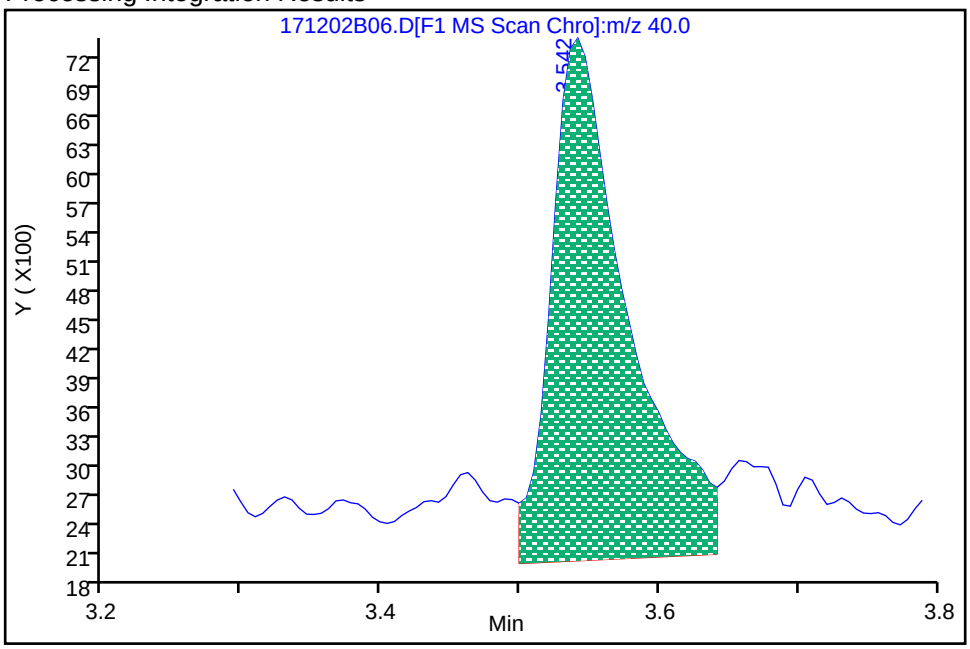
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

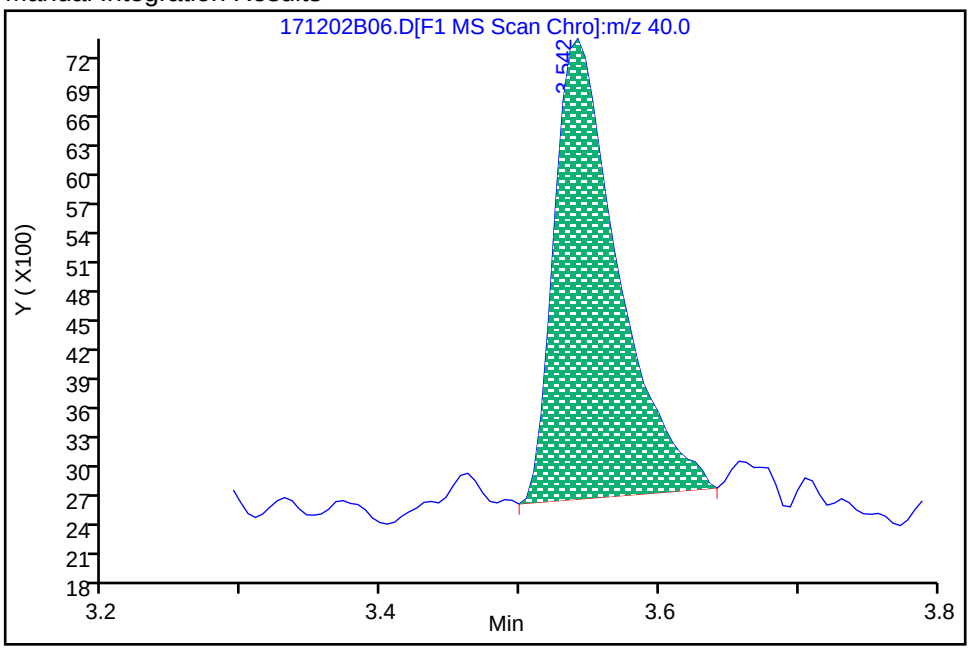
Processing Integration Results

RT: 3.542
Area: 20645
Amount: 10.198
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.542
Area: 15086
Amount: 9.7884
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

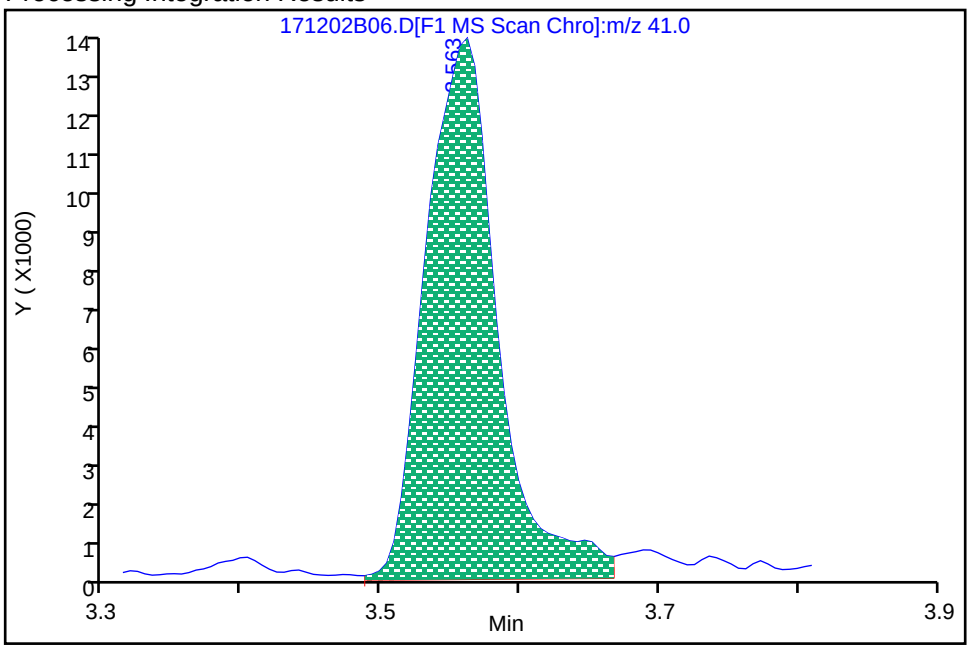
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

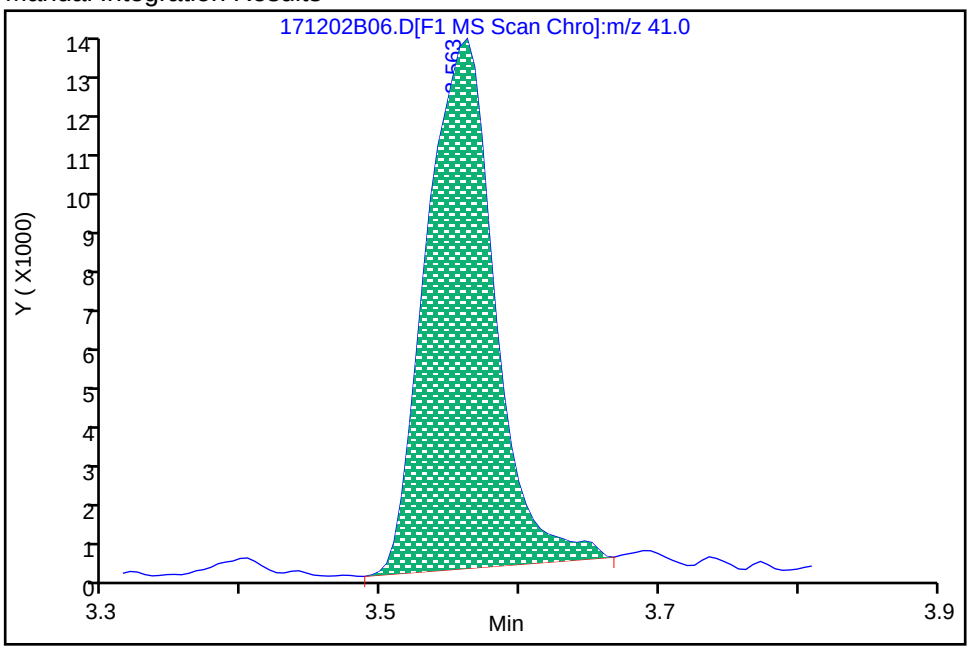
Processing Integration Results

RT: 3.563
Area: 47942
Amount: 10.198
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 44461
Amount: 9.7884
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

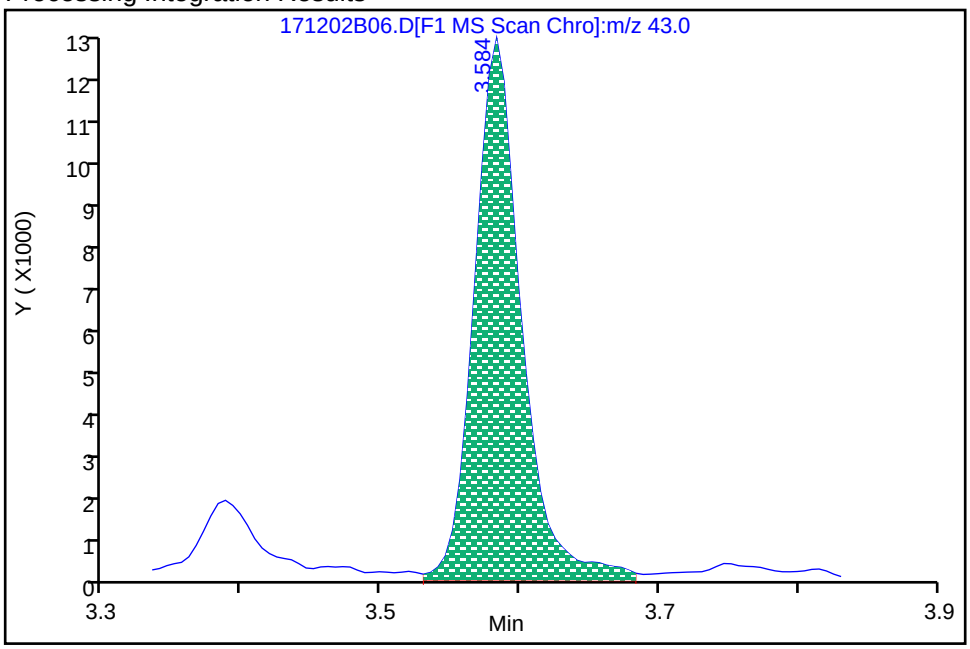
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

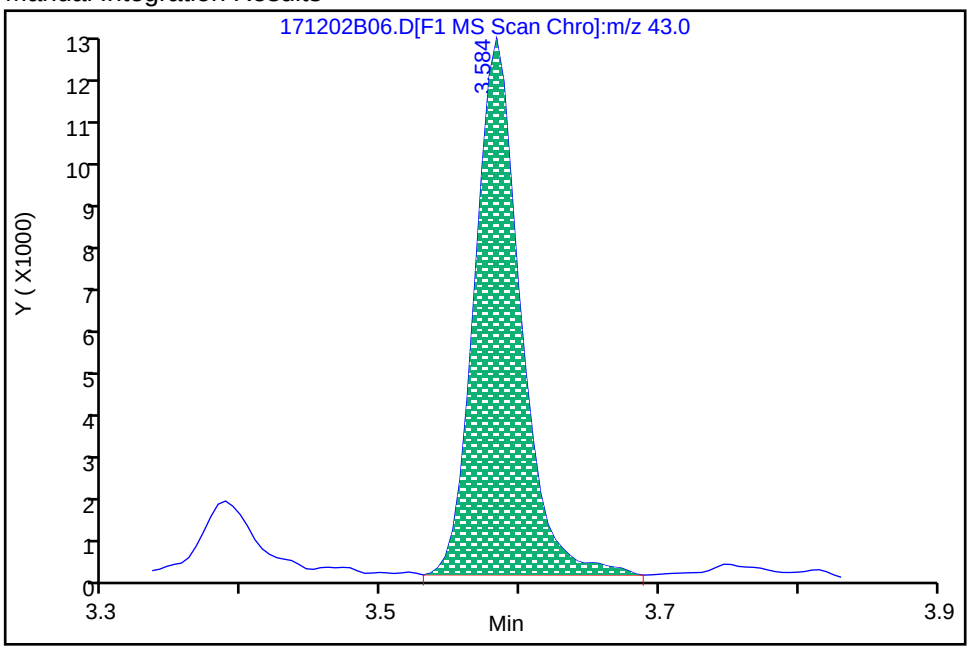
Processing Integration Results

RT: 3.584
Area: 27635
Amount: 0.96257
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.584
Area: 26409
Amount: 0.95499
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:50:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

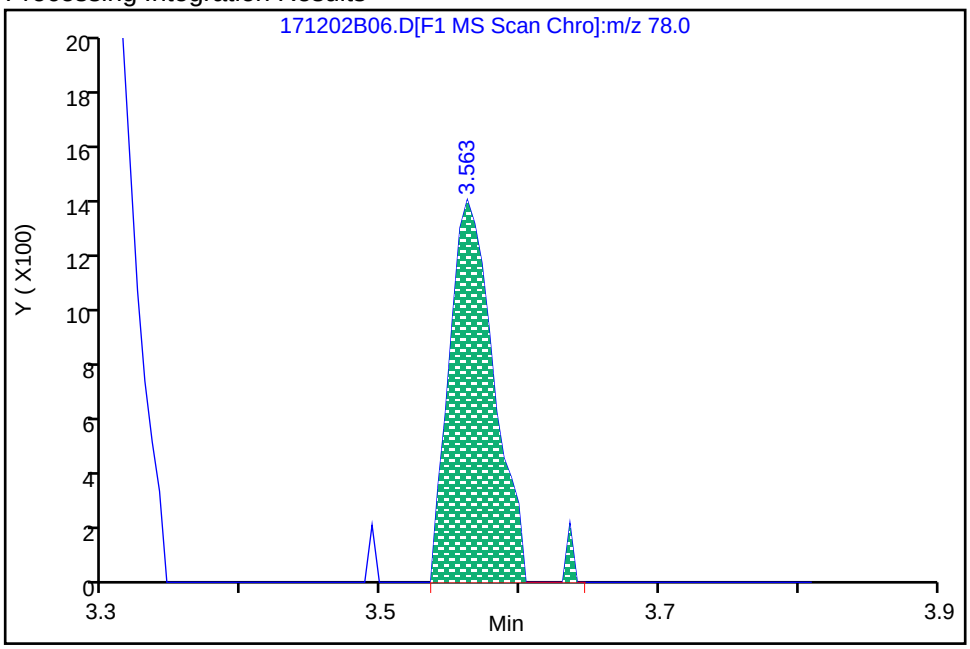
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

17 Allyl chloride, CAS: 107-05-1

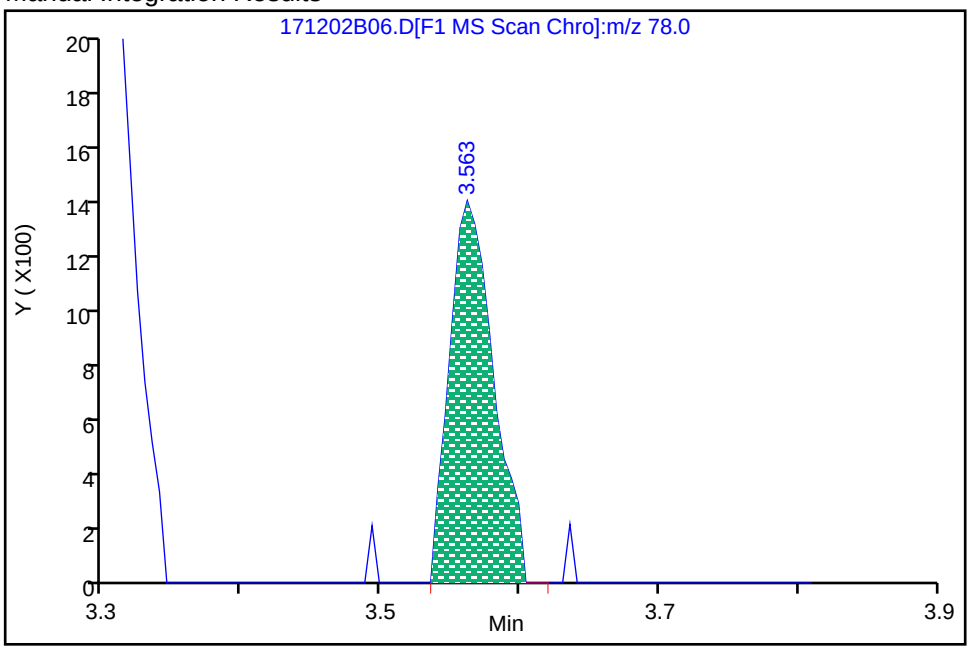
Processing Integration Results

RT: 3.563
Area: 3063
Amount: 0.91501
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 2998
Amount: 0.86170
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

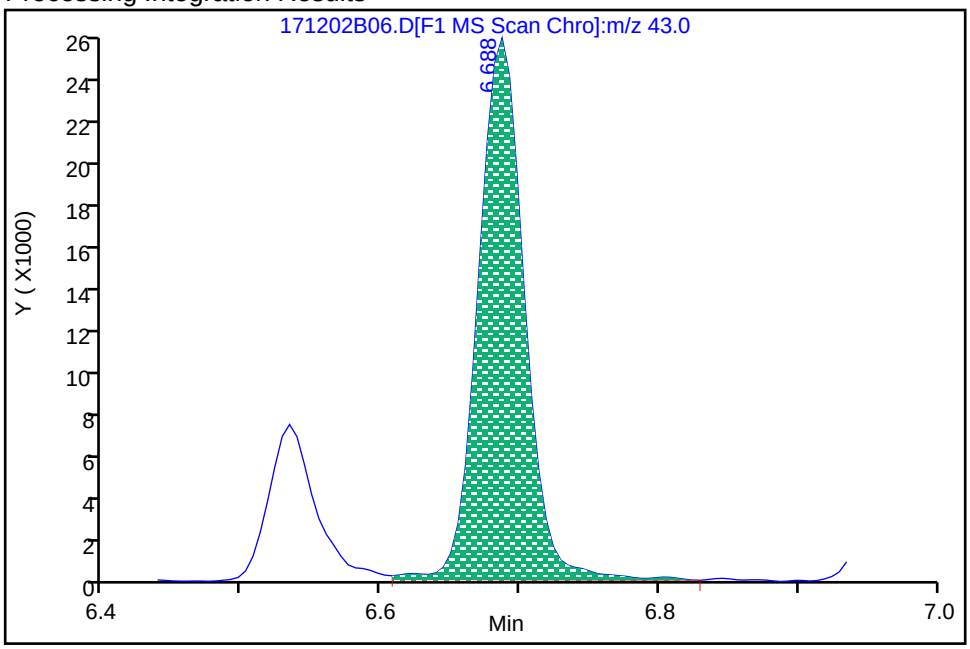
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

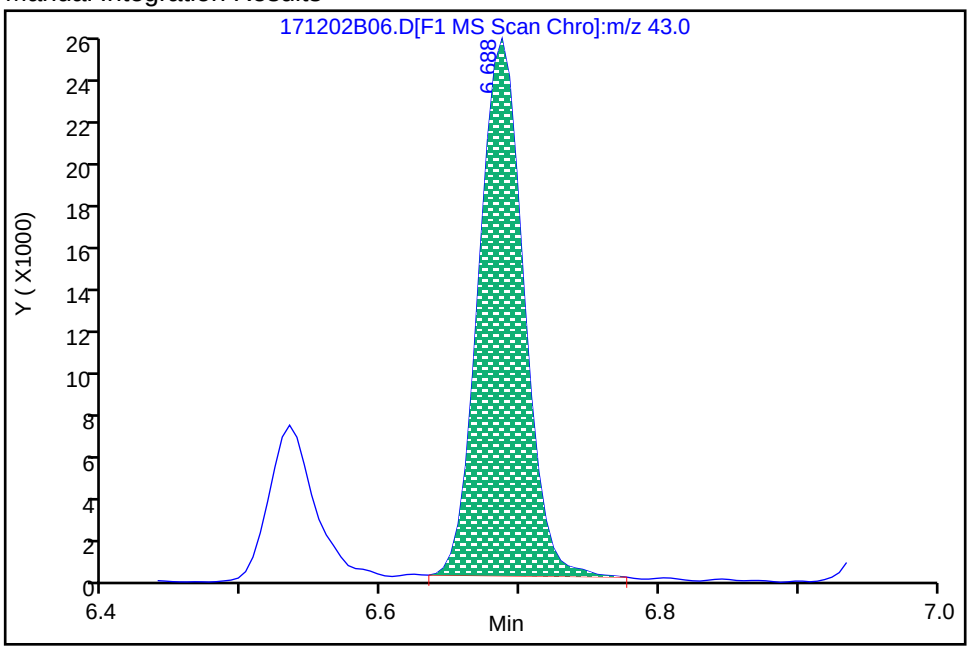
Processing Integration Results

RT: 6.688
Area: 57770
Amount: 1.0323
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 54950
Amount: 1.0006
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:51:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

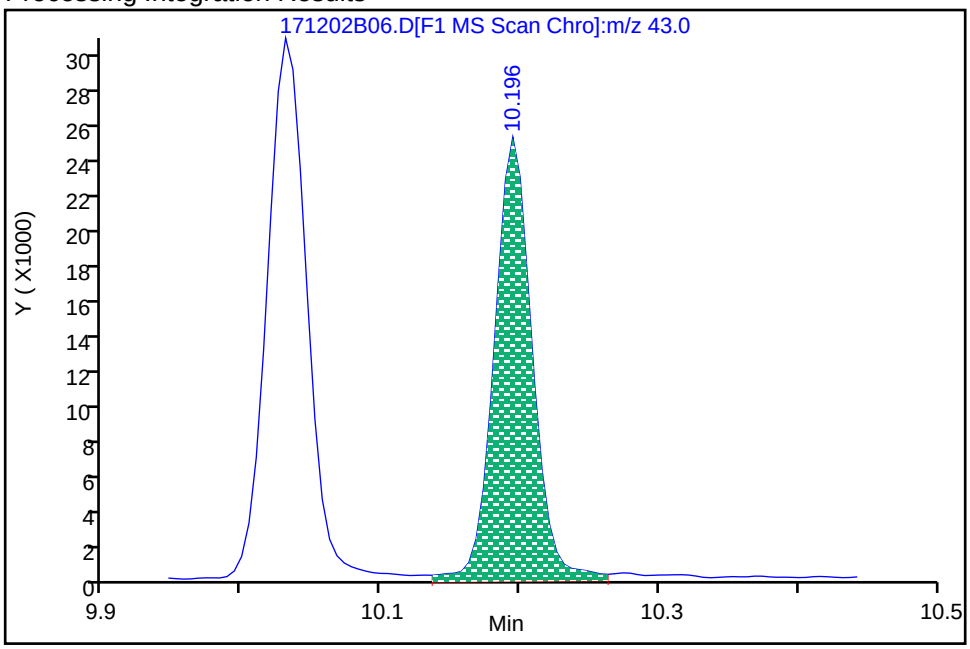
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

73 n-Butyl acetate, CAS: 123-86-4

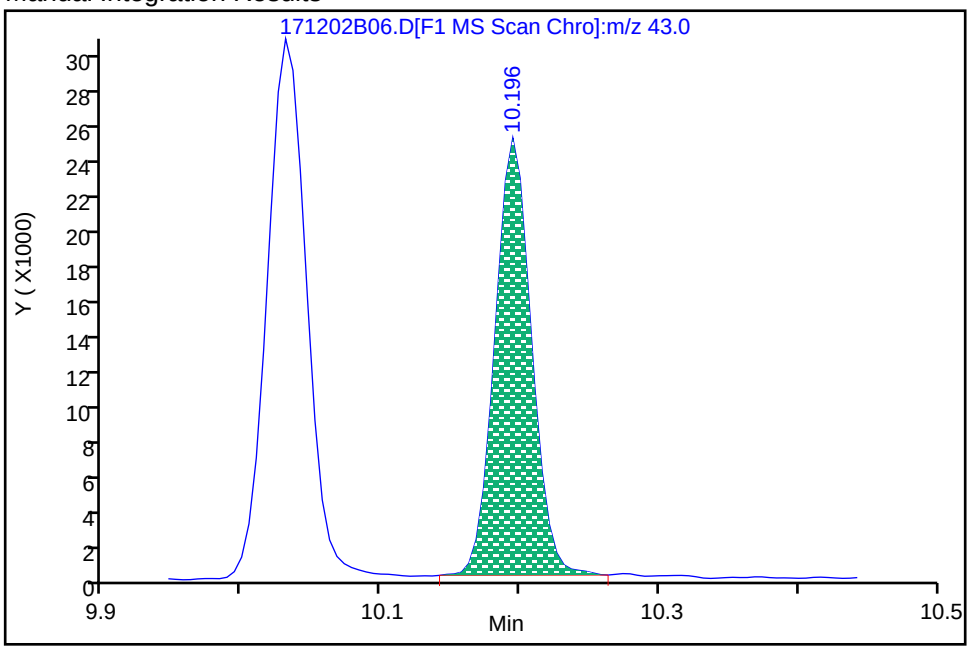
Processing Integration Results

RT: 10.196
Area: 47373
Amount: 0.9990
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.196
Area: 44428
Amount: 0.95348
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

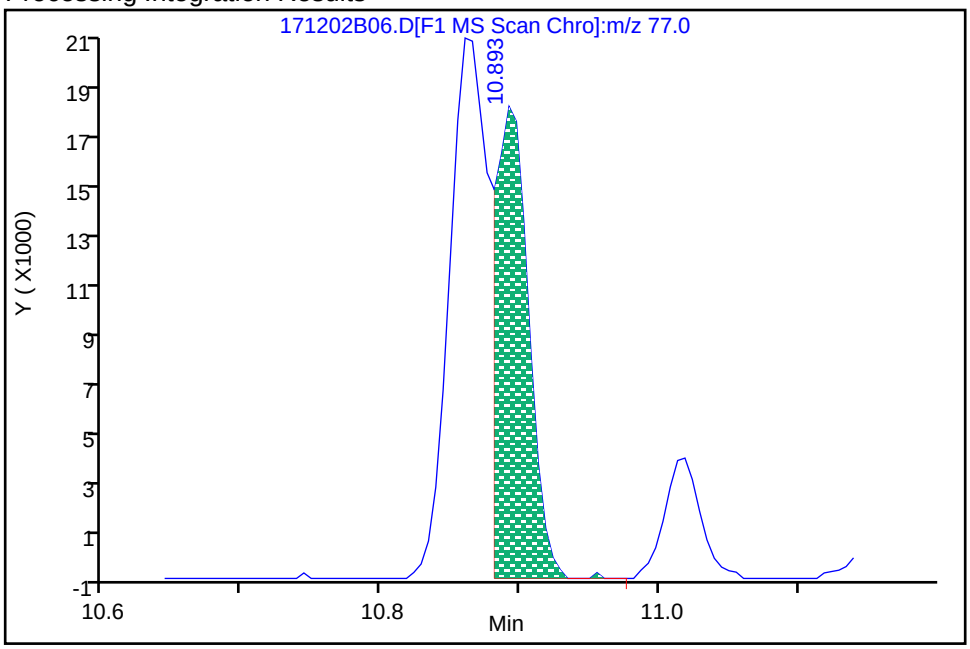
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

77 Chlorobenzene, CAS: 108-90-7

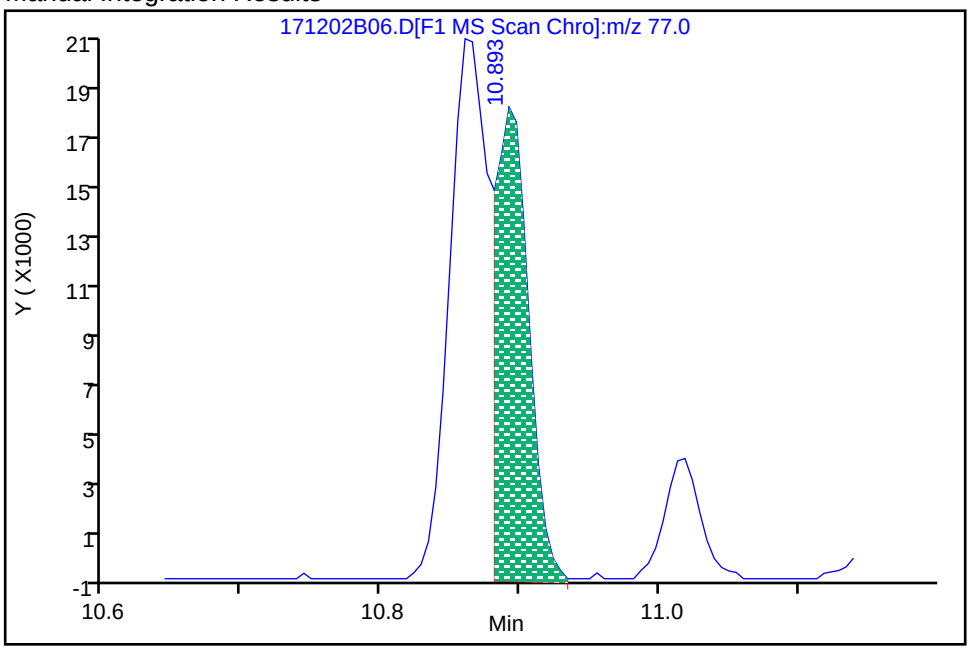
Processing Integration Results

RT: 10.893
Area: 27501
Amount: 0.98590
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.893
Area: 30163
Amount: 0.97278
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:48:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

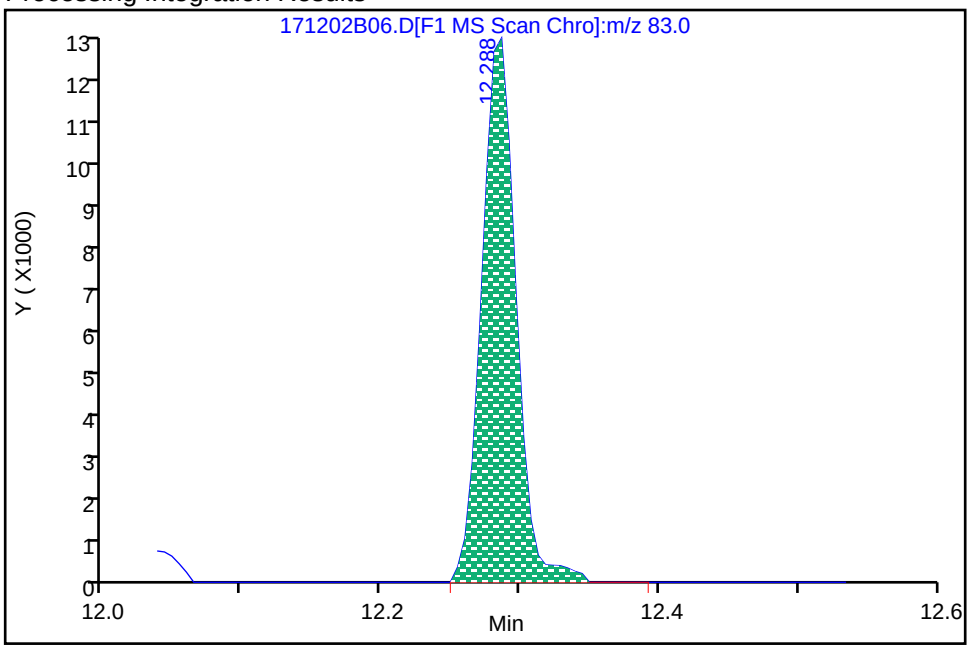
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

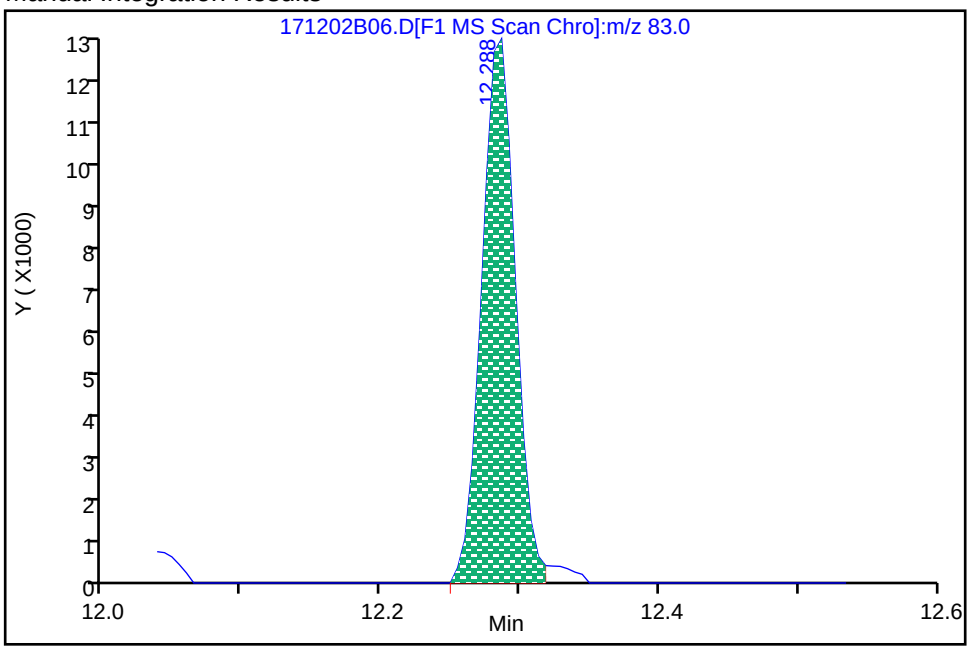
Processing Integration Results

RT: 12.288
Area: 21742
Amount: 1.0203
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 21249
Amount: 0.9938
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

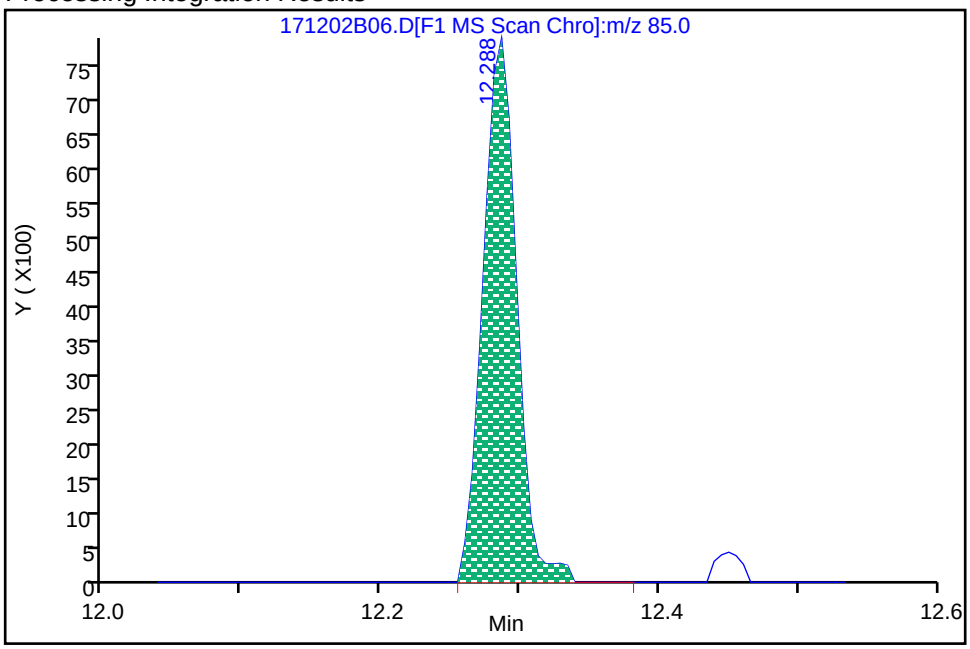
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

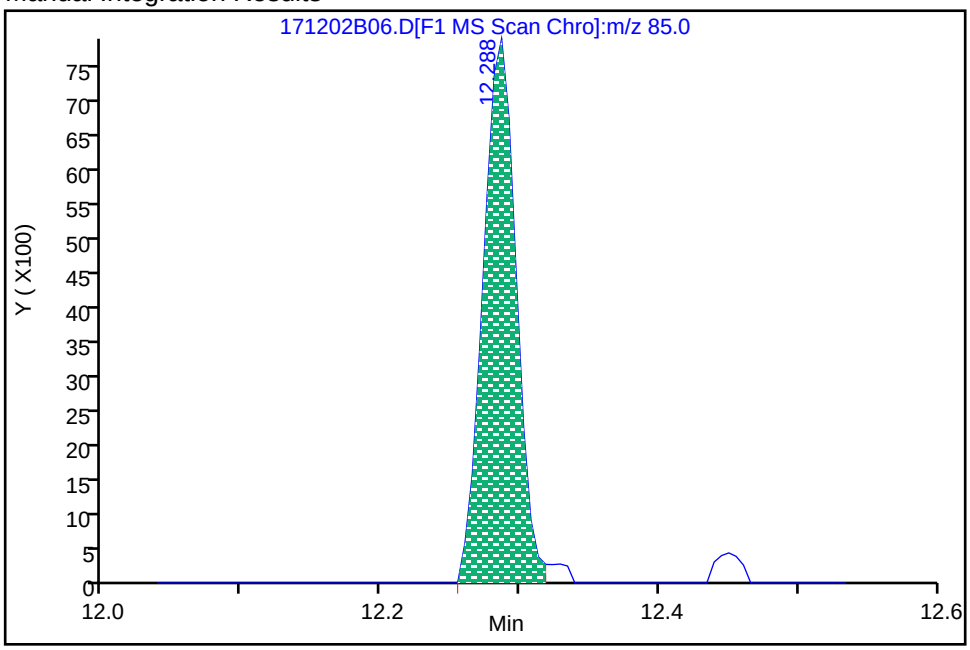
Processing Integration Results

RT: 12.288
Area: 13230
Amount: 1.0203
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 12982
Amount: 0.9938
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D
Lab Sample ID: VSTD005BQ Client Sample ID: 5uL/100mL 15613/10
Injection Date: 03-Dec-2019 02:08:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD005BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 3 ALS Bottle: 7
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	64301	5.0000	5.4317	
2 Chloromethane	50.0	1.576	1.577	0.000	53690	5.0000	5.3879	
3 Vinyl chloride	62.0	1.697	1.697	0.000	62602	5.0000	5.3499	
4 Bromomethane	94.0	2.027	2.027	0.000	59560	5.0000	5.3177	
5 Chloroethane	64.0	2.147	2.148	0.000	43803	5.0000	5.2742	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	139329	5.0000	5.5338	
8 Ethyl ether	59.0	2.782	2.782	0.000	90021	5.0000	5.3319	
9 Acrolein	56.0	2.955	2.955	0.000	251603	50.000	52.854	
10 Acetone	43.0	3.154	3.149	0.006	107508	10.000	10.257	
11 1,1-Dichloroethene	96.0	3.065	3.066	0.000	81060	5.0000	5.5384	
12 Freon 113	101.0	3.102	3.107	-0.004	78192	5.0000	5.4212	
13 Methyl iodide	142.0	3.238	3.244	-0.005	170802	5.0000	5.5464	
14 Carbon disulfide	76.0	3.311	3.312	0.000	253247	5.0000	5.5336	
15 Acetonitrile	40.0	3.537	3.532	0.005	83745	50.000	56.313	M
17 Allyl chloride	76.0	3.563	3.569	-0.004	48884	5.0000	5.2941	
16 Methyl Acetate	43.0	3.579	3.579	0.000	141743	5.0000	5.3120	
18 Methylene chloride	84.0	3.747	3.747	0.000	101855	5.0000	5.3759	
20 Acrylonitrile	53.0	4.077	4.077	0.000	131689	10.000	10.546	
21 trans-1,2-Dichloroethene	96.0	4.098	4.104	-0.005	111967	5.0000	5.3072	
22 tert-Butyl methyl ether(MTBE)	73.0	4.103	4.109	-0.004	288166	5.0000	5.4445	
23 Hexane	57.0	4.481	4.481	0.000	152844	5.0000	5.4424	
24 1,1-Dichloroethane	63.0	4.690	4.691	0.000	193429	5.0000	5.4567	
25 Vinyl acetate	86.0	4.732	4.733	0.000	32295	5.0000	5.3220	M
26 Diisopropyl ether (IPE)	87.0	4.774	4.775	0.000	91261	5.0000	5.0636	
27 Chloroprene	53.0	4.779	4.780	0.000	154376	5.0000	5.6299	
29 cis-1,2-Dichloroethene	96.0	5.445	5.446	0.000	132173	5.0000	5.3059	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.000	59404	10.000	10.033	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	126195	5.0000	5.4563	
32 Propionitrile	54.0	5.540	5.540	0.000	280848	50.000	55.053	
33 Ethyl Acetate	43.0	5.529	5.530	0.000	208185	5.0000	5.2674	
34 Methacrylonitrile	67.0	5.728	5.729	0.000	382475	25.000	26.329	
35 Bromochloromethane	128.0	5.744	5.745	0.000	73927	5.0000	5.2989	
36 Tetrahydrofuran	42.0	5.749	5.750	0.000	83593	5.0000	5.1381	
37 Chloroform	83.0	5.907	5.907	0.000	208971	5.0000	5.3376	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	129112	5.0000	5.0743	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	178713	5.0000	5.3339	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3240441	50.000	50.000	
42 Cyclohexane	41.0	6.143	6.149	-0.005	83817	5.0000	5.5914	
43 1,1-Dichloropropene	75.0	6.289	6.290	0.000	155004	5.0000	5.4377	
44 Carbon tetrachloride	119.0	6.263	6.269	-0.004	165500	5.0000	5.3102	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	63283	50.000	57.733	
$ 46 1,2-Dichloroethane-d4	65.0	6.525	6.526	0.000	144034	5.0000	4.9483	
48 Benzene	78.0	6.536	6.536	0.000	444974	5.0000	5.3719	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	275775	5.0000	5.0448	M
50 1,2-Dichloroethane	62.0	6.625	6.631	-0.004	173151	5.0000	5.3787	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4545769	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	143068	5.0000	5.2500	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	185799	5.0000	5.4259	
55 1,2-Dichloropropane	63.0	7.752	7.753	0.000	105900	5.0000	5.1575	
56 Dibromomethane	93.0	7.862	7.863	0.000	85338	5.0000	5.2167	
57 Methyl methacrylate	41.0	7.878	7.879	0.000	135828	5.0000	5.0807	
58 1,4-Dioxane	88.0	7.862	7.858	0.005	16001	50.000	57.516	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	149722	5.0000	5.1507	
60 2-nitropropane	43.0	8.423	8.423	0.000	67234	5.0000	4.9224	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	93168	5.0000	5.1122	
62 cis-1,3-Dichloropropene	75.0	8.701	8.702	0.000	176237	5.0000	5.2279	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	380067	10.000	10.543	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	438810	5.0000	5.0602	
65 Toluene	92.0	9.126	9.127	0.000	292828	5.0000	5.2207	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	160326	5.0000	4.9454	
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	176404	5.0000	4.9505	
68 1,1,2-Trichloroethane	97.0	9.734	9.735	0.000	119069	5.0000	5.2213	
69 Tetrachloroethene	164.0	9.802	9.803	0.000	120242	5.0000	5.2648	
70 1,3-Dichloropropane	76.0	9.933	9.934	0.000	183413	5.0000	5.1264	
71 2-Hexanone	43.0	10.033	10.034	0.000	322712	10.000	10.048	
72 Dibromochloromethane	129.0	10.190	10.191	0.000	124622	5.0000	4.9745	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	240832	5.0000	5.0612	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.317	0.000	127444	5.0000	5.1638	
* 76 Chlorobenzene-d5	117.0	10.861	10.862	0.000	3690473	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.894	0.005	314927	5.0000	5.3034	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.009	0.000	110398	5.0000	5.1576	
79 Ethylbenzene	106.0	11.019	11.019	0.000	167422	5.0000	5.3255	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	201987	5.0000	5.3844	
81 o-Xylene	106.0	11.575	11.575	0.000	180672	5.0000	5.4298	
82 Styrene	104.0	11.596	11.596	0.000	298043	5.0000	5.2981	
83 Bromoform	173.0	11.774	11.774	0.000	75260	5.0000	4.3624	
84 Isopropylbenzene	105.0	11.957	11.958	0.000	459216	5.0000	5.6496	
85 Cyclohexanone	55.0	12.041	12.042	0.000	48292	50.000	52.244	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.131	0.000	132450	5.0000	5.3379	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	119276	5.0000	5.2286	M
87 Bromobenzene	156.0	12.256	12.257	0.000	117861	5.0000	5.2638	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	48007	5.0000	5.2010	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	26895	5.0000	4.3031	
91 n-Propylbenzene	91.0	12.371	12.372	0.000	493119	5.0000	5.6928	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	268730	5.0000	5.4233	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	301845	5.0000	5.6755	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	99312	5.0000	5.3482	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	283728	5.0000	5.6723	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.902	0.000	278700	5.0000	5.4935	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	381952	5.0000	5.6413	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	167329	5.0000	5.2170	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.005	294895	5.0000	5.5099	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.232	0.000	1260968	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.253	0.000	162218	5.0000	5.1229	
102 Benzyl chloride	91.0	13.362	13.358	0.005	154544	5.0000	4.7391	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	230686	5.0000	5.3627	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	147001	5.0000	5.1463	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.260	0.000	22534	5.0000	4.7123	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	86412	5.0000	4.8844	
107 Hexachlorobutadiene	225.0	15.066	15.067	0.000	44150	5.0000	5.1370	
108 Naphthalene	128.0	15.166	15.167	0.000	251344	5.0000	5.0031	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	80924	5.0000	4.9086	
S 110 Xylenes (total)	106.0	16.000		0.000		10.000	10.814	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		10.000	10.613	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

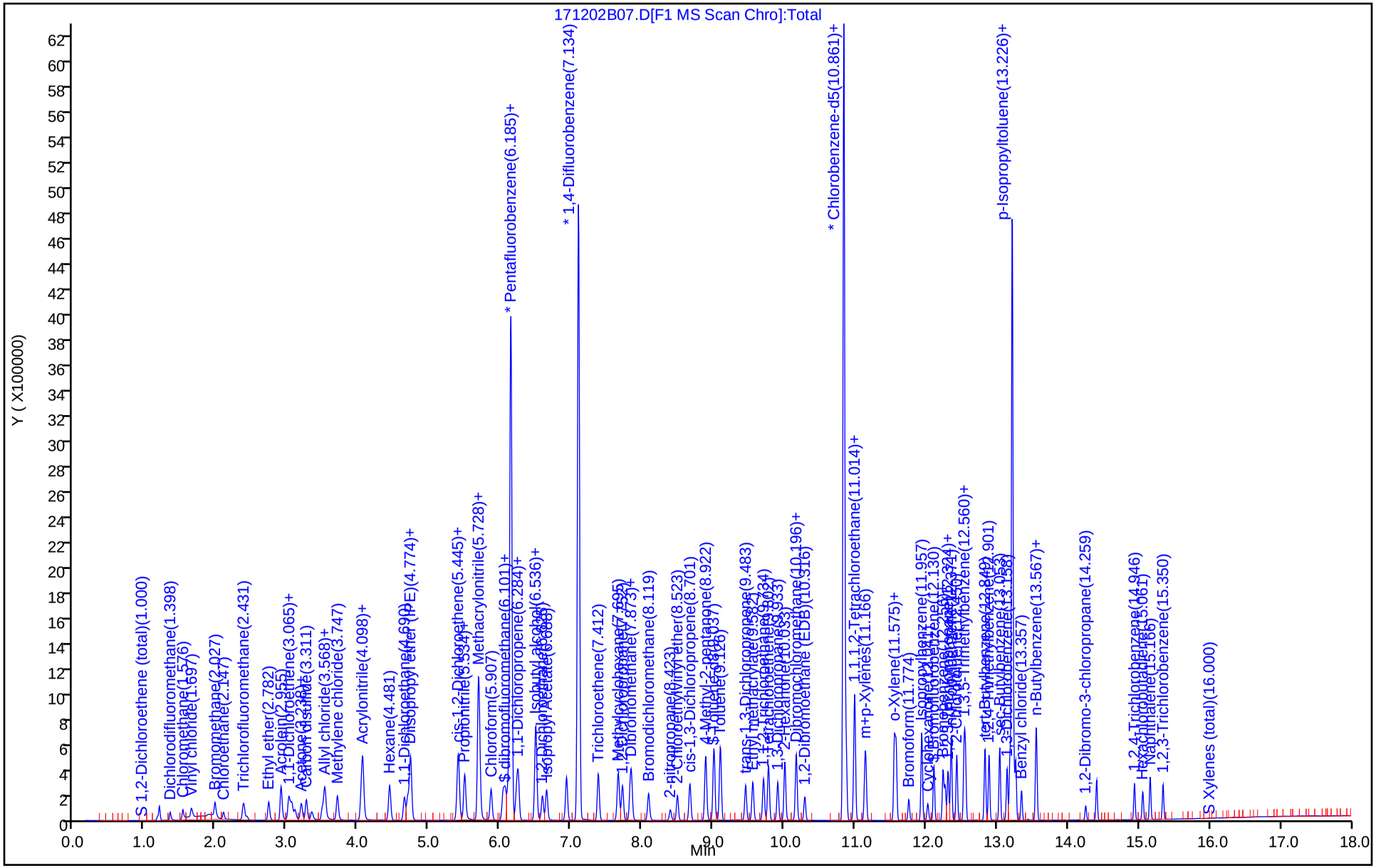
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D				
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ		
Sample Info:	17120219B, VSTD005BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

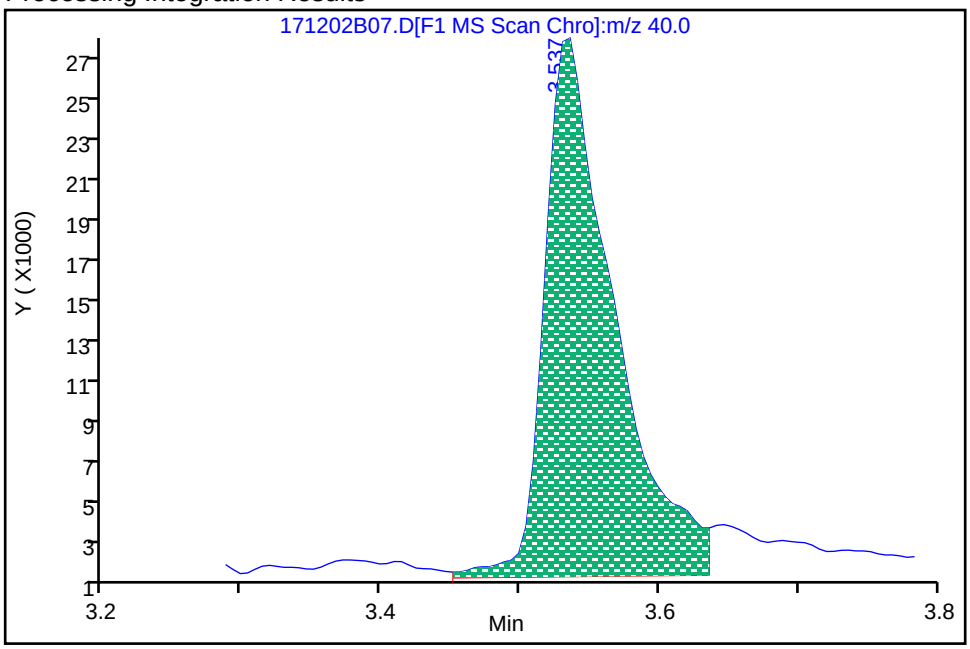
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

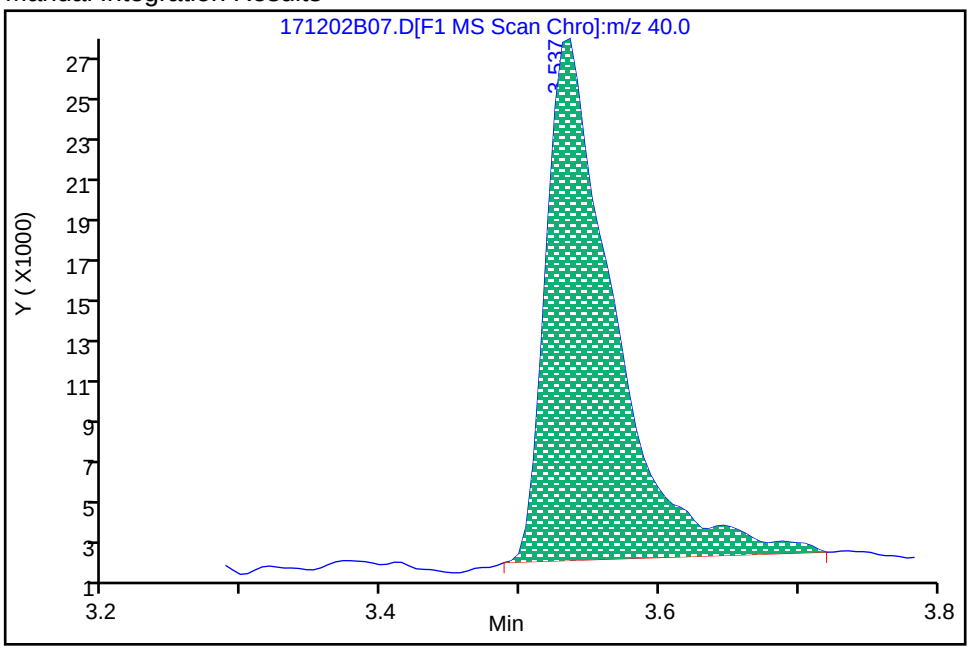
Processing Integration Results

RT: 3.537
Area: 88419
Amount: 46.361
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 83745
Amount: 56.313
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

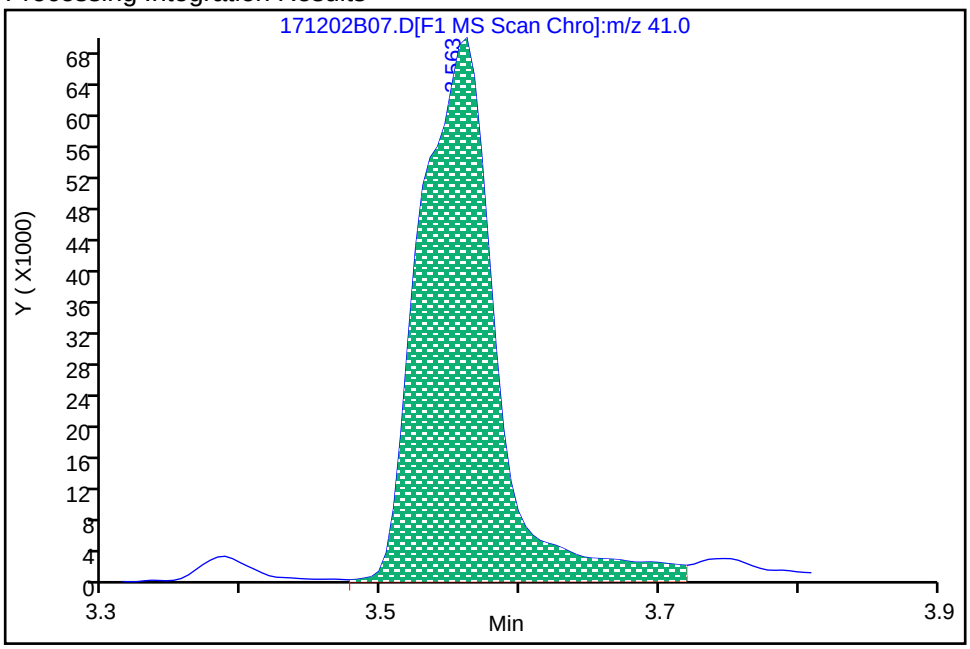
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

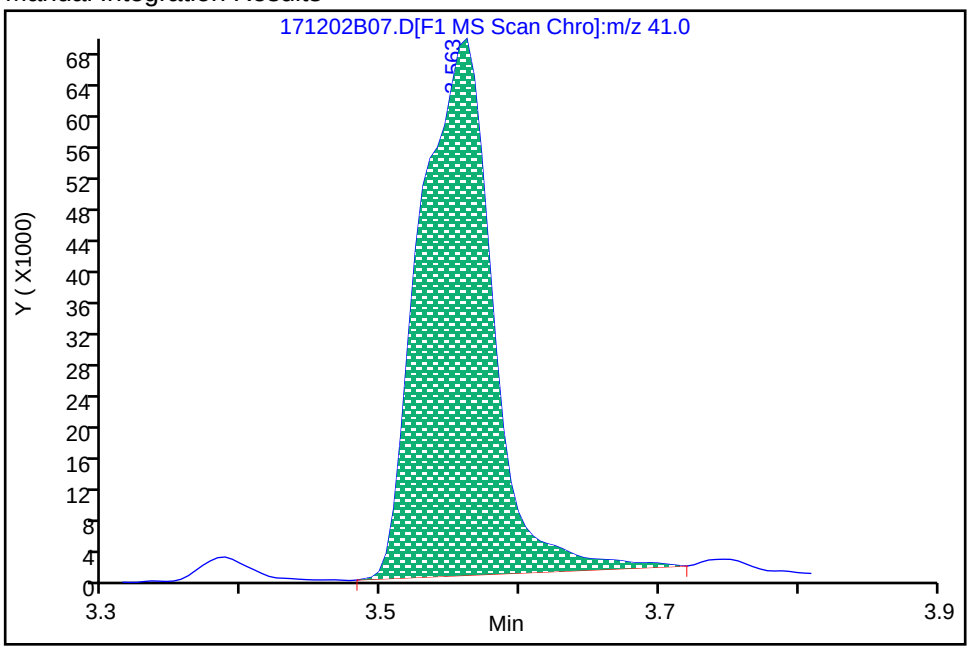
Processing Integration Results

RT: 3.563
Area: 261973
Amount: 46.361
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 245155
Amount: 56.313
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

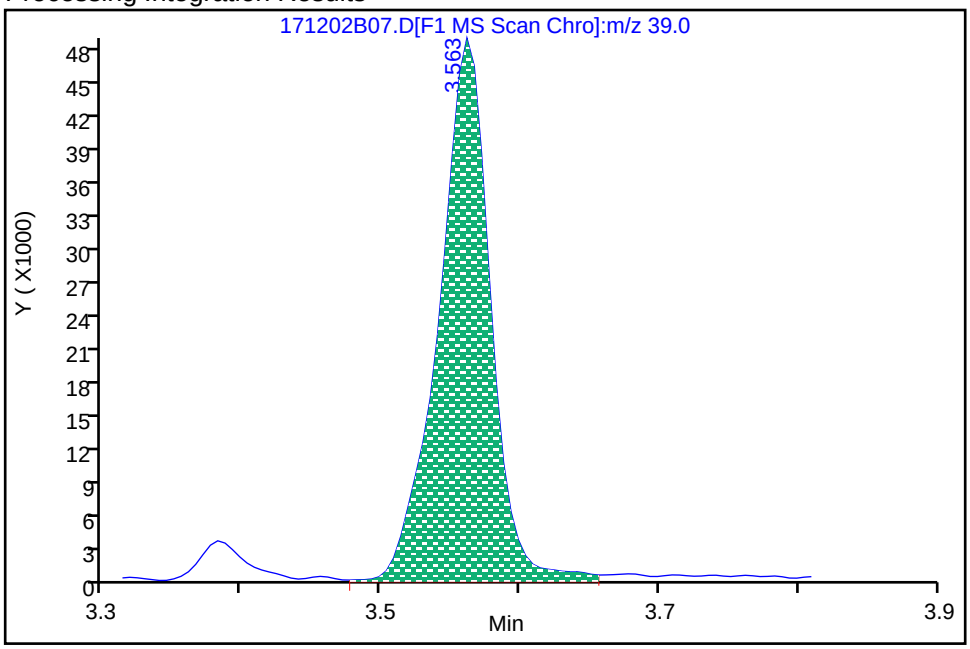
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

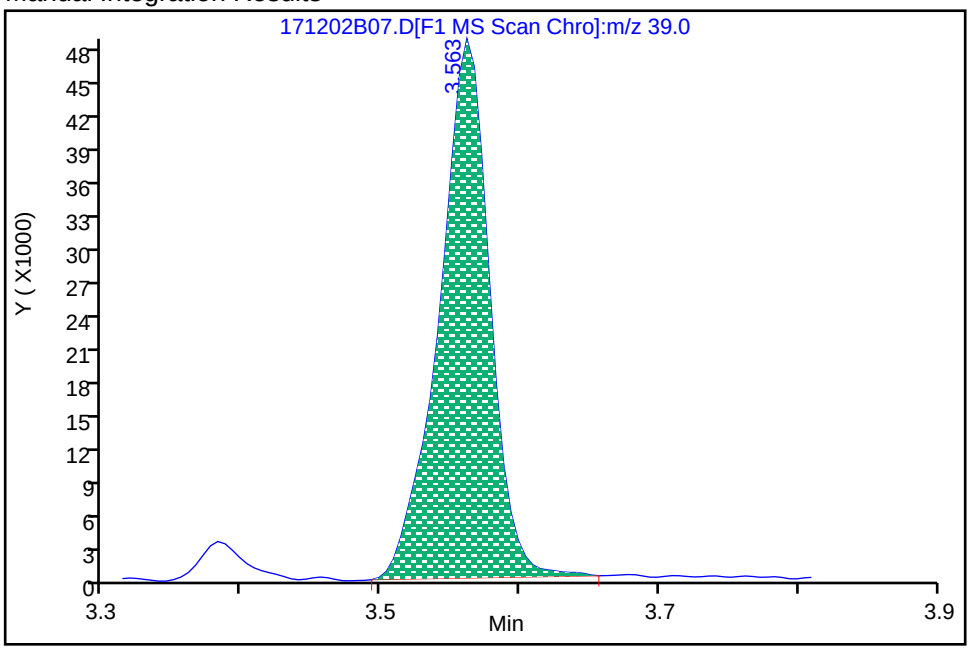
Processing Integration Results

RT: 3.563
Area: 123368
Amount: 46.361
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 119095
Amount: 56.313
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

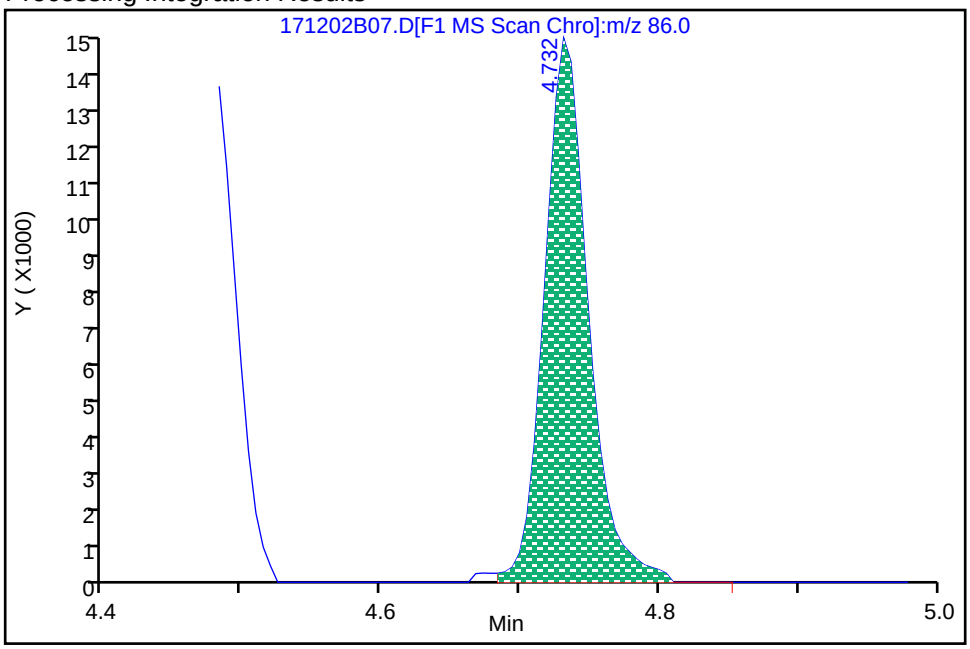
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

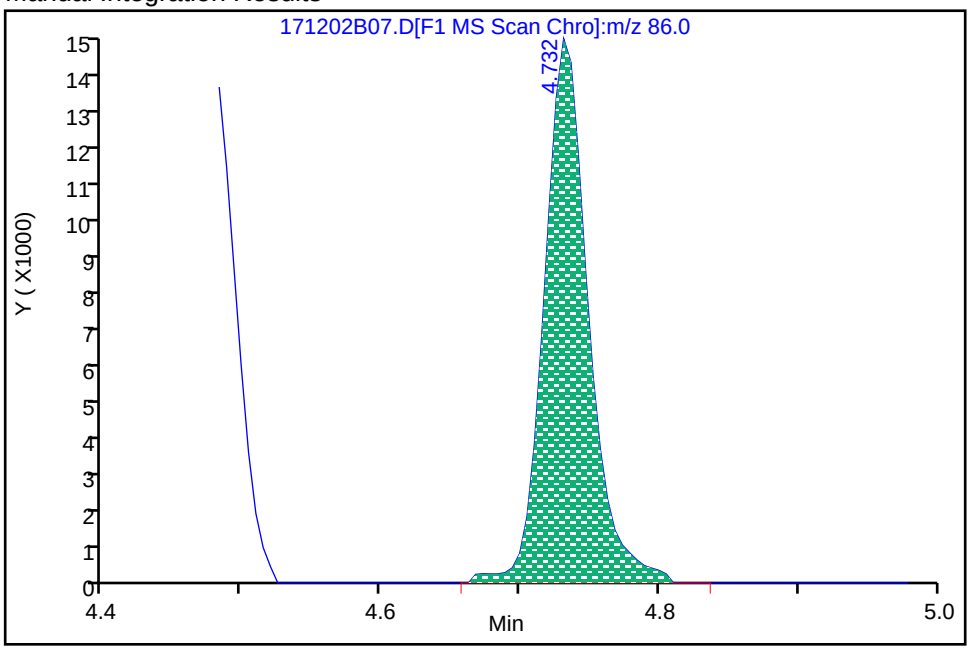
Processing Integration Results

RT: 4.732
Area: 32029
Amount: 5.5370
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.732
Area: 32295
Amount: 5.3220
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

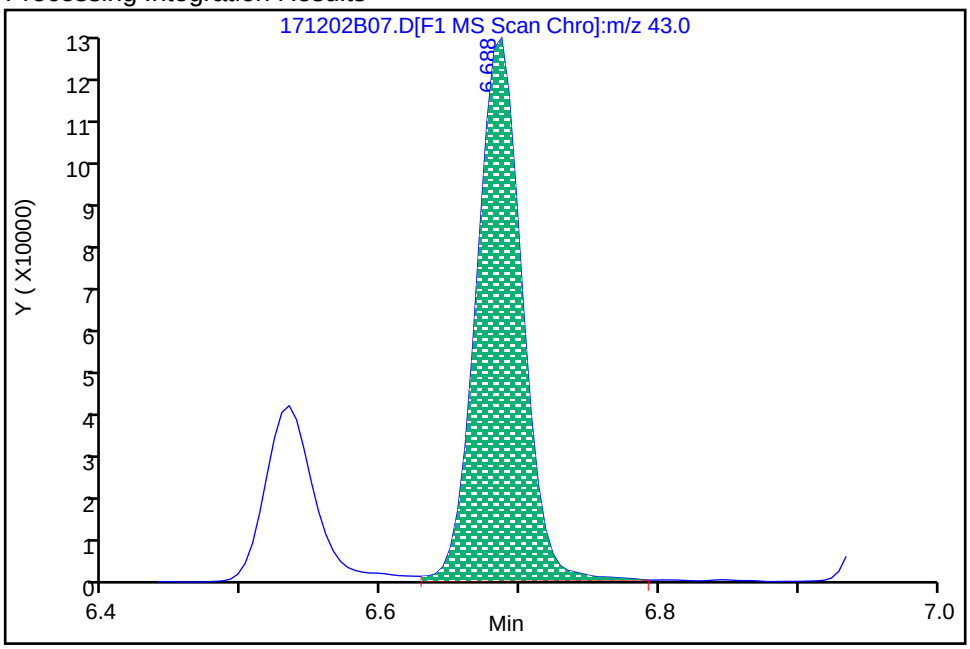
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

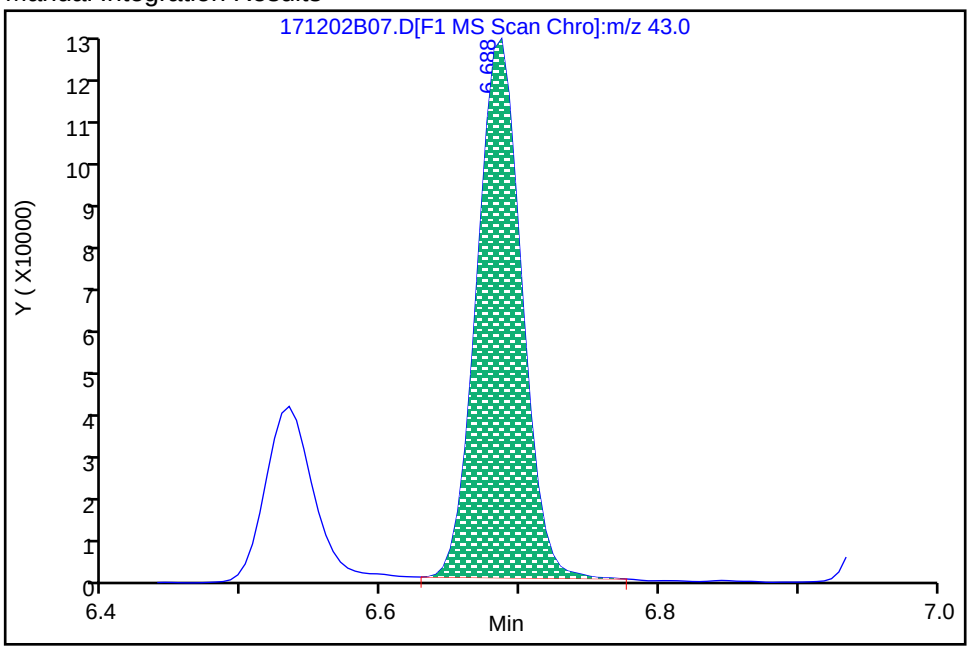
Processing Integration Results

RT:	6.688
Area:	282700
Amount:	5.0559
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	6.688
Area:	275775
Amount:	5.0448
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:52:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

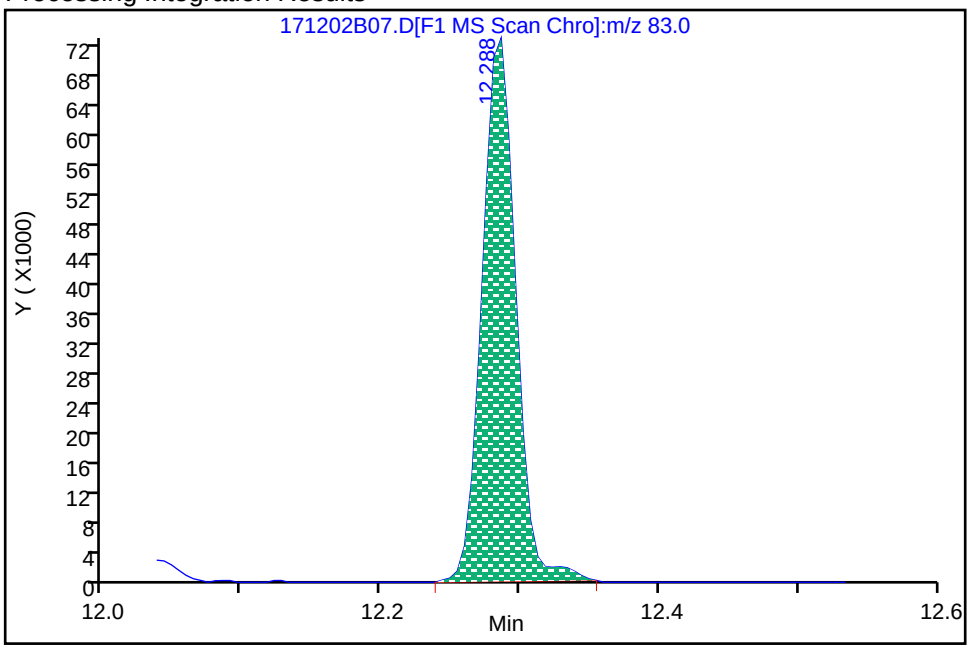
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

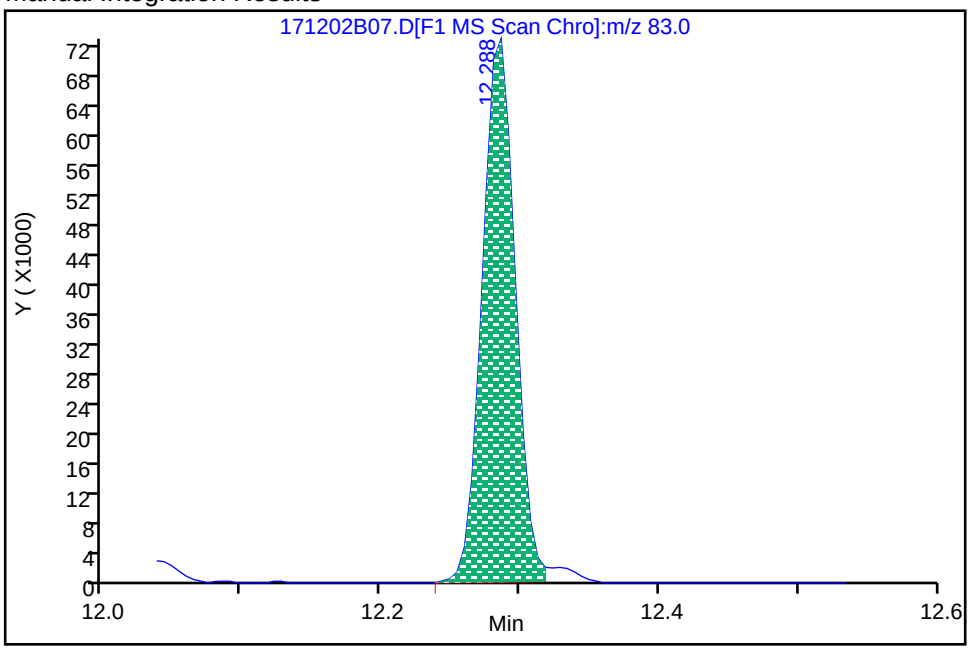
Processing Integration Results

RT: 12.288
Area: 121653
Amount: 5.2583
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 119276
Amount: 5.2286
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

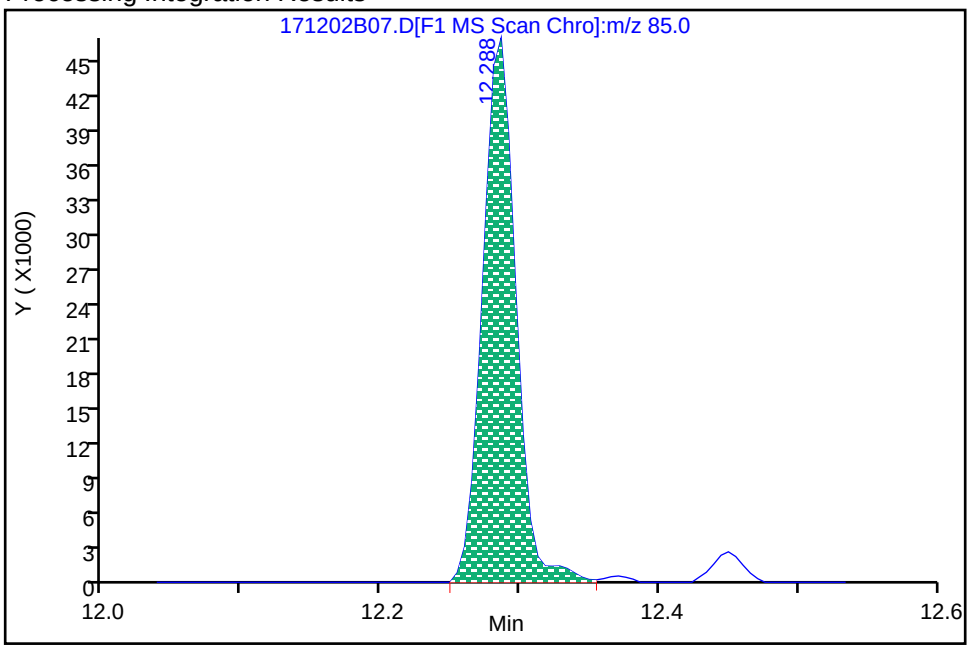
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

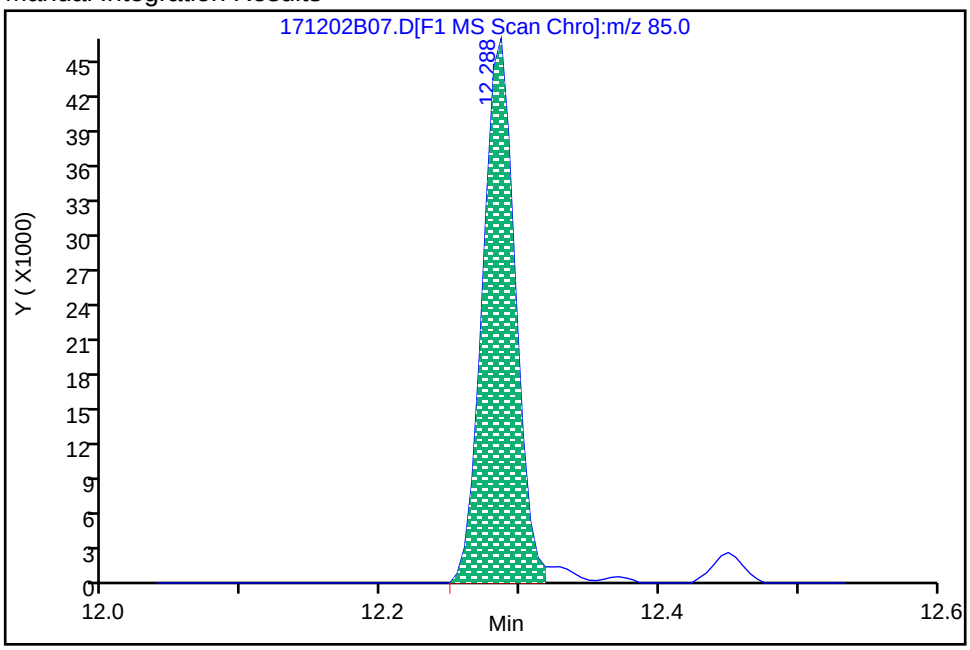
Processing Integration Results

RT: 12.288
Area: 76764
Amount: 5.2583
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 75036
Amount: 5.2286
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Lab Sample ID:	VSTD020BQ	Client Sample ID:	20uL/100mL 15613/10
Injection Date:	03-Dec-2019 02:32:30	Dil. Factor:	1.0
Operator:	JTH	Inst. ID:	msd17.i
Sample Info:	17120219B, VSTD020BQ		
Method:	\\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m		
Method Date:	04-Dec-2019 13:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Ical, Level: 4	ALS Bottle:	8
Cpnd Sublist:	std.sub		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	222861	20.000	18.763	
2 Chloromethane	50.0	1.576	1.577	0.000	198056	20.000	19.809	
3 Vinyl chloride	62.0	1.692	1.697	-0.004	239774	20.000	20.422	
4 Bromomethane	94.0	2.027	2.027	0.001	228827	20.000	20.362	
5 Chloroethane	64.0	2.148	2.148	0.000	167615	20.000	20.114	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	510056	20.000	20.190	
8 Ethyl ether	59.0	2.782	2.782	0.001	336262	20.000	19.850	
9 Acrolein	56.0	2.955	2.955	0.001	1007673	200.00	210.97	
10 Acetone	43.0	3.149	3.149	0.001	394467	40.000	37.507	
11 1,1-Dichloroethene	96.0	3.065	3.066	0.000	302334	20.000	20.588	
12 Freon 113	101.0	3.102	3.107	-0.004	289533	20.000	20.007	
13 Methyl iodide	142.0	3.238	3.244	-0.004	648728	20.000	20.995	
14 Carbon disulfide	76.0	3.312	3.312	0.000	967145	20.000	21.062	
15 Acetonitrile	40.0	3.532	3.532	0.000	309972	200.00	207.74	M
17 Allyl chloride	76.0	3.563	3.569	-0.004	192334	20.000	20.760	
16 Methyl Acetate	43.0	3.579	3.579	0.001	533290	20.000	19.919	
18 Methylene chloride	84.0	3.747	3.747	0.000	383417	20.000	20.169	
20 Acrylonitrile	53.0	4.077	4.077	0.001	492272	40.000	39.290	
21 trans-1,2-Dichloroethene	96.0	4.098	4.104	-0.004	424070	20.000	20.033	
22 tert-Butyl methyl ether(MTBE)	73.0	4.109	4.109	0.000	1068258	20.000	20.116	
23 Hexane	57.0	4.481	4.481	0.000	559469	20.000	19.855	
24 1,1-Dichloroethane	63.0	4.691	4.691	0.000	719863	20.000	20.239	
25 Vinyl acetate	86.0	4.733	4.733	0.000	128677	20.000	21.134	
26 Diisopropyl ether (IPE)	87.0	4.769	4.775	-0.004	366372	20.000	20.260	
27 Chloroprene	53.0	4.780	4.780	0.000	564091	20.000	20.503	
29 cis-1,2-Dichloroethene	96.0	5.446	5.446	0.000	498615	20.000	19.949	
30 2-Butanone (MEK)	72.0	5.451	5.456	-0.004	240473	40.000	40.478	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.001	472501	20.000	20.361	
32 Propionitrile	54.0	5.540	5.540	0.001	1017854	200.00	198.86	
33 Ethyl Acetate	43.0	5.530	5.530	0.000	808925	20.000	20.399	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	1480512	100.00	101.58	
35 Bromochloromethane	128.0	5.745	5.745	0.000	279274	20.000	19.951	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	322797	20.000	19.774	
37 Chloroform	83.0	5.907	5.907	0.001	795722	20.000	20.256	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	503690	20.000	19.729	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	689988	20.000	20.525	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3251337	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.149	0.000	301801	20.000	20.065	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	580193	20.000	20.285	
44 Carbon tetrachloride	119.0	6.264	6.269	-0.004	636344	20.000	20.349	
45 Isobutyl alcohol	42.0	6.536	6.536	0.001	239314	200.00	217.59	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	559925	20.000	19.390	
48 Benzene	78.0	6.536	6.536	0.001	1697144	20.000	20.652	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	1117180	20.000	20.600	M
50 1,2-Dichloroethane	62.0	6.625	6.631	-0.004	640940	20.000	20.069	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4509793	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	554336	20.000	20.504	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	677969	20.000	19.957	
55 1,2-Dichloropropane	63.0	7.753	7.753	0.000	418136	20.000	20.526	
56 Dibromomethane	93.0	7.863	7.863	0.000	326063	20.000	20.091	
57 Methyl methacrylate	41.0	7.878	7.879	0.000	561673	20.000	21.177	
58 1,4-Dioxane	88.0	7.857	7.858	0.000	57375	200.00	207.88	
59 Bromodichloromethane	83.0	8.120	8.119	0.000	592379	20.000	20.542	
60 2-nitropropane	43.0	8.424	8.423	0.000	276701	20.000	20.420	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	387244	20.000	21.418	
62 cis-1,3-Dichloropropene	75.0	8.702	8.702	0.000	703974	20.000	21.049	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	1551031	40.000	43.367	
$ 64 Toluene-d8	98.0	9.037	9.037	0.001	1730006	20.000	19.672	
65 Toluene	92.0	9.126	9.127	0.000	1145483	20.000	20.138	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	674707	20.000	20.522	
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	745997	20.000	20.644	
68 1,1,2-Trichloroethane	97.0	9.735	9.735	0.000	461677	20.000	19.963	
69 Tetrachloroethene	164.0	9.803	9.803	0.000	458658	20.000	19.803	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	725002	20.000	19.982	
71 2-Hexanone	43.0	10.033	10.034	0.000	1392977	40.000	42.769	
72 Dibromochloromethane	129.0	10.191	10.191	0.000	518456	20.000	20.407	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	1029085	20.000	21.326	
75 1,2-Dibromoethane (EDB)	107.0	10.311	10.317	-0.004	509357	20.000	20.351	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3742570	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.894	0.000	1249008	20.000	20.741	
78 1,1,1,2-Tetrachloroethane	131.0	11.009	11.009	0.000	441692	20.000	20.348	
79 Ethylbenzene	106.0	11.019	11.019	0.001	657284	20.000	20.616	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	792298	20.000	20.826	
81 o-Xylene	106.0	11.575	11.575	0.000	704681	20.000	20.883	
82 Styrene	104.0	11.596	11.596	0.000	1221608	20.000	21.414	
83 Bromoform	173.0	11.774	11.774	0.001	333368	20.000	18.130	
84 Isopropylbenzene	105.0	11.958	11.958	0.000	1763777	20.000	21.397	
85 Cyclohexanone	55.0	12.041	12.042	0.000	180499	200.00	192.55	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.131	-0.004	501881	20.000	19.945	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	476871	20.000	20.530	
87 Bromobenzene	156.0	12.256	12.257	0.000	474529	20.000	20.814	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	192173	20.000	20.448	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	123963	20.000	18.552	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	1922214	20.000	21.794	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	1054957	20.000	20.910	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	1158445	20.000	21.393	
94 4-Chlorotoluene	126.0	12.571	12.571	0.001	397728	20.000	21.036	
95 tert-Butylbenzene	119.0	12.844	12.849	-0.004	1076564	20.000	21.138	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.902	0.000	1109758	20.000	21.483	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	1468138	20.000	21.296	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	667758	20.000	20.447	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	1163237	20.000	21.346	
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.232	-0.004	1283920	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.253	13.253	0.000	667186	20.000	20.693	
102 Benzyl chloride	91.0	13.358	13.358	0.000	701140	20.000	21.116	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	930234	20.000	21.238	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	591438	20.000	20.335	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.260	0.000	95611	20.000	19.637	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.001	353195	20.000	19.607	
107 Hexachlorobutadiene	225.0	15.062	15.067	-0.004	174387	20.000	19.928	
108 Naphthalene	128.0	15.166	15.167	0.000	1048784	20.000	20.503	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	328143	20.000	19.548	
S 110 Xylenes (total)	106.0	16.000		0.000		40.000	41.710	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		40.000	39.983	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

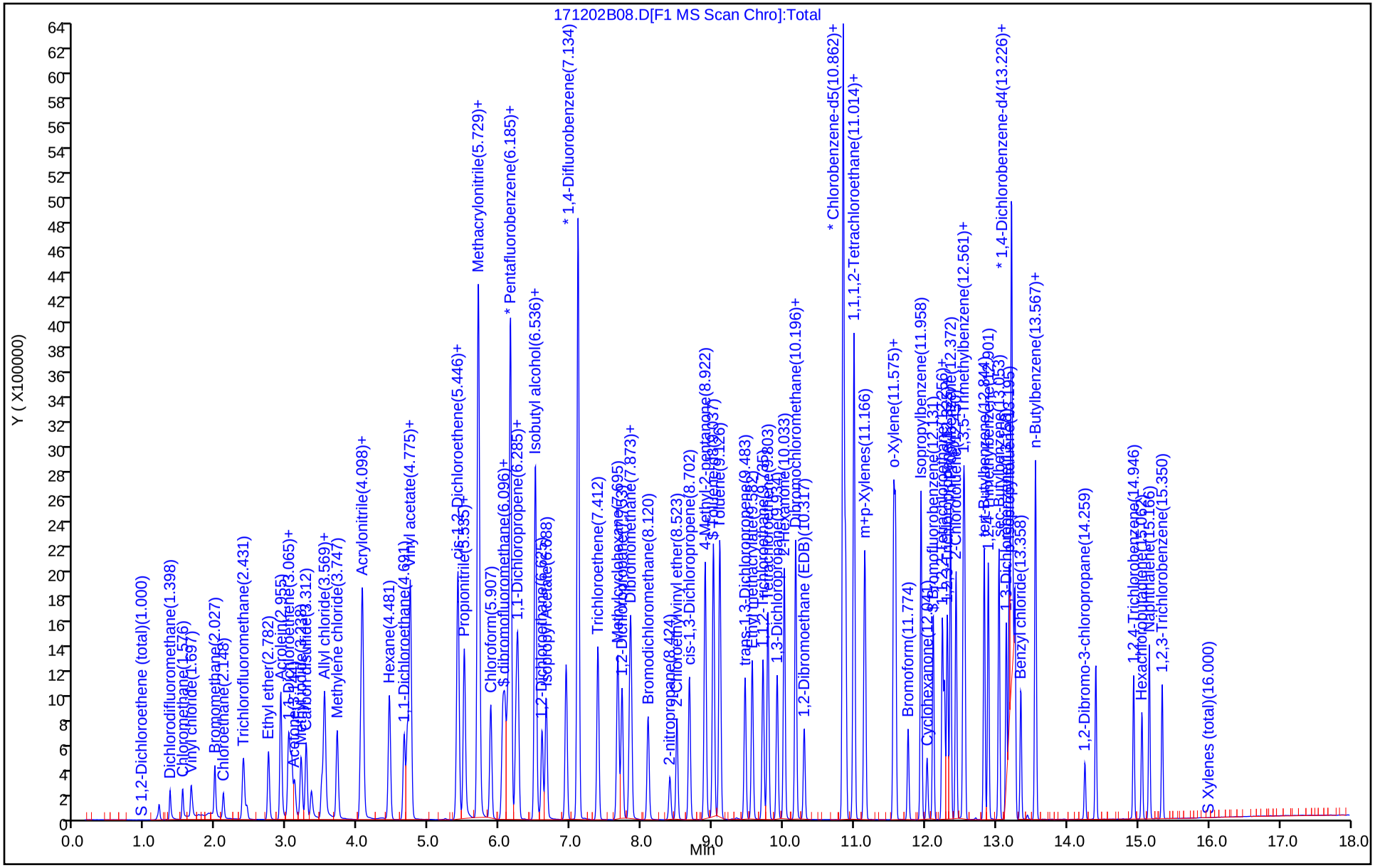
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D				
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ		
Sample Info:	17120219B, VSTD020BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

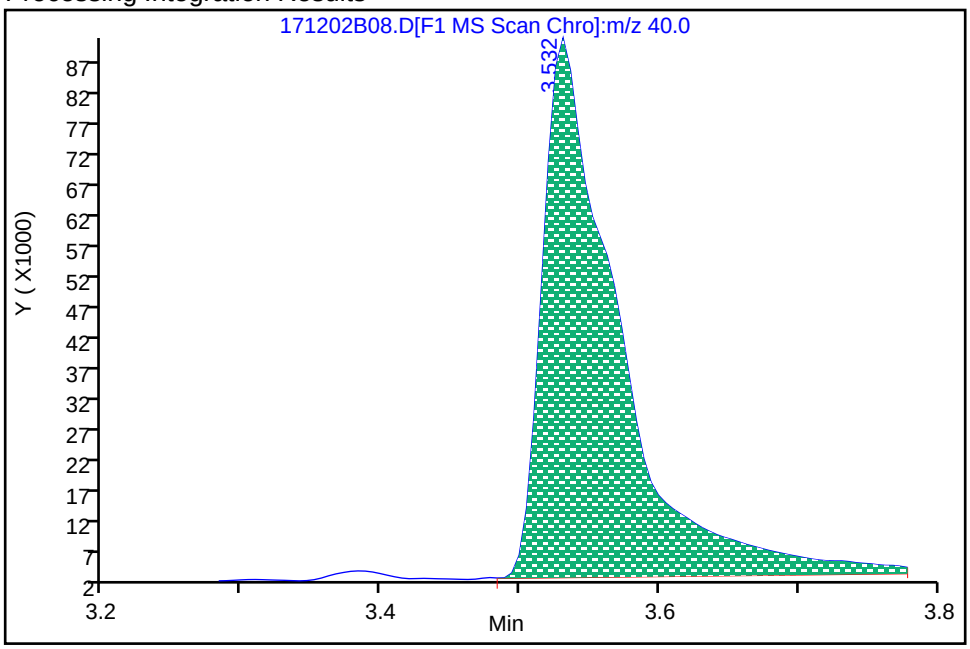
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ
Sample Info:	17120219B, VSTD020BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

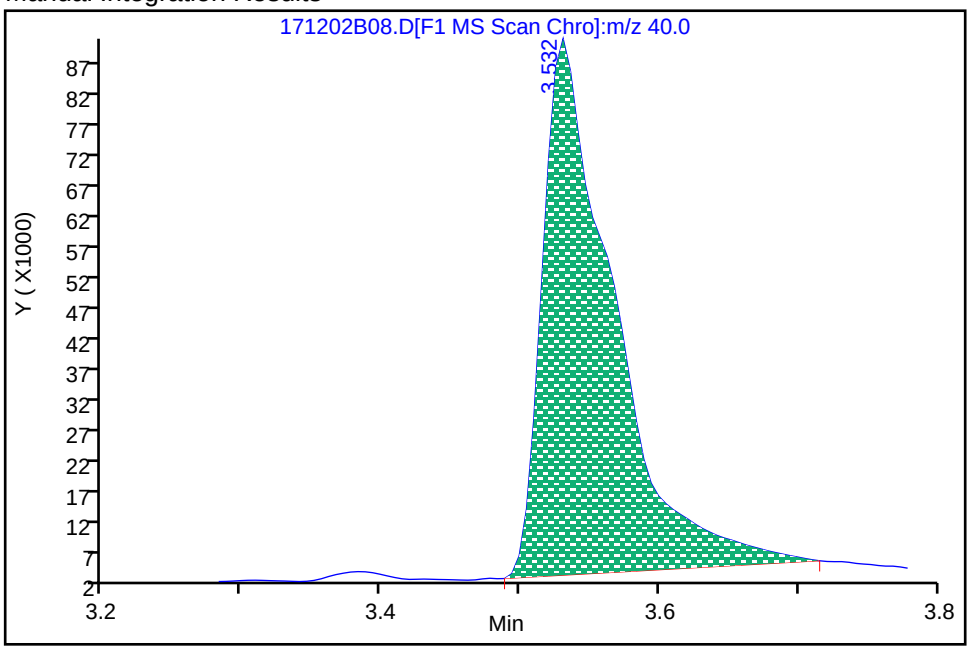
Processing Integration Results

RT: 3.532
Area: 333755
Amount: 178.99
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 309972
Amount: 207.74
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

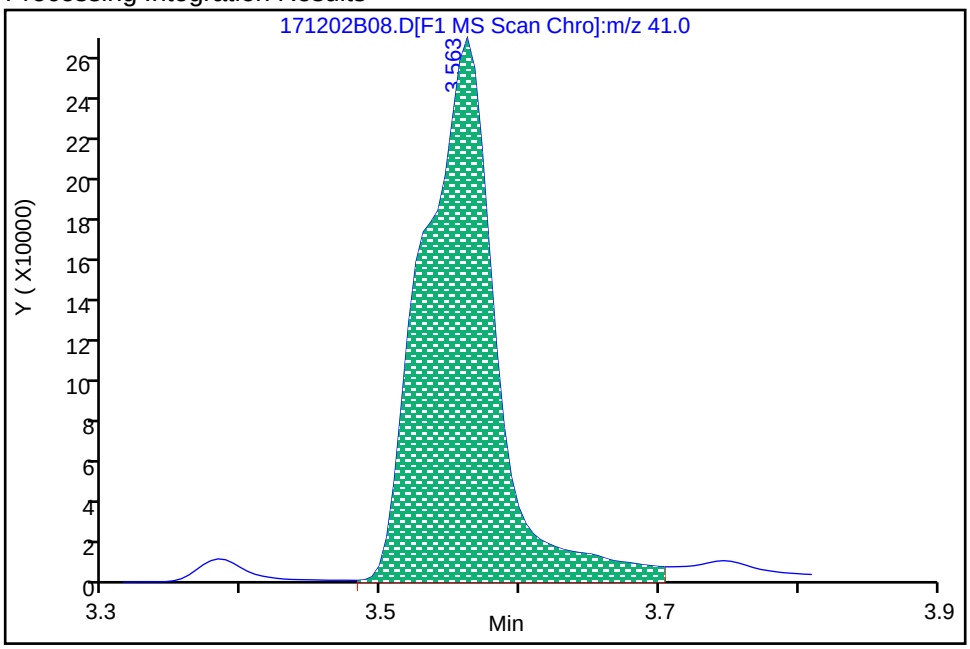
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ
Sample Info:	17120219B, VSTD020BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

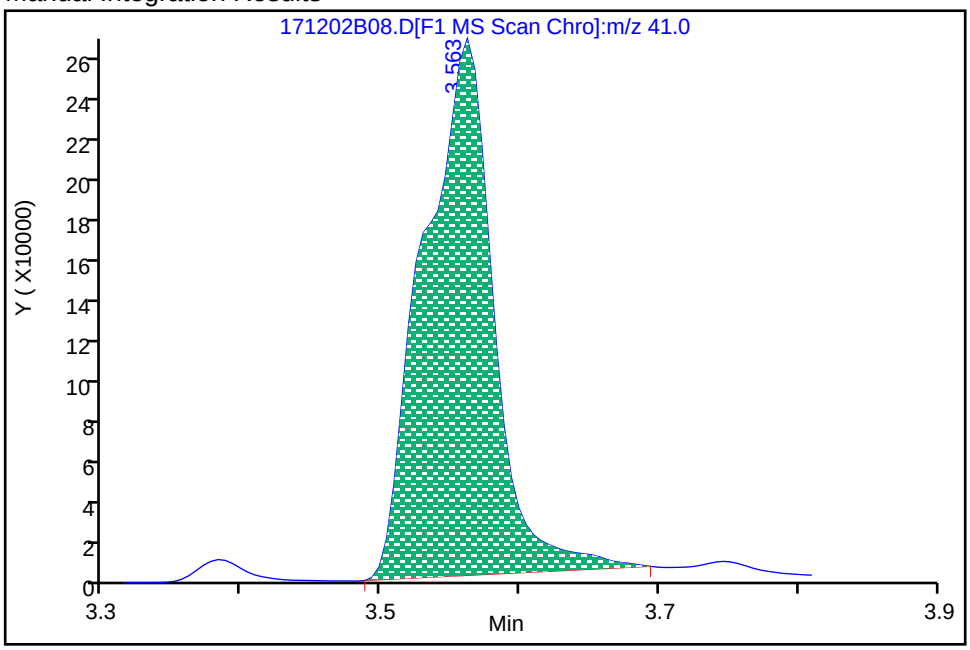
Processing Integration Results

RT: 3.563
Area: 967802
Amount: 178.99
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 907189
Amount: 207.74
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

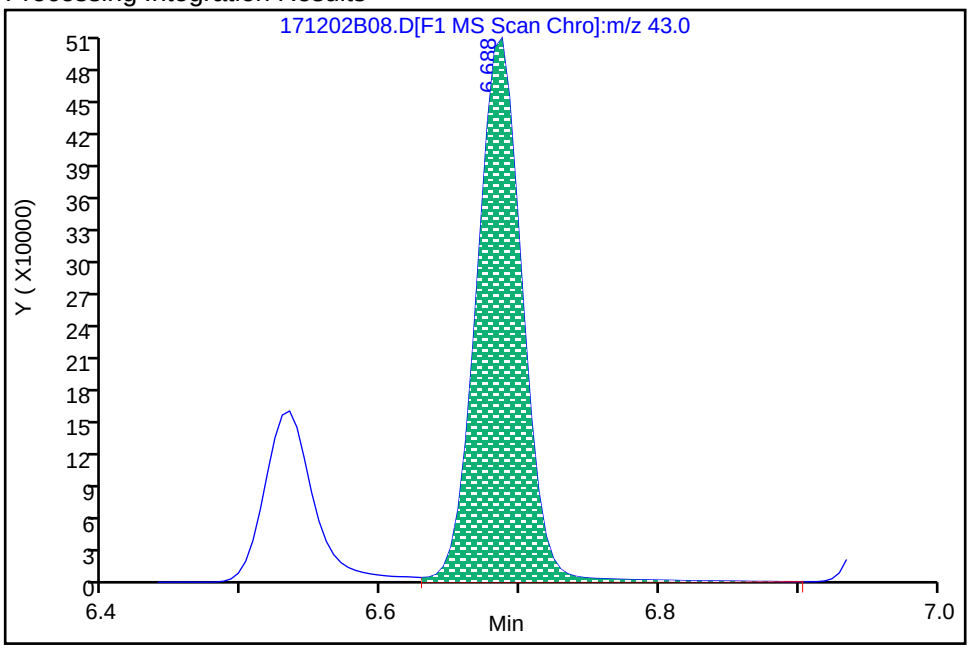
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ
Sample Info:	17120219B, VSTD020BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

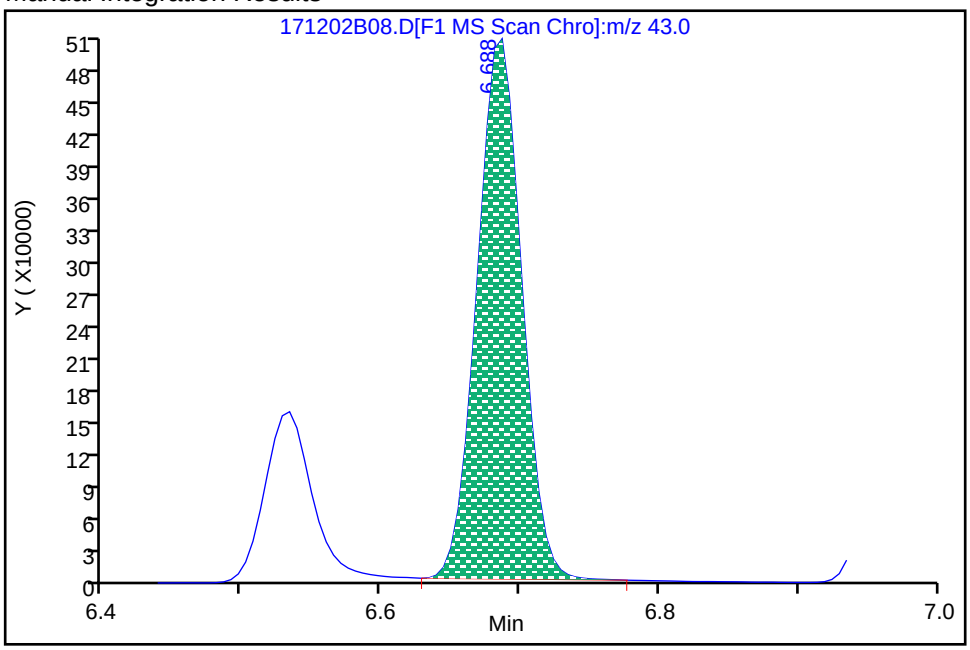
Processing Integration Results

RT: 6.688
Area: 1151923
Amount: 20.608
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 1117180
Amount: 20.600
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:52:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D
Lab Sample ID: VSTD050BQ Client Sample ID: 50uL/100mL 15613/10
Injection Date: 03-Dec-2019 02:56:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD050BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 5 ALS Bottle: 9
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	639547	50.000	55.012	
2 Chloromethane	50.0	1.576	1.576	0.000	498533	50.000	50.942	
3 Vinyl chloride	62.0	1.697	1.697	0.000	593947	50.000	51.685	
4 Bromomethane	94.0	2.027	2.027	0.000	567719	50.000	51.613	
5 Chloroethane	64.0	2.148	2.148	0.000	415038	50.000	50.886	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	1295297	50.000	52.386	
8 Ethyl ether	59.0	2.782	2.782	0.000	856966	50.000	51.685	
9 Acrolein	56.0	2.955	2.955	0.000	2640631	500.00	564.85	
10 Acetone	43.0	3.149	3.149	0.000	1023107	100.00	99.391	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	740593	50.000	51.525	
12 Freon 113	101.0	3.107	3.107	0.000	726211	50.000	51.269	
13 Methyl iodide	142.0	3.243	3.243	0.000	1596786	50.000	52.799	
14 Carbon disulfide	76.0	3.311	3.311	0.000	2399577	50.000	53.390	
15 Acetonitrile	40.0	3.532	3.532	0.000	750305	500.00	513.75	M
17 Allyl chloride	76.0	3.568	3.568	0.000	478186	50.000	52.733	
16 Methyl Acetate	43.0	3.579	3.579	0.000	1374664	50.000	52.458	
18 Methylene chloride	84.0	3.747	3.747	0.000	958850	50.000	51.533	
20 Acrylonitrile	53.0	4.077	4.077	0.000	1302614	100.00	106.22	
21 trans-1,2-Dichloroethene	96.0	4.103	4.103	0.000	1052454	50.000	50.797	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	2736428	50.000	52.645	
23 Hexane	57.0	4.481	4.481	0.000	1346235	50.000	48.812	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	1779108	50.000	51.106	
25 Vinyl acetate	86.0	4.732	4.732	0.000	324029	50.000	54.373	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	904307	50.000	51.092	
27 Chloroprene	53.0	4.780	4.780	0.000	1393844	50.000	51.760	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	1243727	50.000	50.840	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.000	579728	100.00	99.700	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	1131880	50.000	49.833	
32 Propionitrile	54.0	5.540	5.540	0.000	2570106	500.00	513.01	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	1905394	50.000	49.090	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	3650228	250.00	255.87	
35 Bromochloromethane	128.0	5.744	5.744	0.000	708100	50.000	51.682	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	786748	50.000	49.241	
37 Chloroform	83.0	5.907	5.907	0.000	1949276	50.000	50.698	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	1254282	50.000	50.195	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	1679158	50.000	51.032	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3182314	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.000	735105	50.000	49.934	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	1419965	50.000	50.723	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	1591858	50.000	52.009	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	569467	500.00	529.01	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	1382348	50.000	48.544	
48 Benzene	78.0	6.536	6.536	0.000	4081483	50.000	50.367	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	2656669	50.000	49.677	M
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	1581103	50.000	50.205	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4447059	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	1346410	50.000	50.504	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	1687093	50.000	50.361	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	980427	50.000	48.808	
56 Dibromomethane	93.0	7.862	7.862	0.000	809760	50.000	50.599	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	1313430	50.000	50.220	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	129450	500.00	475.64	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	1472112	50.000	51.768	
60 2-nitropropane	43.0	8.424	8.424	0.000	672053	50.000	50.295	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	915530	50.000	51.351	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	1736926	50.000	52.668	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	3574934	100.00	101.37	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	4018533	50.000	46.440	
65 Toluene	92.0	9.126	9.126	0.000	2684771	50.000	47.968	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	1670450	50.000	51.638	
67 Ethyl methacrylate	69.0	9.582	9.582	0.000	1755594	50.000	49.374	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	1101244	50.000	48.394	
69 Tetrachloroethene	164.0	9.802	9.802	0.000	1085533	50.000	47.632	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	1726261	50.000	48.352	
71 2-Hexanone	43.0	10.033	10.033	0.000	3105429	100.00	96.900	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	1311274	50.000	52.454	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	2339358	50.000	49.268	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	1256726	50.000	51.030	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3682563	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.893	0.000	2979665	50.000	50.286	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	1083259	50.000	50.716	
79 Ethylbenzene	106.0	11.019	11.019	0.000	1577977	50.000	50.301	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	1897816	50.000	50.699	
81 o-Xylene	106.0	11.575	11.575	0.000	1700059	50.000	51.202	
82 Styrene	104.0	11.596	11.596	0.000	3001354	50.000	53.468	
83 Bromoform	173.0	11.774	11.774	0.000	897137	50.000	49.108	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	4199548	50.000	51.777	
85 Cyclohexanone	55.0	12.041	12.041	0.000	461621	500.00	500.47	

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.130	0.000	1261797	50.000	50.962	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	1199036	50.000	50.307	
87 Bromobenzene	156.0	12.256	12.256	0.000	1185488	50.000	50.675	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	486180	50.000	50.413	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	342874	50.000	49.563	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	4579562	50.000	50.602	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	2559020	50.000	49.430	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.555	0.000	2805611	50.000	50.491	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	989595	50.000	51.008	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	2580512	50.000	49.377	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	2682545	50.000	50.608	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	3522157	50.000	49.790	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	1651820	50.000	49.293	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	2810139	50.000	50.254	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.231	0.000	1317460	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	1636512	50.000	49.465	
102 Benzyl chloride	91.0	13.357	13.357	0.000	1849401	50.000	54.280	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	2293112	50.000	51.021	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	1454663	50.000	48.742	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	247142	50.000	49.466	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	889230	50.000	48.108	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	433952	50.000	48.327	
108 Naphthalene	128.0	15.166	15.166	0.000	2644047	50.000	50.374	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	833595	50.000	48.395	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	101.90	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	101.64	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

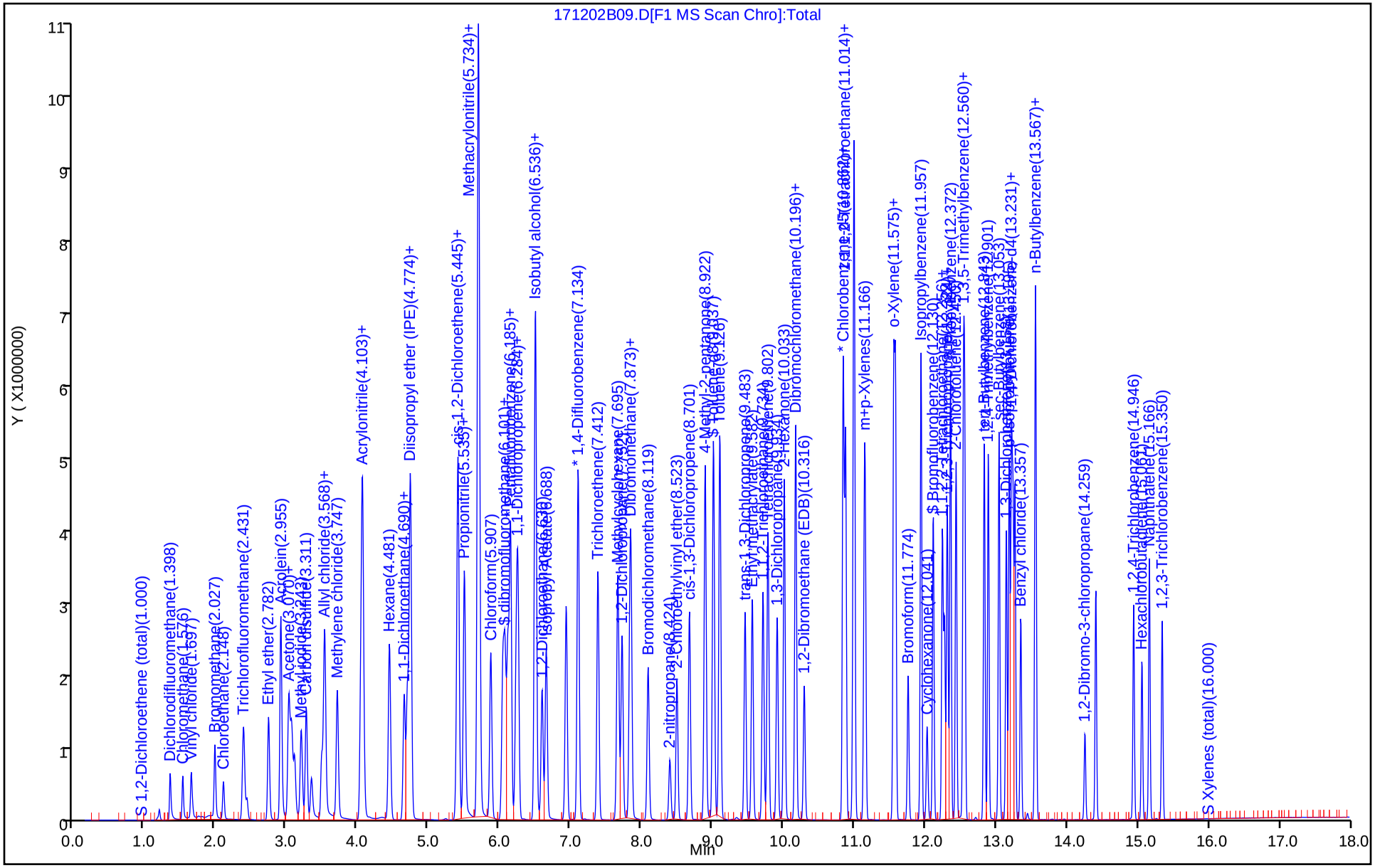
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D				
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ		
Sample Info:	17120219B, VSTD050BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

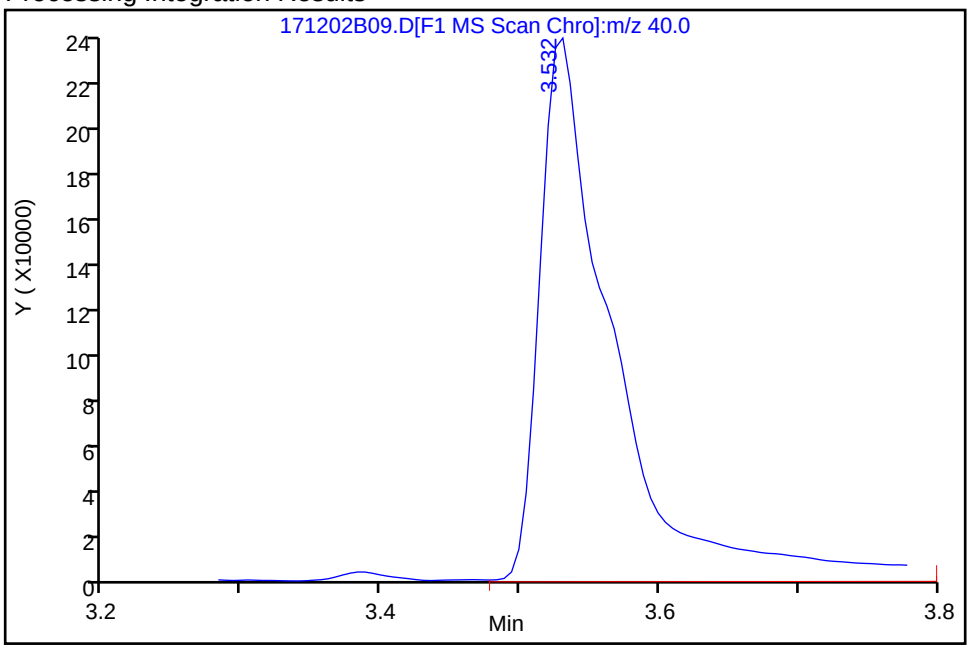
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D		
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ
Sample Info:	17120219B, VSTD050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

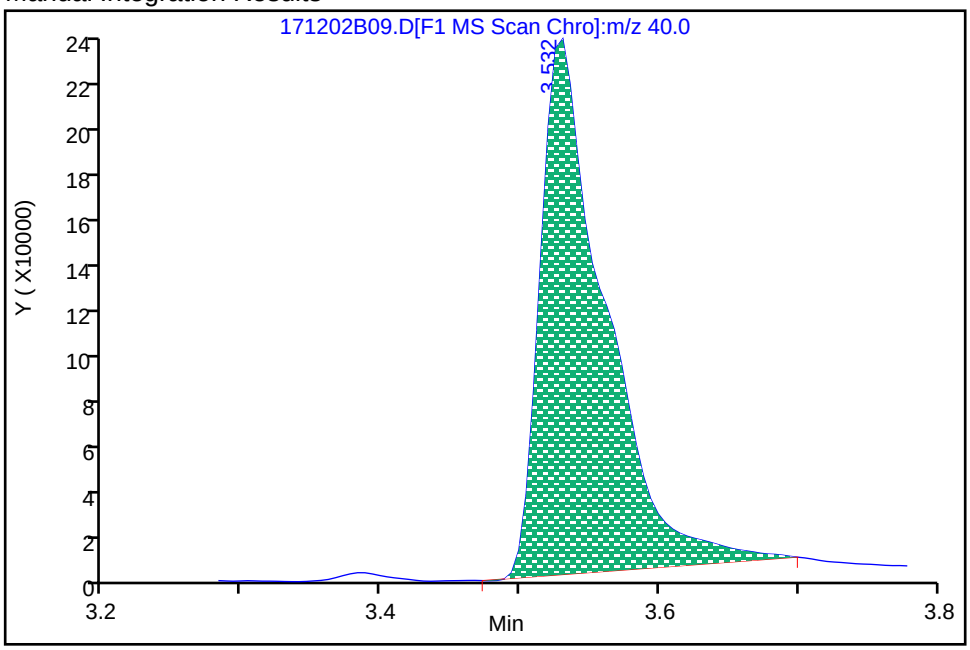
Processing Integration Results

RT: 3.532
Area: 876159
Amount: 500.00
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 750305
Amount: 513.75
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:36:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

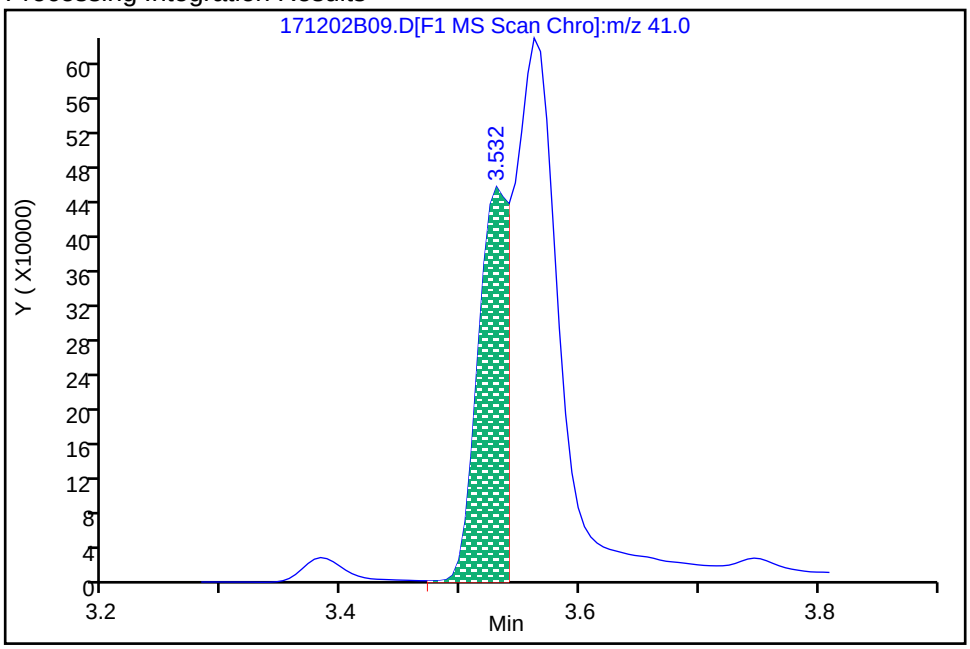
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D		
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ
Sample Info:	17120219B, VSTD050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

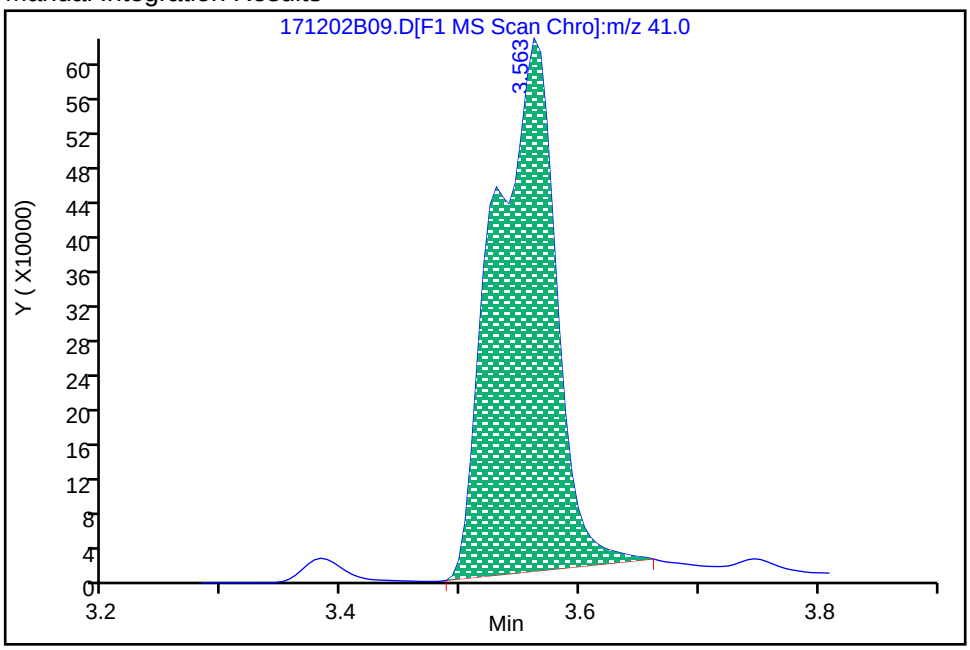
Processing Integration Results

RT:	3.532
Area:	768282
Amount:	500.00
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	3.563
Area:	2216909
Amount:	513.75
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:36:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

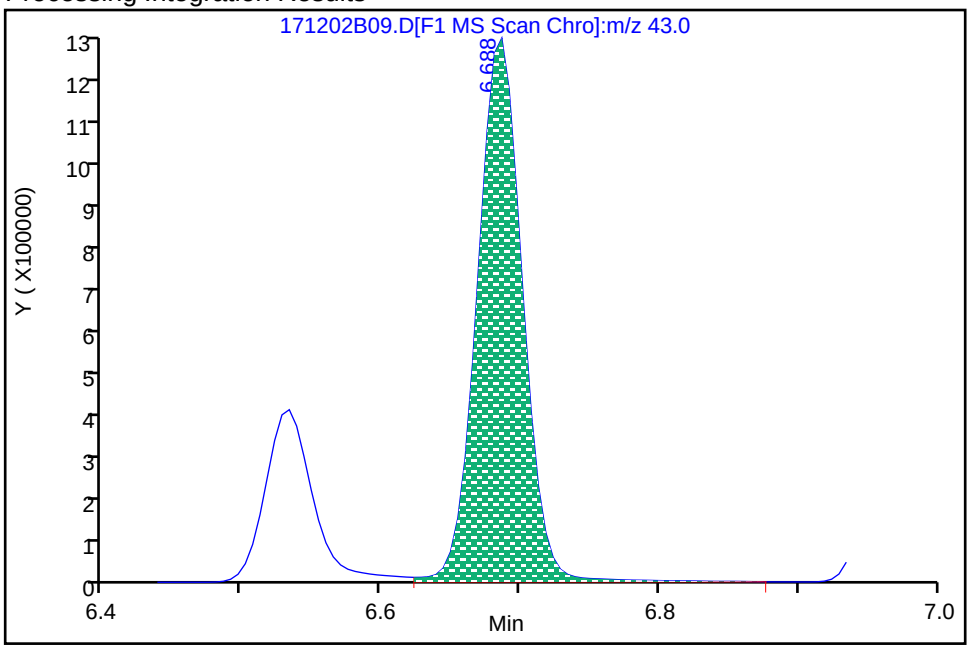
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D		
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ
Sample Info:	17120219B, VSTD050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

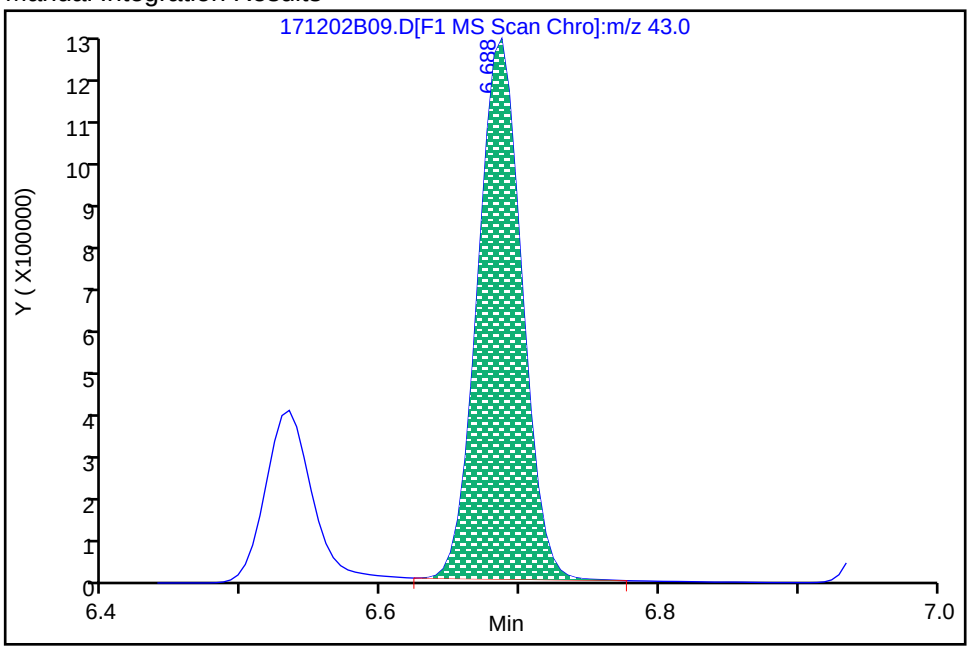
Processing Integration Results

RT:	6.688
Area:	2735831
Amount:	50.000
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	6.688
Area:	2656669
Amount:	49.677
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:52:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D
Lab Sample ID: VSTD100BQ Client Sample ID: 100uL/100mL15613/10
Injection Date: 03-Dec-2019 03:19:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD100BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 6 ALS Bottle: 10
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	1200191	100.00	98.136	
2 Chloromethane	50.0	1.576	1.576	0.001	973353	100.00	94.548	
3 Vinyl chloride	62.0	1.691	1.697	-0.004	1162519	100.00	96.164	
4 Bromomethane	94.0	2.027	2.027	0.000	1098582	100.00	94.942	
5 Chloroethane	64.0	2.148	2.148	0.000	826117	100.00	96.283	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	2498925	100.00	96.072	
8 Ethyl ether	59.0	2.782	2.782	0.000	1693968	100.00	97.119	
9 Acrolein	56.0	2.955	2.955	0.000	4863689	1000.00	988.98	
10 Acetone	43.0	3.149	3.149	0.000	1947171	200.00	179.82	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	1416586	100.00	93.688	
12 Freon 113	101.0	3.102	3.107	-0.004	1462695	100.00	98.162	
13 Methyl iodide	142.0	3.243	3.243	0.000	2969813	100.00	93.347	
14 Carbon disulfide	76.0	3.312	3.311	0.000	4510096	100.00	95.391	
15 Acetonitrile	40.0	3.526	3.532	-0.004	1399697	1000.00	911.05	M
17 Allyl chloride	76.0	3.563	3.568	-0.004	973614	100.00	102.06	
16 Methyl Acetate	43.0	3.579	3.579	0.000	2700196	100.00	97.951	
18 Methylene chloride	84.0	3.747	3.747	0.000	1759509	100.00	89.892	
20 Acrylonitrile	53.0	4.077	4.077	0.001	2481118	200.00	192.33	
21 trans-1,2-Dichloroethene	96.0	4.098	4.103	-0.005	2146675	100.00	98.492	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	5092892	100.00	93.140	
23 Hexane	57.0	4.481	4.481	0.000	2855044	100.00	98.405	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	3592569	100.00	98.100	
25 Vinyl acetate	86.0	4.732	4.732	0.000	662069	100.00	105.61	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	1838425	100.00	98.737	
27 Chloroprene	53.0	4.780	4.780	0.000	2827502	100.00	99.812	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	2506589	100.00	97.400	
30 2-Butanone (MEK)	72.0	5.451	5.456	-0.004	1187640	200.00	194.16	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	2197186	100.00	91.957	
32 Propionitrile	54.0	5.540	5.540	0.000	5071890	1000.00	962.36	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	3953035	100.00	96.814	
34 Methacrylonitrile	67.0	5.734	5.729	0.005	7258189	500.00	483.64	
35 Bromochloromethane	128.0	5.750	5.744	0.005	1417181	100.00	98.326	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	1556386	100.00	92.599	
37 Chloroform	83.0	5.907	5.907	0.000	3928181	100.00	97.120	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	2505142	100.00	95.301	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	3455520	100.00	99.830	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3347696	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.001	1467605	100.00	94.766	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	2920412	100.00	99.168	
44 Carbon tetrachloride	119.0	6.263	6.269	-0.004	3303191	100.00	102.59	
45 Isobutyl alcohol	42.0	6.536	6.536	0.001	1127863	1000.00	995.97	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	2701958	100.00	93.345	
48 Benzene	78.0	6.536	6.536	0.001	8182557	100.00	99.336	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	5573467	100.00	102.53	M
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	3136651	100.00	97.980	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4520476	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	2762453	100.00	101.94	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	3425612	100.00	100.60	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	2024493	100.00	99.147	
56 Dibromomethane	93.0	7.863	7.862	0.000	1620995	100.00	99.646	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	2732904	100.00	102.80	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	256242	1000.00	926.22	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	2982954	100.00	103.19	
60 2-nitropropane	43.0	8.424	8.424	0.000	1419591	100.00	104.51	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	1893326	100.00	104.47	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	3485135	100.00	103.96	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	7170097	200.00	200.00	
$ 64 Toluene-d8	98.0	9.037	9.037	0.001	7918709	100.00	96.618	
65 Toluene	92.0	9.126	9.126	0.000	5434023	100.00	102.51	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	3334196	100.00	108.82	
67 Ethyl methacrylate	69.0	9.582	9.582	0.000	3651004	100.00	108.41	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	2179511	100.00	101.12	
69 Tetrachloroethene	164.0	9.808	9.802	0.005	2198863	100.00	101.87	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	3364444	100.00	99.496	
71 2-Hexanone	43.0	10.033	10.033	0.000	6285319	200.00	207.07	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	2592445	100.00	109.49	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	4746864	100.00	105.55	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	2426360	100.00	104.02	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3487938	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.893	0.005	5626810	100.00	100.26	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	2142123	100.00	105.89	
79 Ethylbenzene	106.0	11.019	11.019	0.000	3044974	100.00	102.48	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	3637433	100.00	102.59	
81 o-Xylene	106.0	11.575	11.575	0.000	3202850	100.00	101.85	
82 Styrene	104.0	11.601	11.596	0.005	5495314	100.00	103.36	
83 Bromoform	173.0	11.774	11.774	0.000	1739382	100.00	100.24	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	7542480	100.00	98.181	
85 Cyclohexanone	55.0	12.041	12.041	0.000	818976	1000.00	937.45	

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.130	0.000	2276106	100.00	97.057	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	2209652	100.00	100.76	
87 Bromobenzene	156.0	12.256	12.256	0.000	2195832	100.00	102.01	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	880196	100.00	99.191	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	637787	100.00	99.926	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	8060671	100.00	96.797	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	4688484	100.00	98.423	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.555	0.000	5088772	100.00	99.528	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	1817013	100.00	101.78	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	4625803	100.00	96.195	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	4905815	100.00	100.58	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	6309490	100.00	96.934	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	3146586	100.00	102.05	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.006	5160062	100.00	100.29	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.231	0.000	1212249	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	3103850	100.00	101.96	
102 Benzyl chloride	91.0	13.357	13.357	0.000	3510634	100.00	111.98	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	4288725	100.00	103.71	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	2812636	100.00	102.42	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	496629	100.00	108.03	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	1827420	100.00	107.45	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	872938	100.00	105.65	
108 Naphthalene	128.0	15.166	15.166	0.000	5253059	100.00	108.77	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	1713911	100.00	108.14	
S 110 Xylenes (total)	106.0	16.000		0.000		200.00	204.44	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		200.00	195.89	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

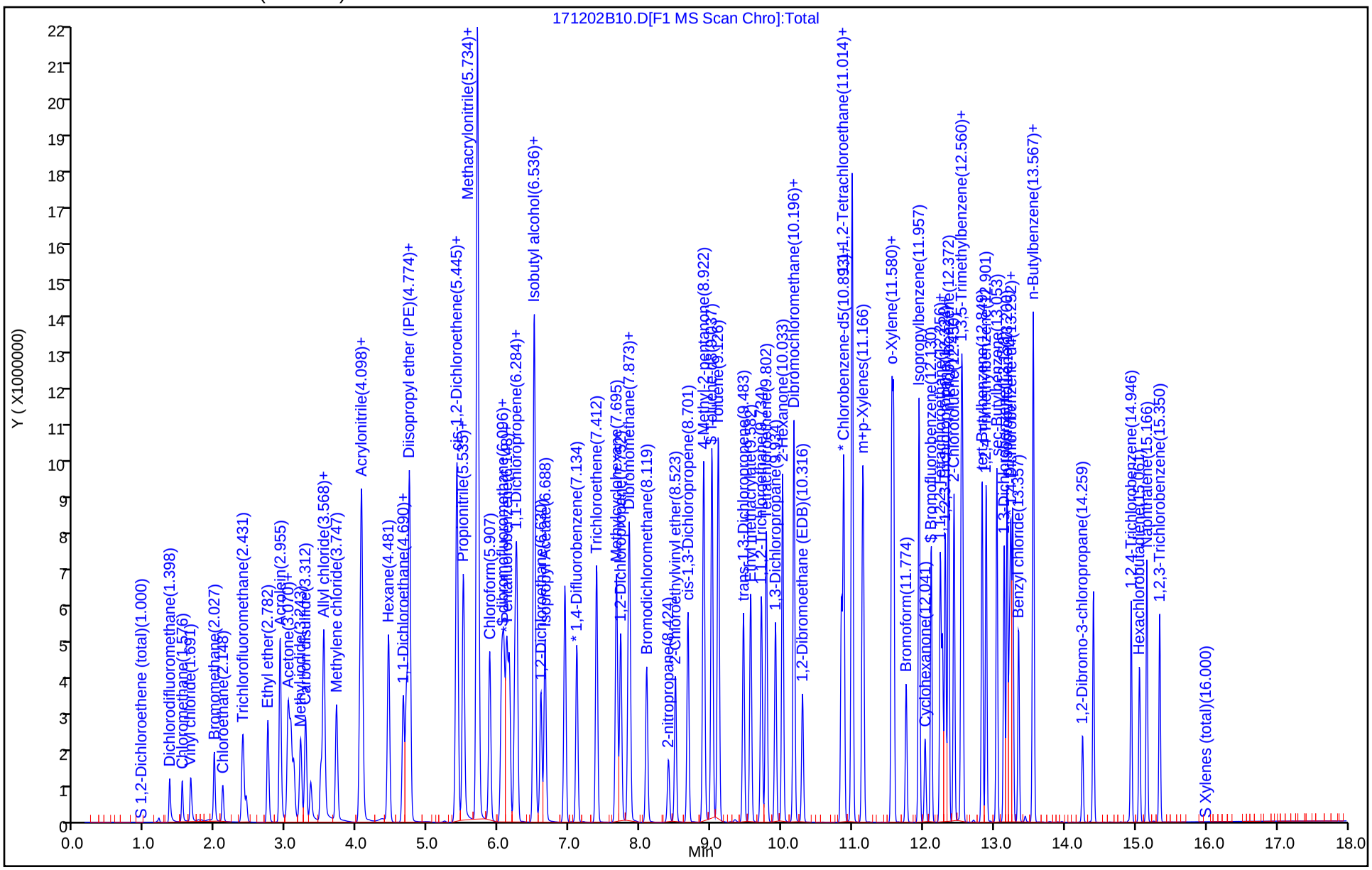
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D				
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ		
Sample Info:	17120219B, VSTD100BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

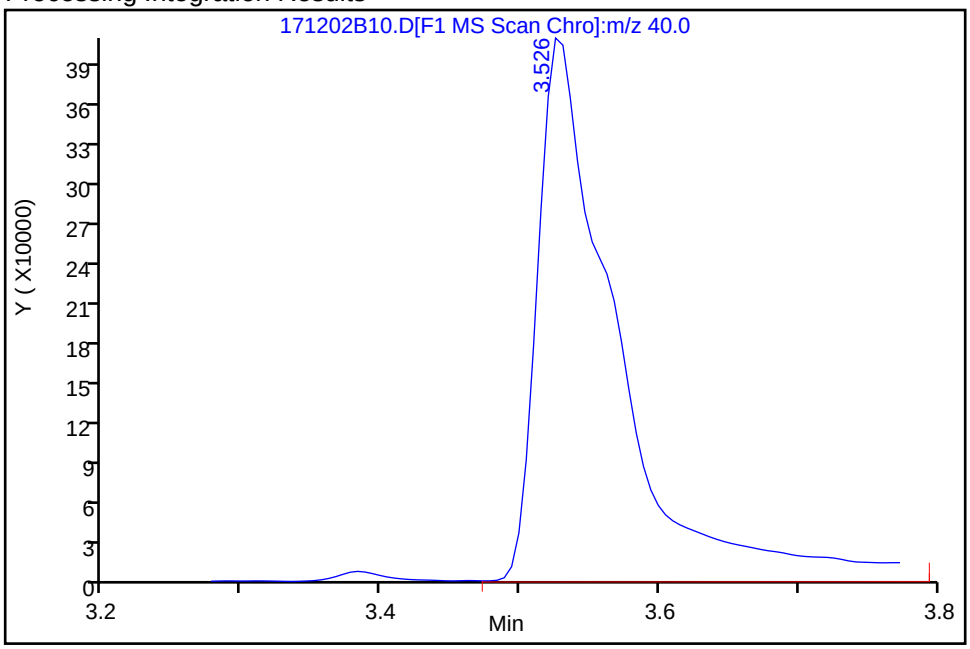
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

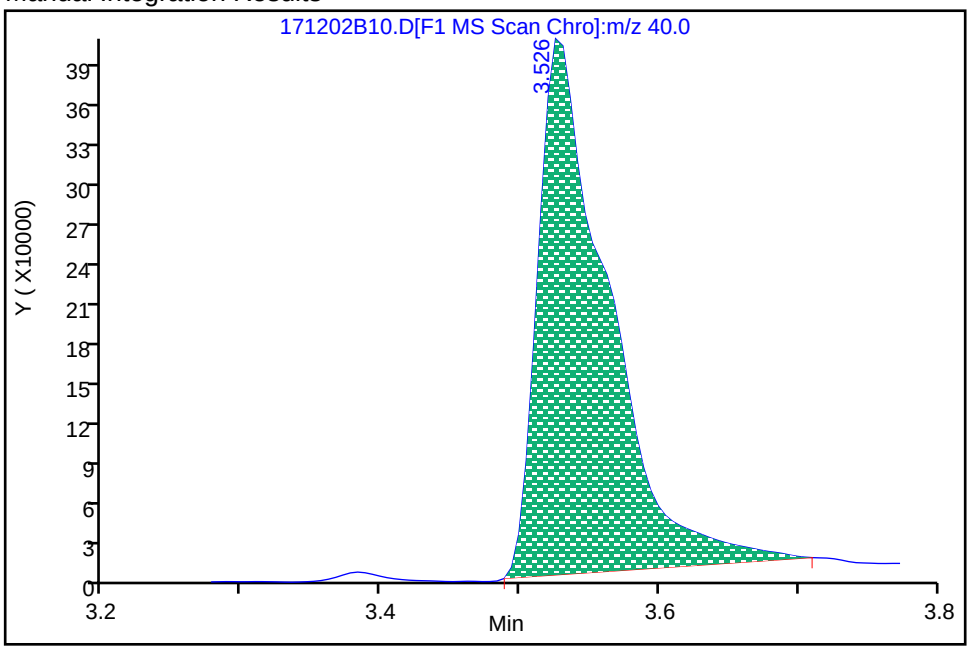
Processing Integration Results

RT: 3.526
Area: 1621008
Amount: 866.81
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.526
Area: 1399697
Amount: 911.05
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

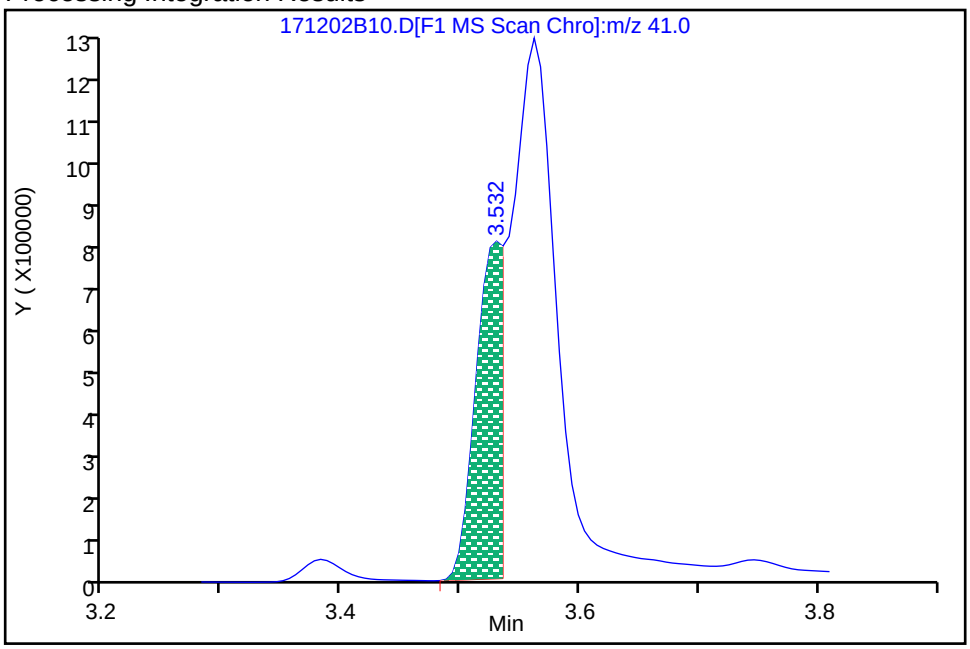
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

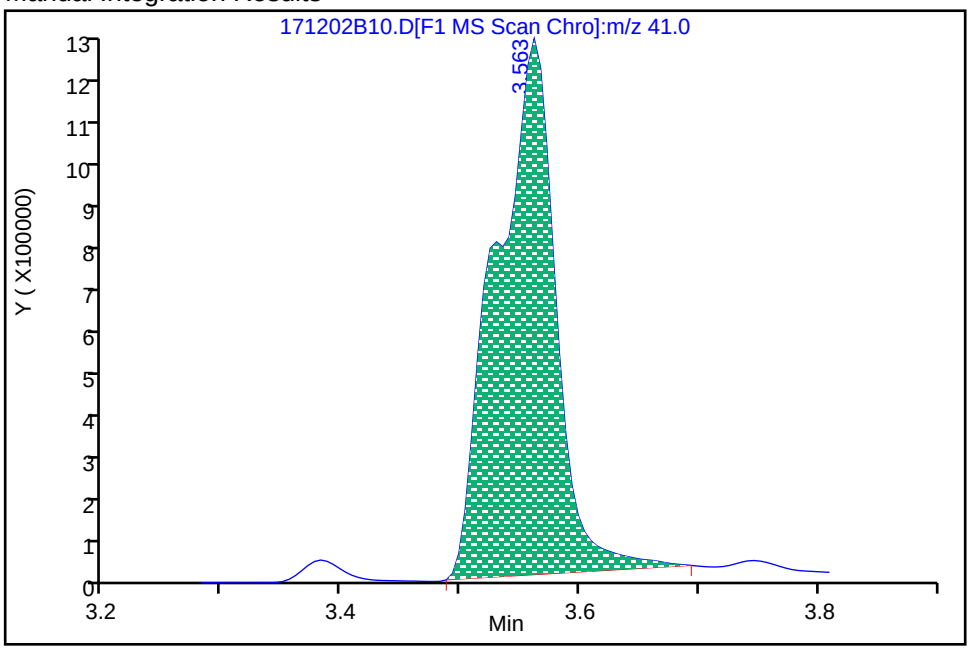
Processing Integration Results

RT:	3.532
Area:	1168362
Amount:	866.81
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	3.563
Area:	4339774
Amount:	911.05
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:47:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

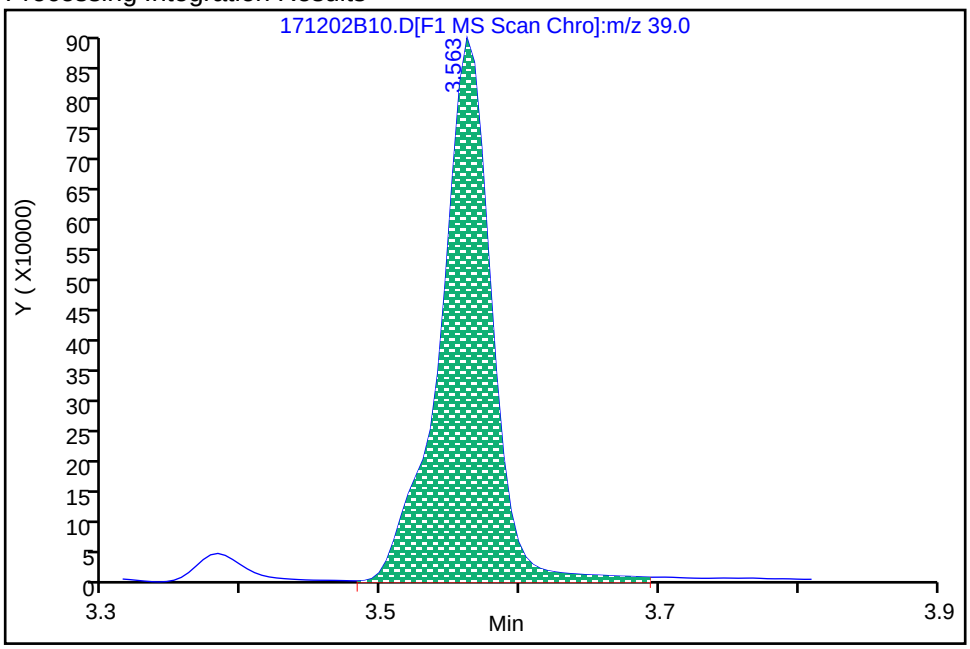
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

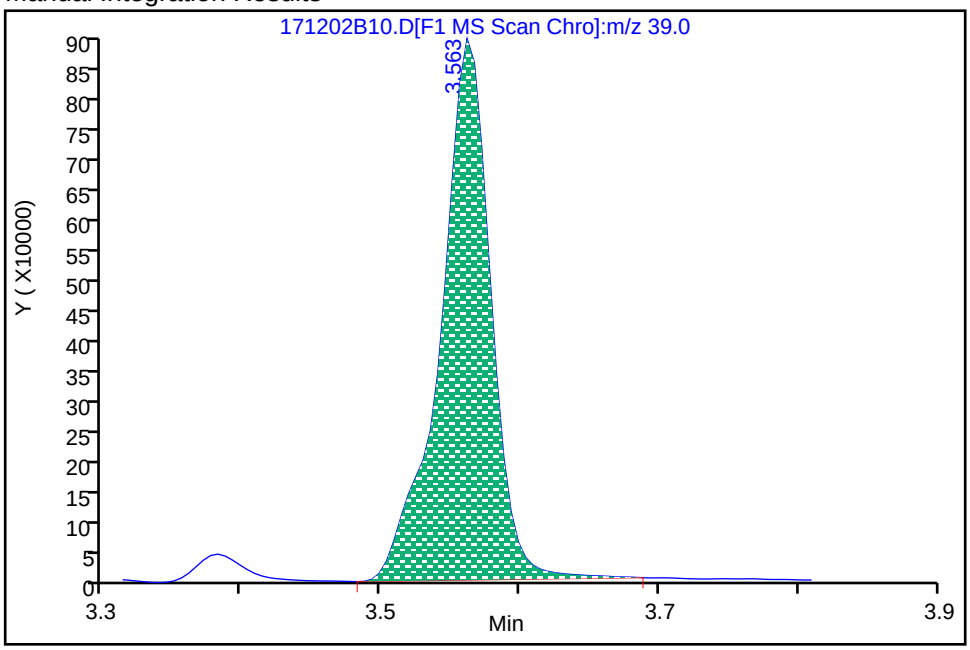
Processing Integration Results

RT: 3.563
Area: 2302163
Amount: 866.81
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 2234880
Amount: 911.05
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

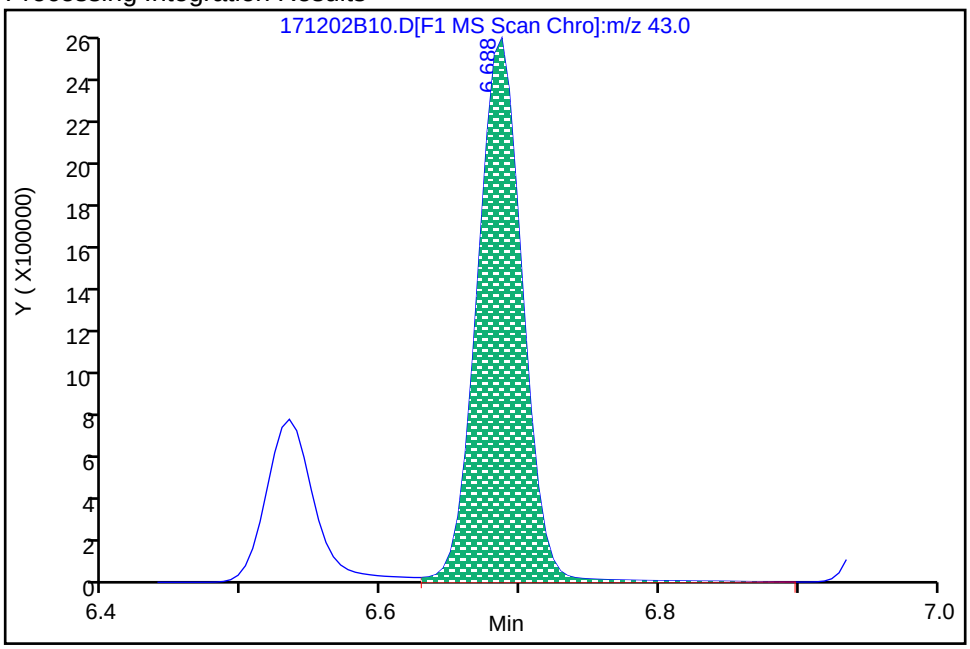
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

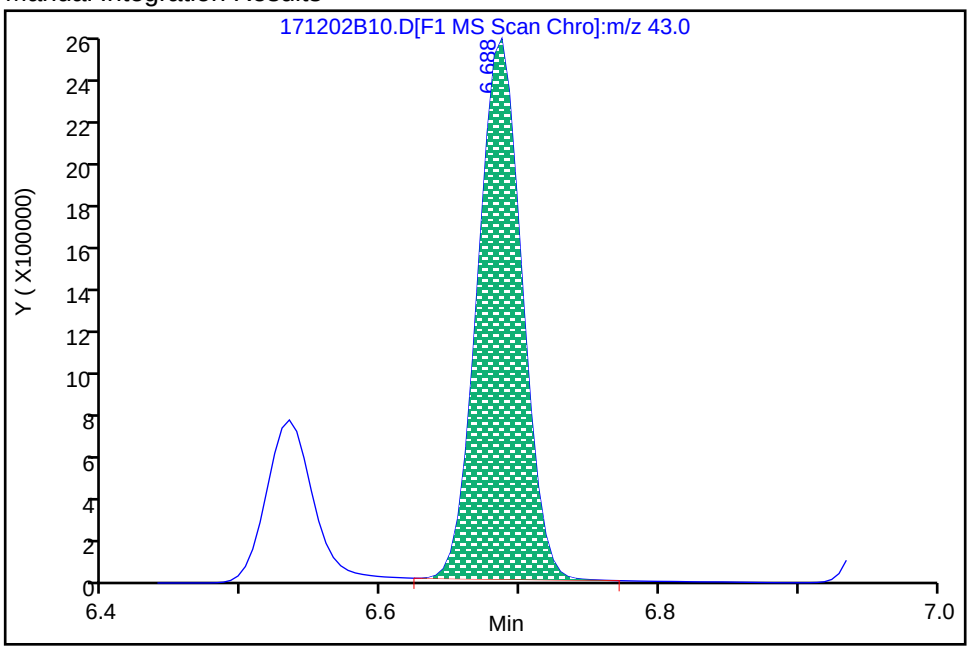
Processing Integration Results

RT: 6.688
Area: 5740653
Amount: 102.04
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 5573467
Amount: 102.53
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:52:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D
Lab Sample ID: VSTD200BQ Client Sample ID: 200uL/100mL15613/10
Injection Date: 03-Dec-2019 03:43:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD200BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 7 ALS Bottle: 11
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:48:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	2373130	200.00	200.39	
2 Chloromethane	50.0	1.576	1.576	0.000	1916147	200.00	192.21	
3 Vinyl chloride	62.0	1.697	1.697	0.000	2308531	200.00	197.21	
4 Bromomethane	94.0	2.027	2.027	0.000	2111210	200.00	188.42	
5 Chloroethane	64.0	2.142	2.148	-0.004	1680776	200.00	202.30	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	4882006	200.00	193.83	
8 Ethyl ether	59.0	2.782	2.782	0.000	3315867	200.00	196.32	
9 Acrolein	56.0	2.955	2.955	0.000	8974564	2000.00	1884.56	
10 Acetone	43.0	3.149	3.149	0.000	3662213	400.00	349.25	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	2789313	200.00	190.51	
12 Freon 113	101.0	3.102	3.107	-0.004	3004976	200.00	208.26	
13 Methyl iodide	142.0	3.243	3.243	0.000	5828245	200.00	189.18	
14 Carbon disulfide	76.0	3.311	3.311	0.000	8766832	200.00	191.49	
15 Acetonitrile	40.0	3.532	3.532	0.000	2730452	2000.00	1835.34	M
17 Allyl chloride	76.0	3.568	3.568	0.000	1953420	200.00	211.47	
16 Methyl Acetate	43.0	3.579	3.579	0.000	5084019	200.00	190.46	
18 Methylene chloride	84.0	3.752	3.747	0.005	3451172	200.00	182.08	
20 Acrylonitrile	53.0	4.077	4.077	0.000	4744617	400.00	379.81	
21 trans-1,2-Dichloroethene	96.0	4.103	4.103	0.000	4218519	200.00	199.88	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	9606746	200.00	181.44	
23 Hexane	57.0	4.481	4.481	0.000	5582485	200.00	198.70	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	6886150	200.00	194.18	
25 Vinyl acetate	86.0	4.732	4.732	0.000	1293544	200.00	213.08	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	3528585	200.00	195.71	
27 Chloroprene	53.0	4.780	4.780	0.000	5463792	200.00	199.18	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	4899790	200.00	196.62	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.000	2167918	400.00	366.00	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	4171986	200.00	180.32	
32 Propionitrile	54.0	5.545	5.540	0.006	8917854	2000.00	1747.44	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	7108255	200.00	179.78	
34 Methacrylonitrile	67.0	5.739	5.729	0.011	12939134	1000.00	890.37	
35 Bromochloromethane	128.0	5.750	5.744	0.005	2789185	200.00	199.85	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	2835436	200.00	174.21	
37 Chloroform	83.0	5.907	5.907	0.000	7526300	200.00	192.16	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	4853760	200.00	190.69	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	6584242	200.00	196.44	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3241688	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.000	2806655	200.00	187.16	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	5627550	200.00	197.34	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	6394619	200.00	205.10	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	1936545	2000.00	1766.01	
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.526	0.005	5084959	200.00	182.80	
48 Benzene	78.0	6.536	6.536	0.000	14817501	200.00	187.19	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	10160964	200.00	194.50	
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	5871343	200.00	190.85	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4344084	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	5278191	200.00	202.68	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	6566474	200.00	200.66	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	3762868	200.00	191.76	
56 Dibromomethane	93.0	7.862	7.862	0.000	3051384	200.00	195.19	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	4903710	200.00	191.94	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	442922	2000.00	1666.01	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	5634388	200.00	202.83	
60 2-nitropropane	43.0	8.424	8.424	0.000	2573594	200.00	197.17	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	3484357	200.00	200.07	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	6473979	200.00	200.96	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	11946522	400.00	346.77	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	14001260	200.00	180.69	
65 Toluene	92.0	9.131	9.126	0.005	9875154	200.00	197.03	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	6253270	200.00	215.86	
67 Ethyl methacrylate	69.0	9.587	9.582	0.005	6530022	200.00	205.08	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	4010238	200.00	196.80	
69 Tetrachloroethene	164.0	9.808	9.802	0.005	4155542	200.00	203.62	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	6095912	200.00	190.67	
71 2-Hexanone	43.0	10.033	10.033	0.000	10629568	400.00	370.39	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	4862252	200.00	217.20	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	8234321	200.00	193.66	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	4451082	200.00	201.83	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3297677	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.893	0.005	9971560	200.00	187.92	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	3808056	200.00	199.10	
79 Ethylbenzene	106.0	11.019	11.019	0.000	5522259	200.00	196.58	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	6572017	200.00	196.06	
81 o-Xylene	106.0	11.575	11.575	0.000	5674194	200.00	190.84	
82 Styrene	104.0	11.601	11.596	0.005	9699240	200.00	192.96	
83 Bromoform	173.0	11.774	11.774	0.000	3330795	200.00	202.74	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	12273854	200.00	168.99	
85 Cyclohexanone	55.0	12.041	12.041	0.000	1390034	2000.00	1682.92	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.130	0.000	4138495	200.00	186.65	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	4022030	200.00	190.63	M
87 Bromobenzene	156.0	12.256	12.256	0.000	3999693	200.00	193.14	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	1612099	200.00	188.84	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	1244251	200.00	202.36	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	13096785	200.00	163.48	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	8137584	200.00	177.57	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.555	0.000	8611570	200.00	175.07	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	3338305	200.00	194.38	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	7777974	200.00	168.13	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	8402539	200.00	179.07	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	10430245	200.00	166.56	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	5739220	200.00	193.47	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.005	8736378	200.00	176.49	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.231	0.000	1166250	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	5683162	200.00	194.05	
102 Benzyl chloride	91.0	13.363	13.357	0.005	6478505	200.00	214.80	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	7525593	200.00	189.15	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	5215905	200.00	197.43	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	970612	200.00	219.46	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	3462767	200.00	211.63	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	1641302	200.00	206.48	
108 Naphthalene	128.0	15.166	15.166	0.000	9600692	200.00	206.63	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	3203845	200.00	210.12	
S 110 Xylenes (total)	106.0	16.000		0.000		400.00	386.90	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		400.00	396.50	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

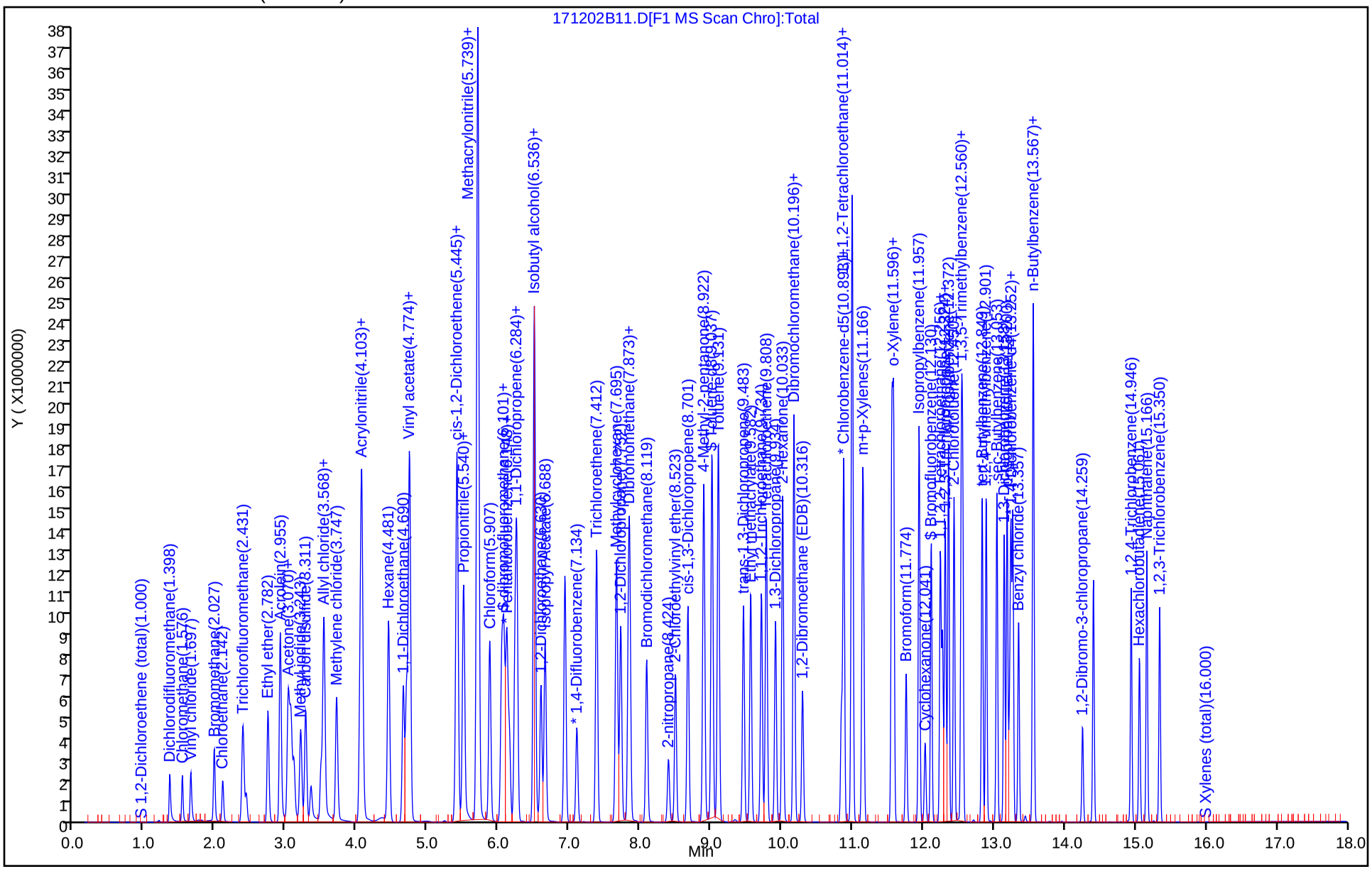
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D				
Injection Date:	03-Dec-2019 03:43:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	200uL/100mL15613/10	Lab ID:	VSTD200BQ		
Sample Info:	17120219B, VSTD200BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

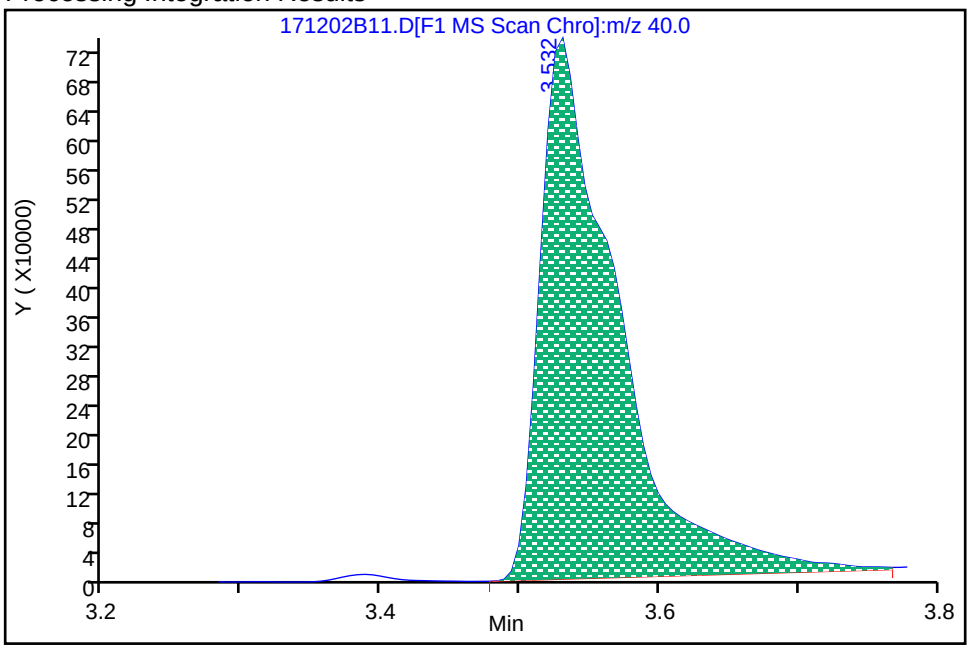
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D		
Injection Date:	03-Dec-2019 03:43:30	Inst. ID:	msd17.i
Client ID:	200uL/100mL15613/10	Lab ID:	VSTD200BQ
Sample Info:	17120219B, VSTD200BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

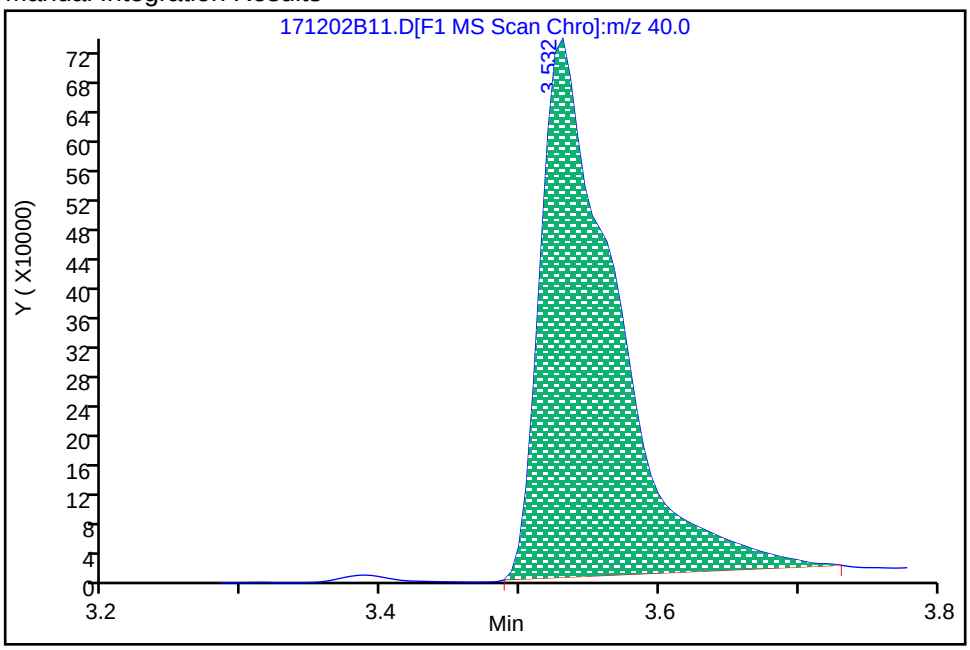
Processing Integration Results

RT: 3.532
Area: 2824803
Amount: 1610.55
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 2730452
Amount: 1835.34
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:48:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

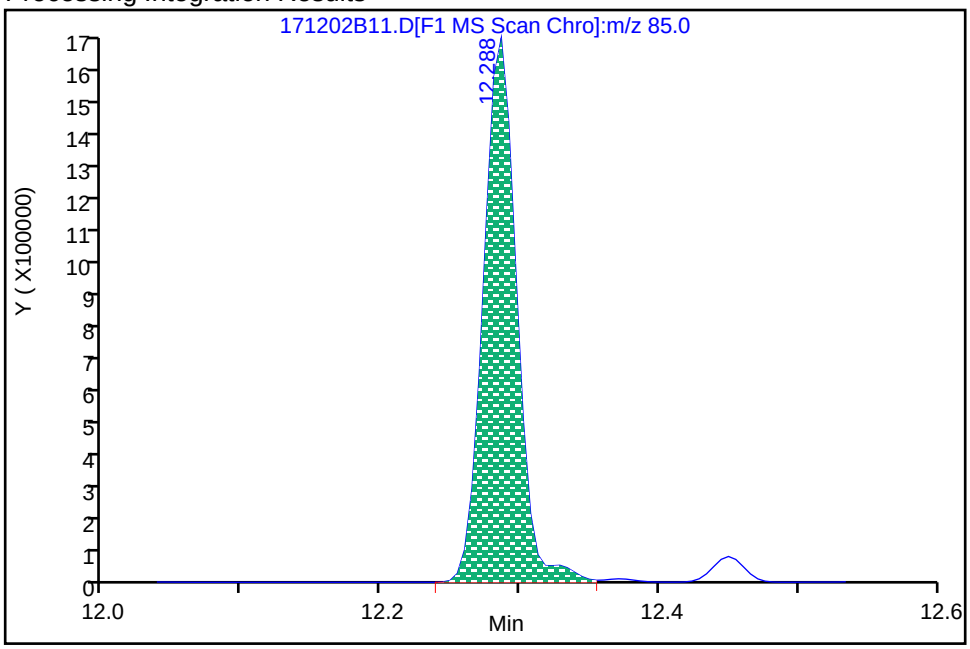
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D		
Injection Date:	03-Dec-2019 03:43:30	Inst. ID:	msd17.i
Client ID:	200uL/100mL15613/10	Lab ID:	VSTD200BQ
Sample Info:	17120219B, VSTD200BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

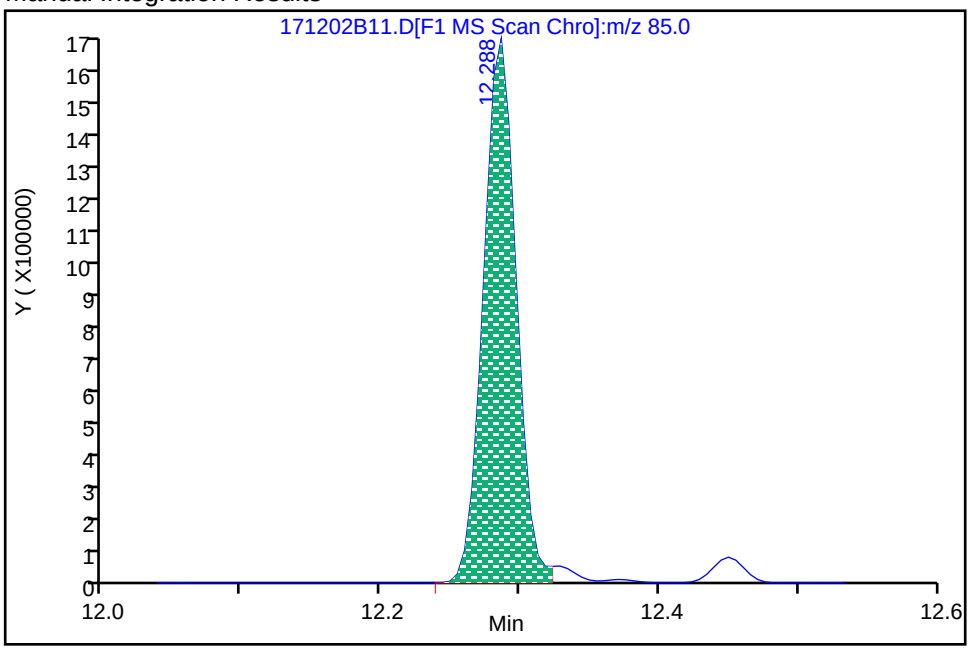
Processing Integration Results

RT: 12.288
Area: 2720690
Amount: 189.44
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 2671903
Amount: 190.63
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:48:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
ICV, Initial Calibration Verificaion Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D
Lab Sample ID: VICV050BQ Client Sample ID: 50uL/100mL 15608/11
Injection Date: 03-Dec-2019 04:30:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VICV050BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: ICV ALS Bottle: 13
Cpnd Sublist: std.sub Spike List File: 8260ICV70-130.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	47.511	-5	95	70- 130
2 Chloromethane	50	45.943	-8.1	91.9	70- 130
3 Vinyl chloride	50	45.841	-8.3	91.7	70- 130
4 Bromomethane	50	49.924	-0.2	99.8	70- 130
5 Chloroethane	50	53.31	6.6	106	70- 130
6 Trichlorofluoromethane	50	52.162	4.3	104	70- 130
8 Ethyl ether	50	52.822	5.6	105	70- 130
9 Acrolein	500	507.68	1.5	101	70- 130
10 Acetone	100	89.95	-10	90	70- 130
11 1,1-Dichloroethene	50	60.771	21.5	121	70- 130
12 Freon 113	50	50.907	1.8	101	70- 130
13 Methyl iodide	50	52.225	4.4	104	70- 130
14 Carbon disulfide	50	52.616	5.2	105	70- 130
15 Acetonitrile	500	499.24	-0.2	99.8	70- 130
16 Methyl Acetate	50	50.167	0.3	100	70- 130
17 Allyl chloride	50	61.742	23.5	123	70- 130
18 Methylene chloride	50	50.123	0.2	100	70- 130
20 Acrylonitrile	100	99.401	-0.6	99.4	70- 130
21 trans-1,2-Dichloroethene	50	55.497	11	110	70- 130
22 tert-Butyl methyl ether(MTB	50	50.886	1.8	101	70- 130
23 Hexane	50	46.904	-6.2	93.8	70- 130
24 1,1-Dichloroethane	50	51.91	3.8	103	70- 130
25 Vinyl acetate	50	53.757	7.5	107	70- 130
26 Diisopropyl ether (IPE)	50	53.358	6.7	106	70- 130
27 Chloroprene	50	55.808	11.6	111	70- 130
29 cis-1,2-Dichloroethene	50	51.431	2.9	102	70- 130
30 2-Butanone (MEK)	100	91.175	-8.8	91.2	70- 130
31 2,2-Dichloropropane	50	49.754	-0.5	99.5	70- 130
32 Propionitrile	500	481.89	-3.6	96.4	70- 130
33 Ethyl Acetate	50	46.576	-6.8	93.2	70- 130
34 Methacrylonitrile	250	247.54	-1	99	70- 130
35 Bromochloromethane	50	49.881	-0.2	99.8	70- 130
36 Tetrahydrofuran	50	45.357	-9.3	90.7	70- 130
37 Chloroform	50	52.381	4.8	104	70- 130
40 1,1,1-Trichloroethane	50	51.504	3	103	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
42 Cyclohexane	50	51.548	3.1	103	70- 130
43 1,1-Dichloropropene	50	51.692	3.4	103	70- 130
44 Carbon tetrachloride	50	51.716	3.4	103	70- 130
45 Isobutyl alcohol	500	488.01	-2.4	97.6	70- 130
48 Benzene	50	50.393	0.8	100	70- 130
49 Isopropyl Acetate	50	48.601	-2.8	97.2	70- 130
50 1,2-Dichloroethane	50	49.284	-1.4	98.6	70- 130
53 Trichloroethene	50	50.741	1.5	101	70- 130
54 Methylcyclohexane	50	51.369	2.7	102	70- 130
55 1,2-Dichloropropane	50	49.499	-1	99	70- 130
56 Dibromomethane	50	49.648	-0.7	99.3	70- 130
57 Methyl methacrylate	50	49.153	-1.7	98.3	70- 130
58 1,4-Dioxane	500	453.04	-9.4	90.6	70- 130
59 Bromodichloromethane	50	52.848	5.7	105	70- 130
60 2-nitropropane	50	48.131	-3.7	96.3	70- 130
61 2-Chloroethylvinyl ether	50	46.968	-6.1	93.9	70- 130
62 cis-1,3-Dichloropropene	50	55.401	10.8	110	70- 130
63 4-Methyl-2-pentanone	100	92.646	-7.4	92.6	70- 130
65 Toluene	50	48.111	-3.8	96.2	70- 130
66 trans-1,3-Dichloropropene	50	53.835	7.7	107	70- 130
67 Ethyl methacrylate	50	48.664	-2.7	97.3	70- 130
68 1,1,2-Trichloroethane	50	47.782	-4.4	95.6	70- 130
69 Tetrachloroethene	50	48.979	-2	98	70- 130
70 1,3-Dichloropropane	50	49.197	-1.6	98.4	70- 130
71 2-Hexanone	100	89.244	-10.8	89.2	70- 130
72 Dibromochloromethane	50	52.406	4.8	104	70- 130
73 n-Butyl acetate	50	47.845	-4.3	95.7	70- 130
75 1,2-Dibromoethane (EDB)	50	50.279	0.6	100	70- 130
77 Chlorobenzene	50	50.179	0.4	100	70- 130
78 1,1,1,2-Tetrachloroethane	50	49.528	-0.9	99.1	70- 130
79 Ethylbenzene	50	50.198	0.4	100	70- 130
80 m+p-Xylenes	50	51.036	2.1	102	70- 130
81 o-Xylene	50	50.74	1.5	101	70- 130
82 Styrene	50	52.672	5.3	105	70- 130
83 Bromoform	50	48.051	-3.9	96.1	70- 130
84 Isopropylbenzene	50	50.715	1.4	101	70- 130
85 Cyclohexanone	500	482.36	-3.5	96.5	60- 140
87 Bromobenzene	50	50.832	1.7	101	70- 130
88 1,1,2,2-Tetrachloroethane	50	47.827	-4.3	95.7	70- 130
89 1,2,3-Trichloropropane	50	50.876	1.8	101	70- 130
90 trans-1,4-Dichloro-2-butene	50	44.96	-10.1	89.9	70- 130
91 n-Propylbenzene	50	49.905	-0.2	99.8	70- 130
92 2-Chlorotoluene	50	49.499	-1	99	70- 130
93 1,3,5-Trimethylbenzene	50	51.12	2.2	102	70- 130
94 4-Chlorotoluene	50	51.584	3.2	103	70- 130
95 tert-Butylbenzene	50	48.265	-3.5	96.5	70- 130
96 1,2,4-Trimethylbenzene	50	50.614	1.2	101	70- 130

Report Date: 04-Dec-2019 13:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
97 sec-Butylbenzene	50	48.593	-2.8	97.2	70- 130
98 1,3-Dichlorobenzene	50	49.372	-1.3	98.7	70- 130
99 p-Isopropyltoluene	50	50.968	1.9	101	70- 130
101 1,4-Dichlorobenzene	50	49.43	-1.1	98.9	70- 130
102 Benzyl chloride	50	49.842	-0.3	99.7	70- 130
103 n-Butylbenzene	50	51.362	2.7	102	70- 130
104 1,2-Dichlorobenzene	50	48.529	-2.9	97.1	70- 130
105 1,2-Dibromo-3-chloropropane	50	48.086	-3.8	96.2	70- 130
106 1,2,4-Trichlorobenzene	50	48.618	-2.8	97.2	70- 130
107 Hexachlorobutadiene	50	48.523	-3	97	70- 130
108 Naphthalene	50	50.699	1.4	101	70- 130
109 1,2,3-Trichlorobenzene	50	48.323	-3.4	96.6	70- 130
S 110 Xylenes (total)	100	101.78	1.8	101	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D
Lab Sample ID: VICV050BQ Client Sample ID: 50uL/100mL 15608/11
Injection Date: 03-Dec-2019 04:30:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VICV050BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: ICV ALS Bottle: 13
Cpnd Sublist: std.sub Spike List File: 8260ICV70-130.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:54:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	569696	47.511	47.511	
2 Chloromethane	50.0	1.576	1.576	0.000	463733	45.943	45.943	
3 Vinyl chloride	62.0	1.697	1.697	0.000	543338	45.841	45.841	
4 Bromomethane	94.0	2.027	2.027	0.000	566387	49.924	49.924	
5 Chloroethane	64.0	2.148	2.148	0.000	448464	53.310	53.310	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	1330274	52.162	52.162	
8 Ethyl ether	59.0	2.782	2.782	0.000	903327	52.822	52.822	
9 Acrolein	56.0	2.955	2.955	0.000	2447901	507.68	507.68	
10 Acetone	43.0	3.149	3.149	0.000	955005	89.950	89.950	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	900915	60.771	60.771	
12 Freon 113	101.0	3.107	3.107	0.000	743722	50.907	50.907	
13 Methyl iodide	142.0	3.243	3.243	0.000	1629032	52.225	52.225	
14 Carbon disulfide	76.0	3.311	3.311	0.000	2439057	52.616	52.616	
15 Acetonitrile	40.0	3.532	3.532	0.000	752016	499.24	499.24	M
17 Allyl chloride	76.0	3.568	3.568	0.000	577462	61.742	61.742	
16 Methyl Acetate	43.0	3.579	3.579	0.000	1355899	50.167	50.167	
18 Methylene chloride	84.0	3.747	3.747	0.000	961919	50.123	50.123	
20 Acrylonitrile	53.0	4.077	4.077	0.000	1257261	99.401	99.401	
21 trans-1,2-Dichloroethene	96.0	4.103	4.103	0.000	1185929	55.497	55.497	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	2728042	50.886	50.886	
23 Hexane	57.0	4.481	4.481	0.000	1334241	46.904	46.904	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	1863877	51.910	51.910	
25 Vinyl acetate	86.0	4.732	4.732	0.000	330419	53.757	53.757	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	974076	53.358	53.358	
27 Chloroprene	53.0	4.780	4.780	0.000	1550050	55.808	55.808	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	1297716	51.431	51.431	
30 2-Butanone (MEK)	72.0	5.451	5.456	-0.004	546809	91.175	91.175	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	1165572	49.754	49.754	
32 Propionitrile	54.0	5.540	5.540	0.000	2490060	481.89	481.89	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	1864575	46.576	46.576	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	3642397	247.54	247.54	
35 Bromochloromethane	128.0	5.744	5.744	0.000	704886	49.881	49.881	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	747444	45.357	45.357	
37 Chloroform	83.0	5.907	5.907	0.000	2077208	52.381	52.381	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	1304342	50.609	50.609	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	1747903	51.504	51.504	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3282259	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.000	782701	51.548	51.548	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	1492545	51.692	51.692	
44 Carbon tetrachloride	119.0	6.263	6.269	-0.004	1632576	51.716	51.716	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	541828	488.01	488.01	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	1403580	48.011	48.011	
48 Benzene	78.0	6.536	6.536	0.000	4192319	50.393	50.393	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	2668354	48.601	48.601	
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	1593453	49.284	49.284	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4565509	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	1388749	50.741	50.741	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	1766692	51.369	51.369	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	1020796	49.499	49.499	
56 Dibromomethane	93.0	7.862	7.862	0.000	815694	49.648	49.648	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	1319760	49.153	49.153	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	126583	453.04	453.04	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	1542863	52.848	52.848	
60 2-nitropropane	43.0	8.424	8.424	0.000	660270	48.131	48.131	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	859689	46.968	46.968	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	1875751	55.401	55.401	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	3354447	92.646	92.646	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	4280864	48.031	48.031	
65 Toluene	92.0	9.126	9.126	0.000	2773543	48.111	48.111	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	1793753	53.835	53.835	
67 Ethyl methacrylate	69.0	9.582	9.582	0.000	1782233	48.664	48.664	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	1119922	47.782	47.782	
69 Tetrachloroethene	164.0	9.802	9.802	0.000	1149700	48.979	48.979	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	1809091	49.197	49.197	
71 2-Hexanone	43.0	10.033	10.033	0.000	2945866	89.244	89.244	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	1349359	52.406	52.406	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	2339903	47.845	47.845	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	1275379	50.279	50.279	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3793008	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.893	0.000	3062536	50.179	50.179	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	1089595	49.528	49.528	
79 Ethylbenzene	106.0	11.019	11.019	0.000	1621955	50.198	50.198	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	1967718	51.036	51.036	
81 o-Xylene	106.0	11.575	11.575	0.000	1735254	50.740	50.740	
82 Styrene	104.0	11.596	11.596	0.000	3045331	52.672	52.672	
83 Bromoform	173.0	11.774	11.774	0.000	904038	48.051	48.051	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	4236765	50.715	50.715	
85 Cyclohexanone	55.0	12.041	12.041	0.000	458260	482.36	482.36	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.130	-0.004	1326390	52.011	52.011	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	1152119	47.827	47.827	M
87 Bromobenzene	156.0	12.256	12.256	0.000	1201880	50.832	50.832	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	495889	50.876	50.876	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	314184	44.960	44.960	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	4564748	49.905	49.905	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	2589976	49.499	49.499	
93 1,3,5-Trimethylbenzene	105.0	12.550	12.555	-0.005	2870907	51.120	51.120	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	1011471	51.584	51.584	
95 tert-Butylbenzene	119.0	12.843	12.849	-0.004	2549381	48.265	48.265	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	2711527	50.614	50.614	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	3474184	48.593	48.593	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	1672164	49.372	49.372	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	2880556	50.968	50.968	
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.231	-0.004	1331546	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	1652838	49.430	49.430	
102 Benzyl chloride	91.0	13.357	13.357	0.000	1716319	49.842	49.842	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	2333093	51.362	51.362	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	1463800	48.529	48.529	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	242818	48.086	48.086	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	908261	48.618	48.618	
107 Hexachlorobutadiene	225.0	15.061	15.067	-0.004	440374	48.523	48.523	
108 Naphthalene	128.0	15.166	15.166	0.000	2689563	50.699	50.699	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	841265	48.323	48.323	
S 110 Xylenes (total)	106.0	16.000		0.000		101.78	101.78	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		106.93	106.93	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

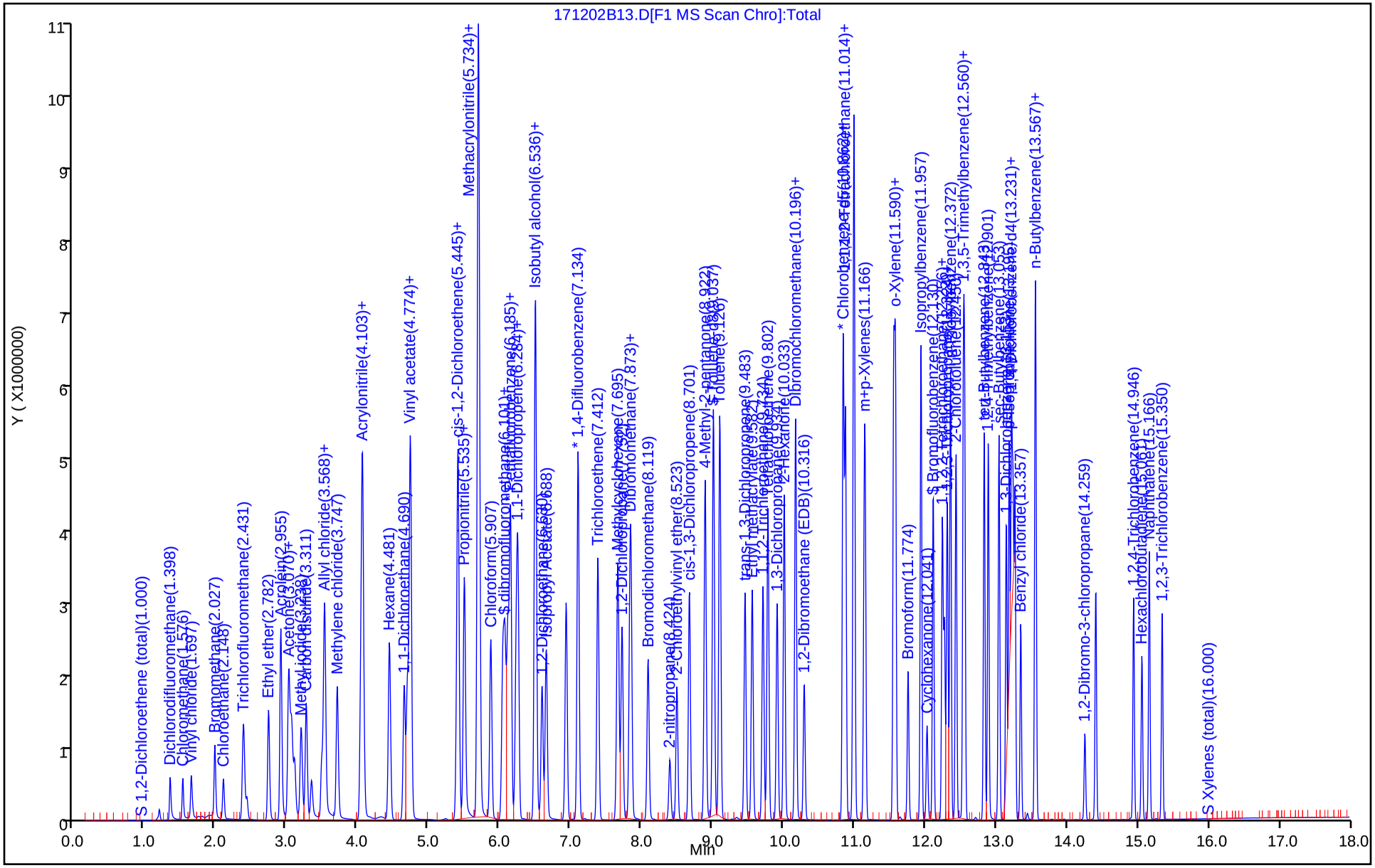
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D				
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ		
Sample Info:	17120219B, VICV050BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

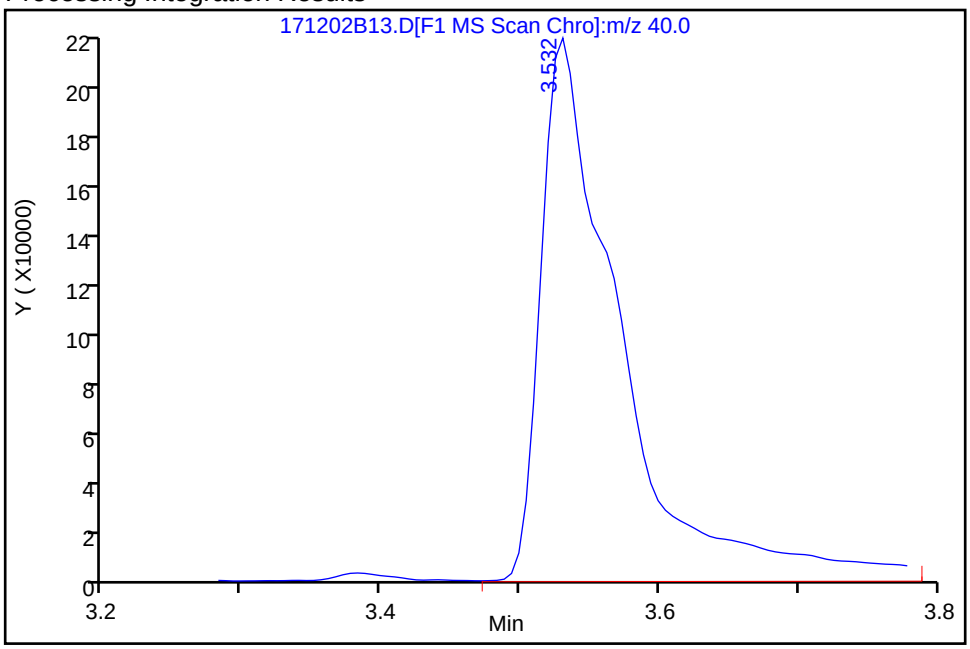
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

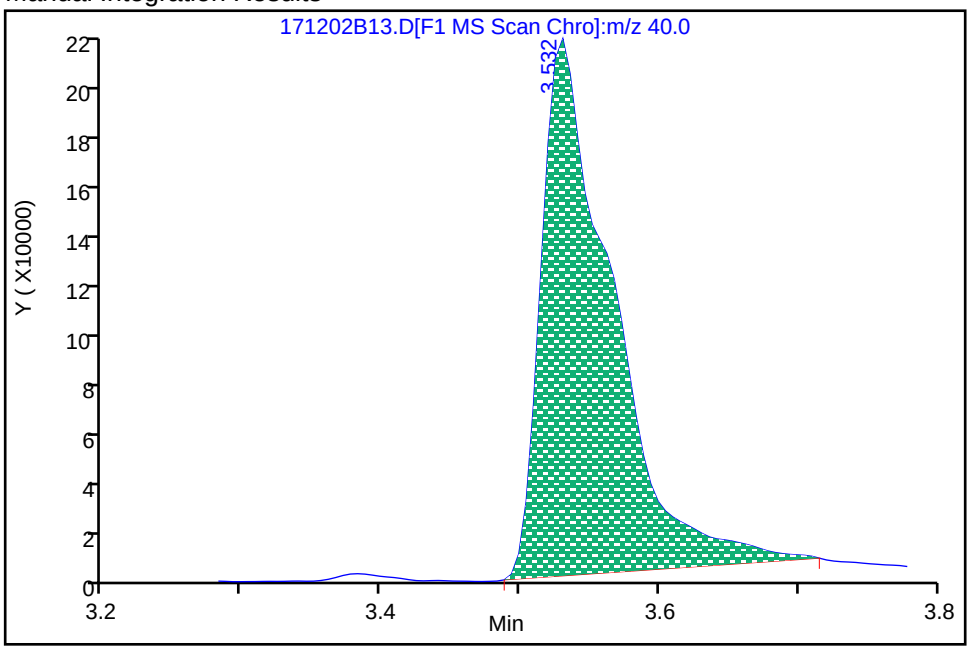
Processing Integration Results

RT: 3.532
Area: 854845
Amount: 567.50
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 752016
Amount: 499.24
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

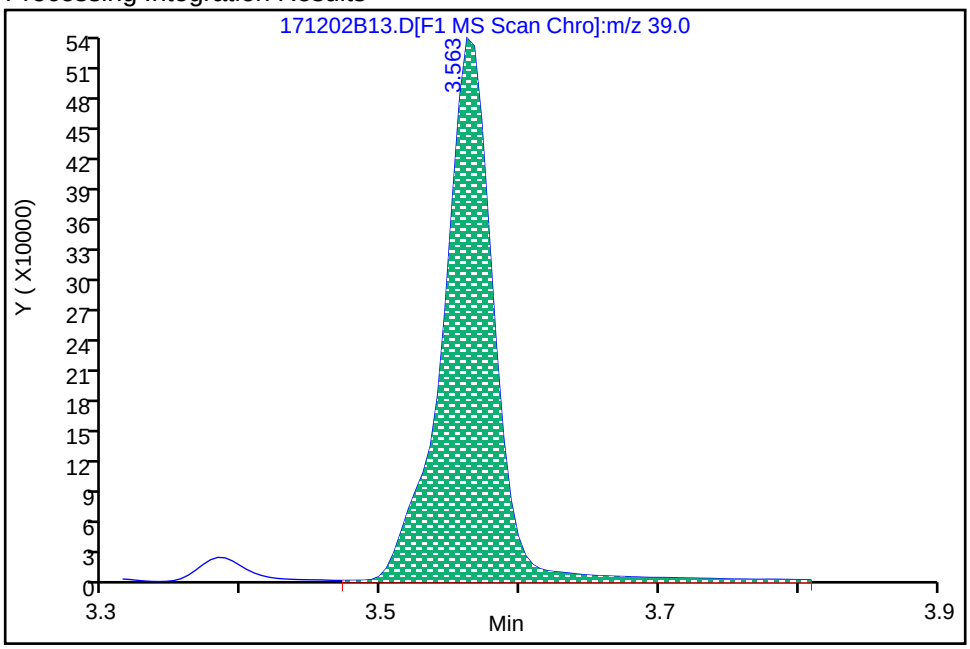
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

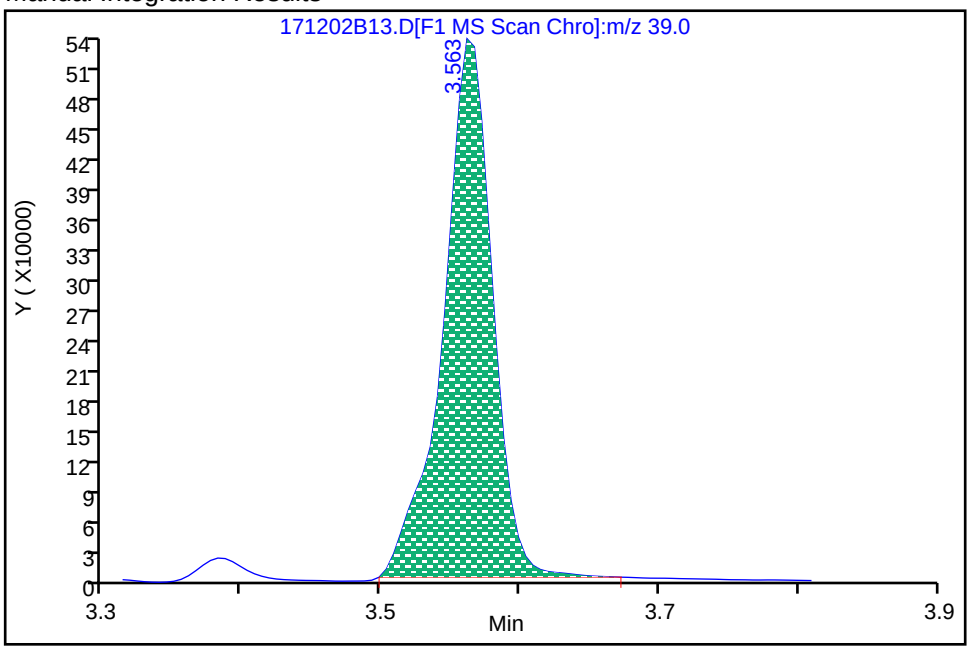
Processing Integration Results

RT: 3.563
Area: 1374540
Amount: 567.50
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 1284792
Amount: 499.24
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

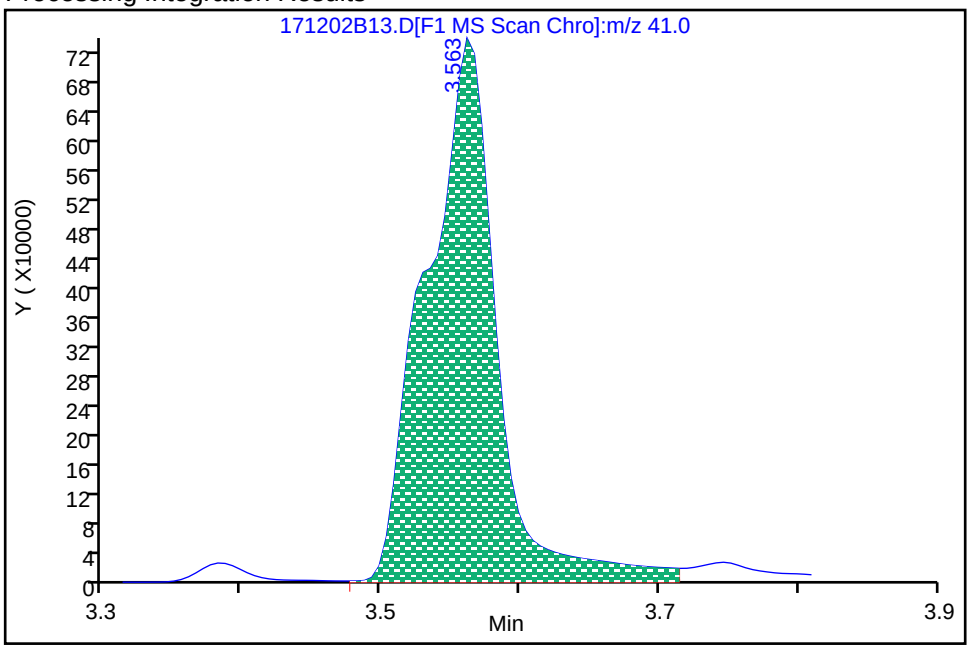
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

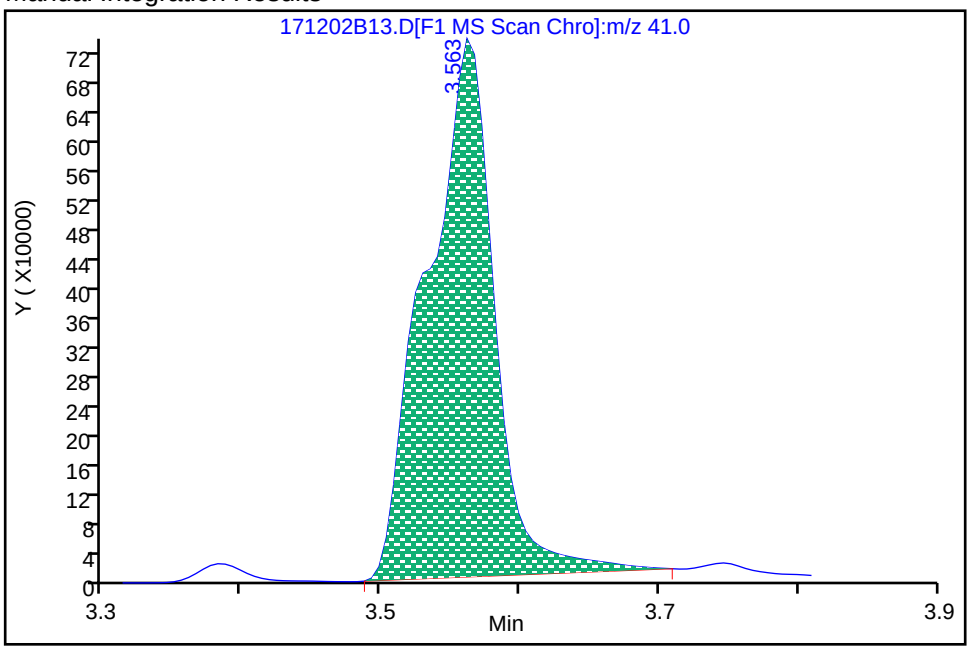
Processing Integration Results

RT: 3.563
Area: 2610072
Amount: 567.50
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 2459663
Amount: 499.24
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

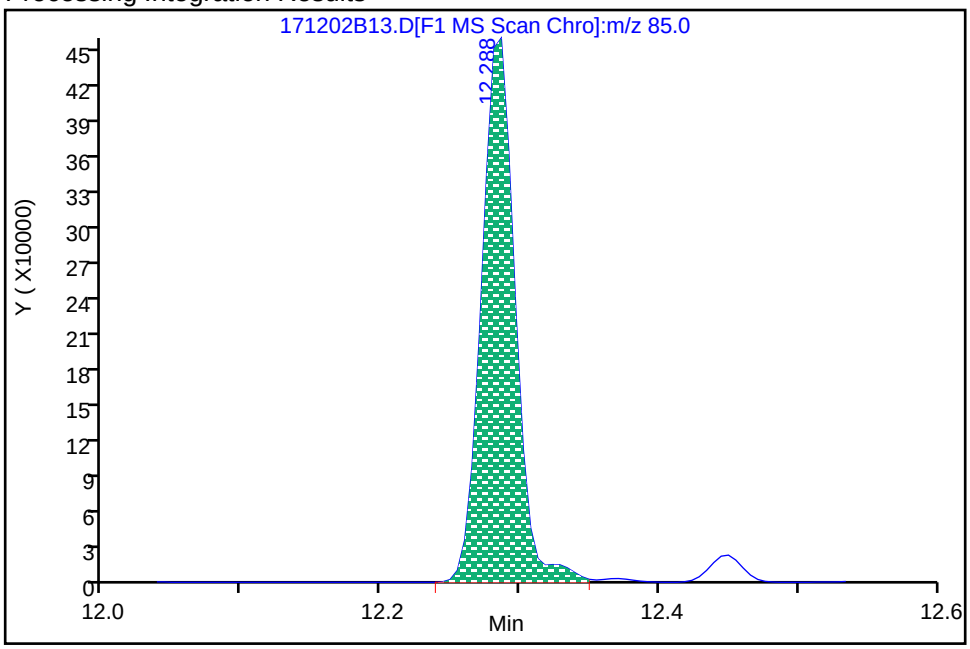
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

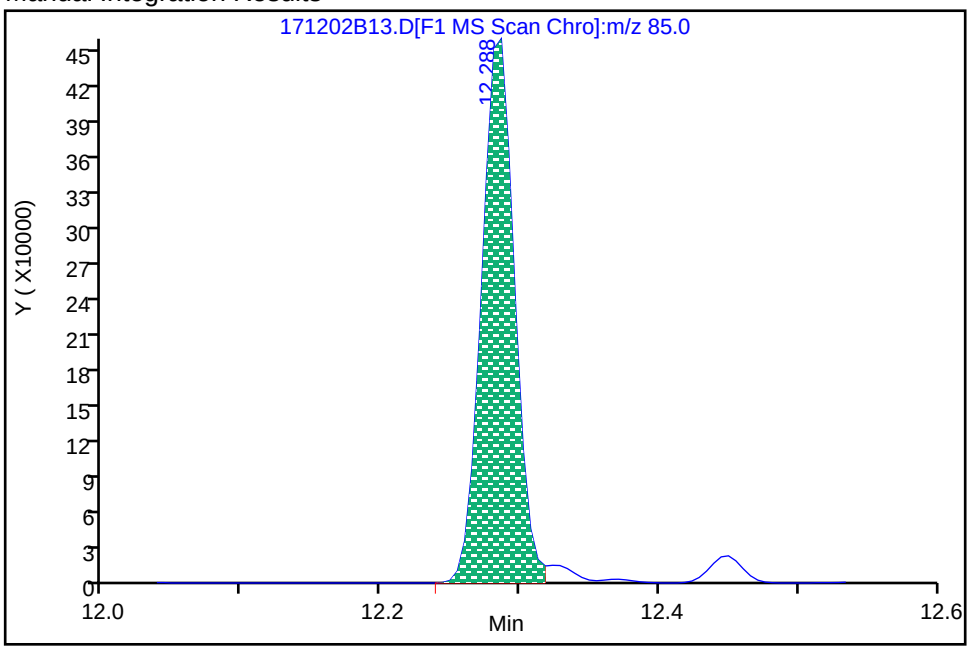
Processing Integration Results

RT: 12.288
Area: 769785
Amount: 47.827
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 752207
Amount: 47.827
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:54:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A02.D
Lab Sample ID: VSTD050BR Client Sample ID: 50uL/100mL 15613/10
Injection Date: 03-Dec-2019 09:23:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, VSTD050BR
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: CCV ALS Bottle: 2
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.18266		0.216547	0.01	18.6	40	119
2 Chloromethane	0.15376		0.168249	0.1	9.4	40	109
3 Vinyl chloride	0.180556		0.200799	0.01	11.2	20	111
4 Bromomethane	0.172822		0.185332	0.01	7.2	30	107
5 Chloroethane	0.128149		0.138936	0.01	8.4	30	108
6 Trichlorofluoromethane	0.388492		0.410747	0.01	5.7	30	106
8 Ethyl ether	0.260511		0.256219	0.01	-1.6	30	98
9 Acrolein	0.073452		0.078654	0.001	7.1	40	107
10 Acetone	0.161734		0.204507	0.01	26.4	40	126
11 1,1-Dichloroethene	0.225832		0.226735	0.01	0.4	20	100
12 Freon 113	0.222552		0.232672	0.01	4.5	30	105
13 Methyl iodide	0.475172		0.473906	0.01	-0.3	30	100
14 Carbon disulfide	0.706162		0.732151	0.01	3.7	30	104
15 Acetonitrile	0.022946		0.022179	0.01	-3.3	40	97
16 Methyl Acetate	0.411727		0.398042	0.01	-3.3	30	97
17 Allyl chloride	0.142476		0.148147	0.01	4	30	104
18 Methylene chloride	0.292345		0.278477	0.01	-4.7	30	95
20 Acrylonitrile	0.192677		0.192419	0.01	-0.1	40	100
21 trans-1,2-Dichloroethene	0.325529		0.32293	0.01	-0.8	20	99
22 tert-Butyl methyl ether(	0.816679		0.795704	0.01	-2.6	30	97
23 Hexane	0.433333		0.450802	0.01	4	30	104
24 1,1-Dichloroethane	0.546966		0.540689	0.1	-1.1	20	99
25 Vinyl acetate	0.093633		0.097984	0.001	4.6	40	105
26 Diisopropyl ether (IPE)	0.278094		0.274418	0.01	-1.3	30	99
27 Chloroprene	0.423102		0.429557	0.01	1.5	30	102
29 cis-1,2-Dichloroethene	0.384369		0.374422	0.01	-2.6	20	97
30 2-Butanone (MEK)	0.09136		0.100376	0.01	9.9	30	110
31 2,2-Dichloropropane	0.356868		0.368594	0.01	3.3	40	103
32 Propionitrile	0.078715		0.078931	0.01	0.3	30	100
33 Ethyl Acetate	0.609841		0.606957	0.01	-0.5	30	100
34 Methacrylonitrile	0.224146		0.222904	0.01	-0.6	30	99
35 Bromochloromethane	0.215268		0.209514	0.01	-2.7	30	97
36 Tetrahydrofuran	0.251036		0.241609	0.01	-3.8	30	96
37 Chloroform	0.604096		0.591632	0.01	-2.1	20	98
$ 39 dibromofluoromethane	0.392608		0.385338	0.01	-1.9	30	98

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 1,1,1-Trichloroethane	0.516982		0.521904	0.01	1	20	101
42 Cyclohexane	0.231303		0.245149	0.01	6	30	106
43 1,1-Dichloropropene	0.439843		0.446552	0.01	1.5	30	102
44 Carbon tetrachloride	0.480894		0.494846	0.01	2.9	30	103
45 Isobutyl alcohol	0.016913		0.018756	0.001	10.9	40	111
$ 46 1,2-Dichloroethane-d4	0.320166		0.308546	0.01	-3.6	30	96
48 Benzene	0.911106		0.921431	0.01	1.1	20	101
49 Isopropyl Acetate	0.601279		0.627475	0.01	4.4	30	104
50 1,2-Dichloroethane	0.354089		0.347399	0.01	-1.9	20	98
53 Trichloroethene	0.299741		0.306277	0.01	2.2	20	102
54 Methylcyclohexane	0.37665		0.388164	0.01	3.1	30	103
55 1,2-Dichloropropane	0.225851		0.227978	0.01	0.9	20	101
56 Dibromomethane	0.179932		0.178015	0.01	-1.1	30	99
57 Methyl methacrylate	0.294055		0.305252	0.01	3.8	30	104
58 1,4-Dioxane	0.00306		0.003516		14.9	40	115
59 Bromodichloromethane	0.319726		0.331955	0.01	3.8	30	104
60 2-nitropropane	0.150238		0.15751	0.01	4.8	30	105
61 2-Chloroethylvinyl ether	0.200456		0.210594	0.001	5.1	30	105
62 cis-1,3-Dichloropropene	0.370796		0.399033	0.01	7.6	30	108
63 4-Methyl-2-pentanone	0.396528		0.409617	0.01	3.3	40	103
$ 64 Toluene-d8	1.17489		1.16794	0.01	-0.6	30	99
65 Toluene	0.75993		0.762565	0.01	0.3	20	100
66 trans-1,3-Dichloropropen	0.439225		0.469146	0.01	6.8	30	107
67 Ethyl methacrylate	0.482774		0.497736	0.01	3.1	30	103
68 1,1,2-Trichloroethane	0.308964		0.304286	0.01	-1.5	20	98
69 Tetrachloroethene	0.309429		0.309137	0.01	-0.1	30	100
70 1,3-Dichloropropane	0.484739		0.478321	0.01	-1.3	30	99
71 2-Hexanone	0.435129		0.459046	0.01	5.5	40	105
72 Dibromochloromethane	0.339418		0.356362	0.01	5	30	105
73 n-Butyl acetate	0.644691		0.66888	0.01	3.8	30	104
75 1,2-Dibromoethane (EDB)	0.334377		0.340034	0.01	1.7	30	102
77 Chlorobenzene	0.804529		0.818522	0.3	1.7	20	102
78 1,1,1,2-Tetrachloroethan	0.290003		0.296729	0.01	2.3	30	102
79 Ethylbenzene	0.425934		0.437154	0.01	2.6	20	103
80 m+p-Xylenes	0.508247		0.526487	0.01	3.6	30	104
81 o-Xylene	0.450812		0.468718	0.01	4	30	104
82 Styrene	0.762155		0.814242	0.01	6.8	30	107
83 Bromoform	50	48.879	0.242474	0.1	-2.2	30	98
84 Isopropylbenzene	1.101252		1.159521	0.01	5.3	30	105
85 Cyclohexanone	0.012523		0.014564	0.001	16.3	40	116
$ 86 Bromofluorobenzene	0.336176		0.346799	0.01	3.2	30	103
87 Bromobenzene	0.887841		0.890294	0.01	0.3	30	100
88 1,1,2,2-Tetrachloroethan	0.904552		0.902254	0.3	-0.3	30	100
89 1,2,3-Trichloropropane	0.366002		0.361208	0.01	-1.3	30	99
90 trans-1,4-Dichloro-2-but	50	52.187	0.274109	0.01	4.4	30	104
91 n-Propylbenzene	3.434696		3.532885	0.01	2.9	30	103
92 2-Chlorotoluene	1.964784		1.972356	0.01	0.4	30	100

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
93 1,3,5-Trimethylbenzene	2.108844		2.194683	0.01	4.1	30	104
94 4-Chlorotoluene	0.736302		0.757647	0.01	2.9	30	103
95 tert-Butylbenzene	1.983407		2.001148	0.01	0.9	30	101
96 1,2,4-Trimethylbenzene	2.011674		2.098452	0.01	4.3	30	104
97 sec-Butylbenzene	2.684709		2.761708	0.01	2.9	30	103
98 1,3-Dichlorobenzene	1.271785		1.27938	0.01	0.6	30	101
99 p-Isopropyltoluene	2.122211		2.227667	0.01	5	30	105
101 1,4-Dichlorobenzene	1.255597		1.272561	0.01	1.4	30	101
102 Benzyl chloride	1.293064		1.553064	0.01	20.1	30	120
103 n-Butylbenzene	1.705712		1.836342	0.01	7.7	30	108
104 1,2-Dichlorobenzene	1.132644		1.12707	0.01	-0.5	30	100
105 1,2-Dibromo-3-chloroprop	0.189615		0.1931	0.001	1.8	30	102
106 1,2,4-Trichlorobenzene	0.701497		0.703084	0.01	0.2	30	100
107 Hexachlorobutadiene	0.34079		0.35524	0.01	4.2	40	104
108 Naphthalene	1.99202		2.047612	0.01	2.8	40	103
109 1,2,3-Trichlorobenzene	0.653716		0.656897	0.01	0.5	30	100
S 110 Xylenes (total)	0.47953		0.497603	0.01	3.8	30	104
S 111 1,2-Dichloroethene (tota	0.354949		0.348676	0.01	-1.8	20	98

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A02.D
Lab Sample ID: VSTD050BR Client Sample ID: 50uL/100mL 15613/10
Injection Date: 03-Dec-2019 09:23:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, VSTD050BR
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: CCV ALS Bottle: 2
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:31:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	711369	50.000	59.276	
2 Chloromethane	50.0	1.576	1.576	0.000	552706	50.000	54.712	
3 Vinyl chloride	62.0	1.691	1.691	0.000	659634	50.000	55.606	
4 Bromomethane	94.0	2.027	2.027	0.000	608824	50.000	53.619	
5 Chloroethane	64.0	2.142	2.142	0.000	456413	50.000	54.209	
6 Trichlorofluoromethane	101.0	2.425	2.425	0.000	1349323	50.000	52.864	
8 Ethyl ether	59.0	2.777	2.777	0.000	841692	50.000	49.176	
9 Acrolein	56.0	2.950	2.950	0.000	2583817	500.00	535.41	
10 Acetone	43.0	3.144	3.144	0.000	1343630	100.00	126.45	
11 1,1-Dichloroethene	96.0	3.060	3.060	0.000	744837	50.000	50.200	
12 Freon 113	101.0	3.102	3.102	0.000	764340	50.000	52.274	
13 Methyl iodide	142.0	3.238	3.238	0.000	1556806	50.000	49.867	
14 Carbon disulfide	76.0	3.306	3.306	0.000	2405152	50.000	51.840	
15 Acetonitrile	40.0	3.526	3.526	0.000	728582	500.00	483.27	M
17 Allyl chloride	76.0	3.563	3.563	0.000	486669	50.000	51.990	
16 Methyl Acetate	43.0	3.574	3.574	0.000	1307589	50.000	48.338	M
18 Methylene chloride	84.0	3.741	3.741	0.000	914809	50.000	47.628	
20 Acrylonitrile	53.0	4.072	4.072	0.000	1264212	100.00	99.866	
21 trans-1,2-Dichloroethene	96.0	4.093	4.093	0.000	1060841	50.000	49.601	
22 tert-Butyl methyl ether(MTBE)	73.0	4.098	4.098	0.000	2613928	50.000	48.716	
23 Hexane	57.0	4.475	4.475	0.000	1480908	50.000	52.016	
24 1,1-Dichloroethane	63.0	4.685	4.685	0.000	1776189	50.000	49.426	
25 Vinyl acetate	86.0	4.727	4.727	0.000	321883	50.000	52.324	
26 Diisopropyl ether (IPE)	87.0	4.764	4.764	0.000	901478	50.000	49.339	
27 Chloroprene	53.0	4.774	4.774	0.000	1411117	50.000	50.763	
29 cis-1,2-Dichloroethene	96.0	5.435	5.435	0.000	1229996	50.000	48.706	
30 2-Butanone (MEK)	72.0	5.445	5.445	0.000	659481	100.00	109.87	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.430	5.430	0.000	1210848	50.000	51.643	
32 Propionitrile	54.0	5.535	5.535	0.000	2592907	500.00	501.37	
33 Ethyl Acetate	43.0	5.524	5.524	0.000	1993883	50.000	49.764	
34 Methacrylonitrile	67.0	5.723	5.723	0.000	3661258	250.00	248.61	
35 Bromochloromethane	128.0	5.739	5.739	0.000	688264	50.000	48.663	
36 Tetrahydrofuran	42.0	5.744	5.744	0.000	793699	50.000	48.122	
37 Chloroform	83.0	5.902	5.902	0.000	1943540	50.000	48.968	
$ 39 dibromofluoromethane	111.0	6.101	6.101	0.000	1265853	50.000	49.074	
40 1,1,1-Trichloroethane	97.0	6.069	6.069	0.000	1714481	50.000	50.476	
* 41 Pentafluorobenzene	168.0	6.179	6.179	0.000	3285049	50.000	50.000	
42 Cyclohexane	41.0	6.143	6.143	0.000	805328	50.000	52.993	
43 1,1-Dichloropropene	75.0	6.284	6.284	0.000	1466944	50.000	50.763	
44 Carbon tetrachloride	119.0	6.258	6.258	0.000	1625592	50.000	51.451	
45 Isobutyl alcohol	42.0	6.525	6.525	0.000	616131	500.00	554.46	
$ 46 1,2-Dichloroethane-d4	65.0	6.520	6.520	0.000	1383790	50.000	48.185	
48 Benzene	78.0	6.531	6.531	0.000	4132506	50.000	50.567	
49 Isopropyl Acetate	43.0	6.678	6.678	0.000	2814151	50.000	52.178	
50 1,2-Dichloroethane	62.0	6.620	6.620	0.000	1558043	50.000	49.055	
* 52 1,4-Difluorobenzene	114.0	7.128	7.128	0.000	4484878	50.000	50.000	
53 Trichloroethene	130.0	7.406	7.406	0.000	1373617	50.000	51.090	
54 Methylcyclohexane	83.0	7.689	7.689	0.000	1740869	50.000	51.528	
55 1,2-Dichloropropane	63.0	7.747	7.747	0.000	1022452	50.000	50.471	
56 Dibromomethane	93.0	7.857	7.857	0.000	798374	50.000	49.467	
57 Methyl methacrylate	41.0	7.873	7.873	0.000	1369019	50.000	51.904	
58 1,4-Dioxane	88.0	7.852	7.852	0.000	157684	500.00	574.49	
59 Bromodichloromethane	83.0	8.114	8.114	0.000	1488779	50.000	51.912	
60 2-nitropropane	43.0	8.418	8.418	0.000	706413	50.000	52.420	
61 2-Chloroethylvinyl ether	63.0	8.518	8.518	0.000	944487	50.000	52.529	
62 cis-1,3-Dichloropropene	75.0	8.696	8.696	0.000	1789616	50.000	53.808	
63 4-Methyl-2-pentanone	43.0	8.916	8.916	0.000	3674169	100.00	103.30	
$ 64 Toluene-d8	98.0	9.032	9.032	0.000	4269275	50.000	49.704	
65 Toluene	92.0	9.121	9.121	0.000	2787471	50.000	50.173	
66 trans-1,3-Dichloropropene	75.0	9.477	9.477	0.000	1714912	50.000	53.406	
67 Ethyl methacrylate	69.0	9.577	9.577	0.000	1819420	50.000	51.550	
68 1,1,2-Trichloroethane	97.0	9.729	9.729	0.000	1112282	50.000	49.243	
69 Tetrachloroethene	164.0	9.802	9.802	0.000	1130017	50.000	49.953	
70 1,3-Dichloropropane	76.0	9.928	9.928	0.000	1748448	50.000	49.338	
71 2-Hexanone	43.0	10.028	10.028	0.000	3355984	100.00	105.50	
72 Dibromochloromethane	129.0	10.185	10.185	0.000	1302641	50.000	52.496	
73 n-Butyl acetate	43.0	10.190	10.190	0.000	2445016	50.000	51.876	
75 1,2-Dibromoethane (EDB)	107.0	10.311	10.311	0.000	1242958	50.000	50.846	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3655388	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.893	0.000	2992017	50.000	50.870	
78 1,1,1,2-Tetrachloroethane	131.0	11.003	11.003	0.000	1084658	50.000	51.160	
79 Ethylbenzene	106.0	11.014	11.014	0.000	1597968	50.000	51.317	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	1924516	50.000	51.794	
81 o-Xylene	106.0	11.569	11.569	0.000	1713347	50.000	51.986	
82 Styrene	104.0	11.596	11.596	0.000	2976372	50.000	53.417	
83 Bromoform	173.0	11.774	11.774	0.000	886337	50.000	48.879	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	4238498	50.000	52.646	
85 Cyclohexanone	55.0	12.041	12.041	0.000	532384	500.00	581.48	

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.125	0.000	1267684	50.000	51.580	
88 1,1,2,2-Tetrachloroethane	83.0	12.282	12.282	0.000	1175264	50.000	49.873	M
87 Bromobenzene	156.0	12.256	12.256	0.000	1159684	50.000	50.138	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	470505	50.000	49.345	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	357050	50.000	52.187	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	4601887	50.000	51.429	
92 2-Chlorotoluene	91.0	12.445	12.445	0.000	2569163	50.000	50.193	
93 1,3,5-Trimethylbenzene	105.0	12.550	12.550	0.000	2858764	50.000	52.035	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	986900	50.000	51.449	
95 tert-Butylbenzene	119.0	12.843	12.843	0.000	2606668	50.000	50.447	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	2733414	50.000	52.157	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	3597362	50.000	51.434	
98 1,3-Dichlorobenzene	146.0	13.153	13.153	0.000	1666503	50.000	50.299	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	2901728	50.000	52.485	
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.226	0.000	1302586	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.247	13.247	0.000	1657620	50.000	50.676	
102 Benzyl chloride	91.0	13.357	13.357	0.000	2022999	50.000	60.054	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	2391993	50.000	53.829	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	1468105	50.000	49.754	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	251529	50.000	50.919	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	915827	50.000	50.113	
107 Hexachlorobutadiene	225.0	15.061	15.061	0.000	462730	50.000	52.120	
108 Naphthalene	128.0	15.166	15.166	0.000	2667191	50.000	51.395	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	855665	50.000	50.243	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	103.78	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	98.307	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

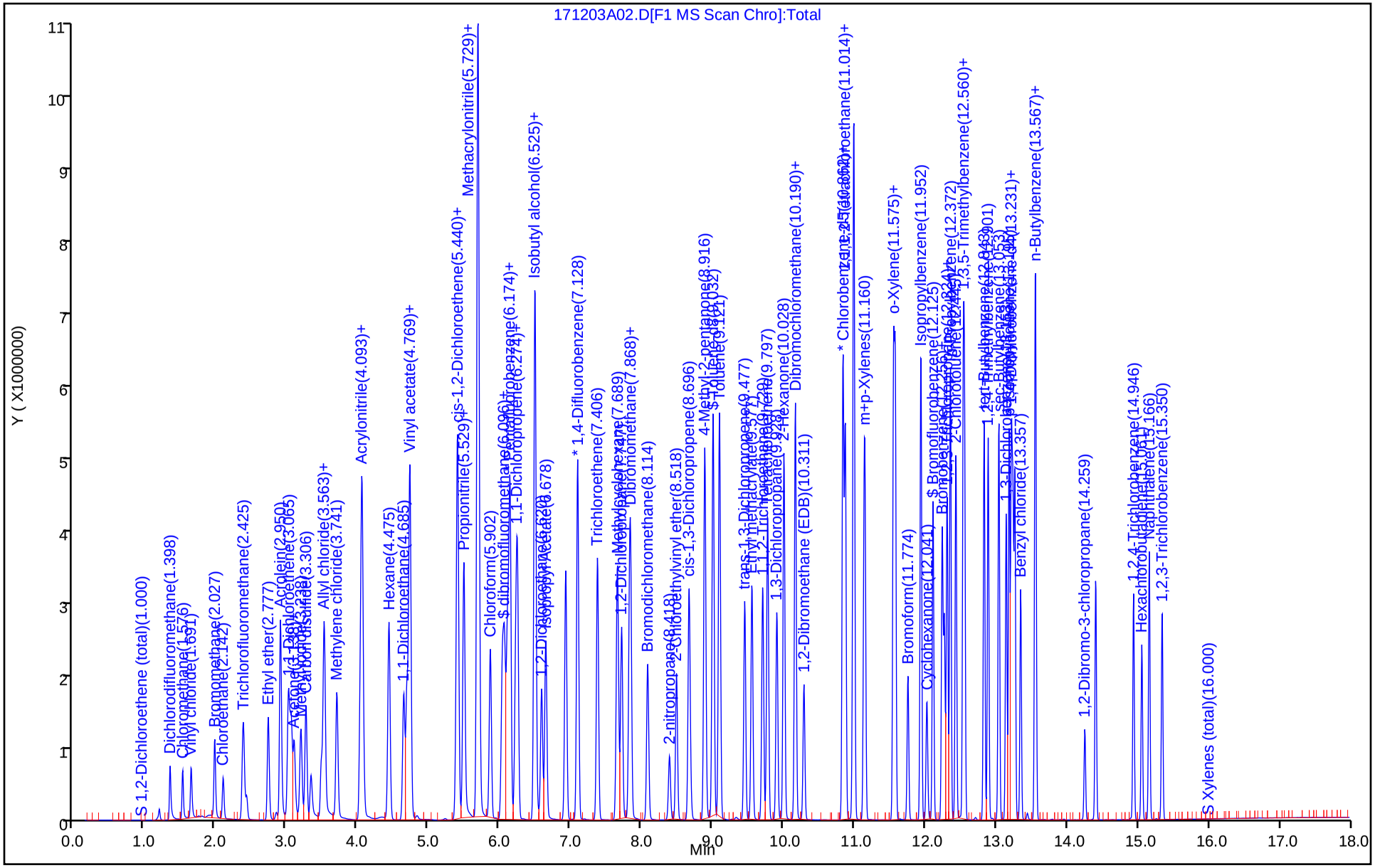
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D				
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR		
Sample Info:	17120319, VSTD050BR				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

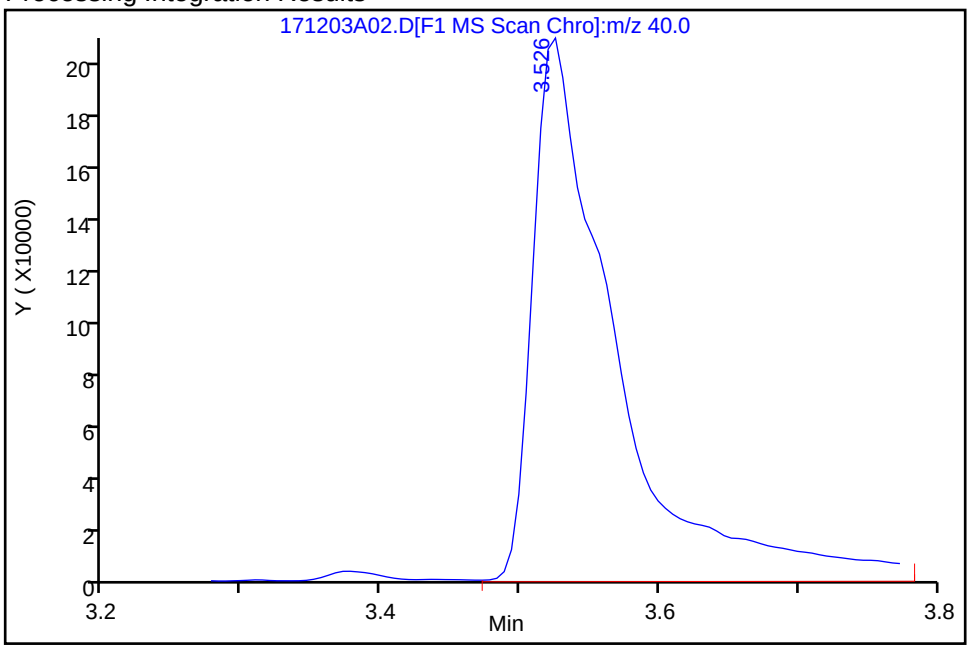
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D		
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR
Sample Info:	17120319, VSTD050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

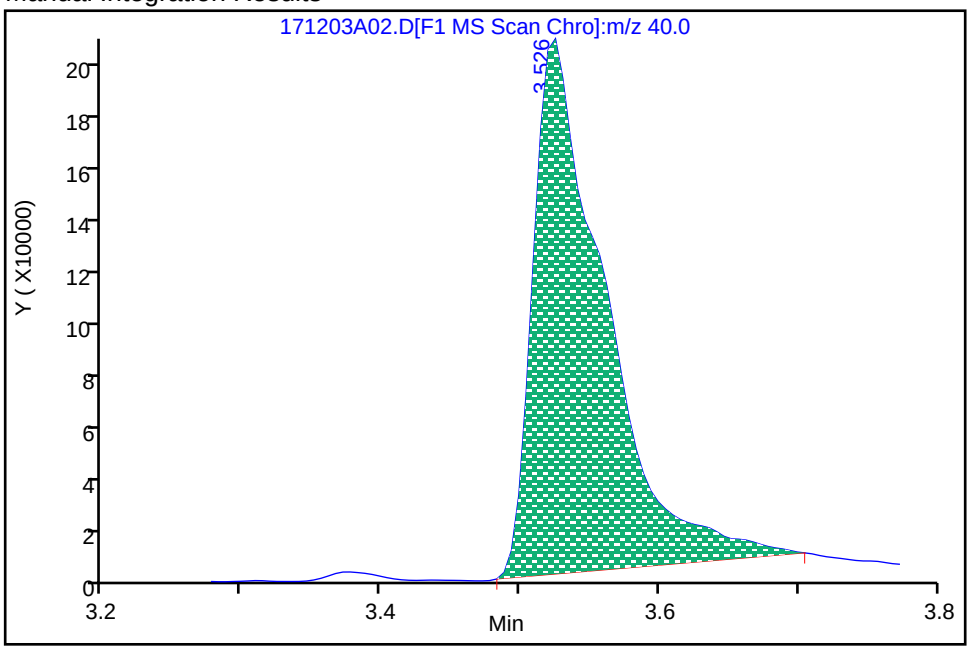
Processing Integration Results

RT: 3.526
Area: 850183
Amount: 563.93
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.526
Area: 728582
Amount: 483.27
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 10:58:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

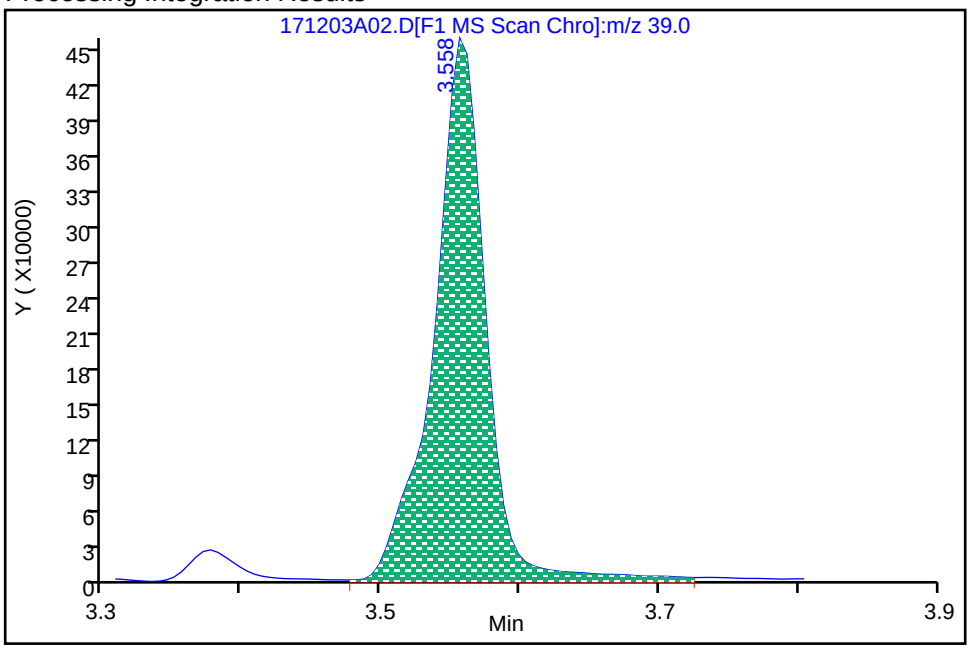
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D		
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR
Sample Info:	17120319, VSTD050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

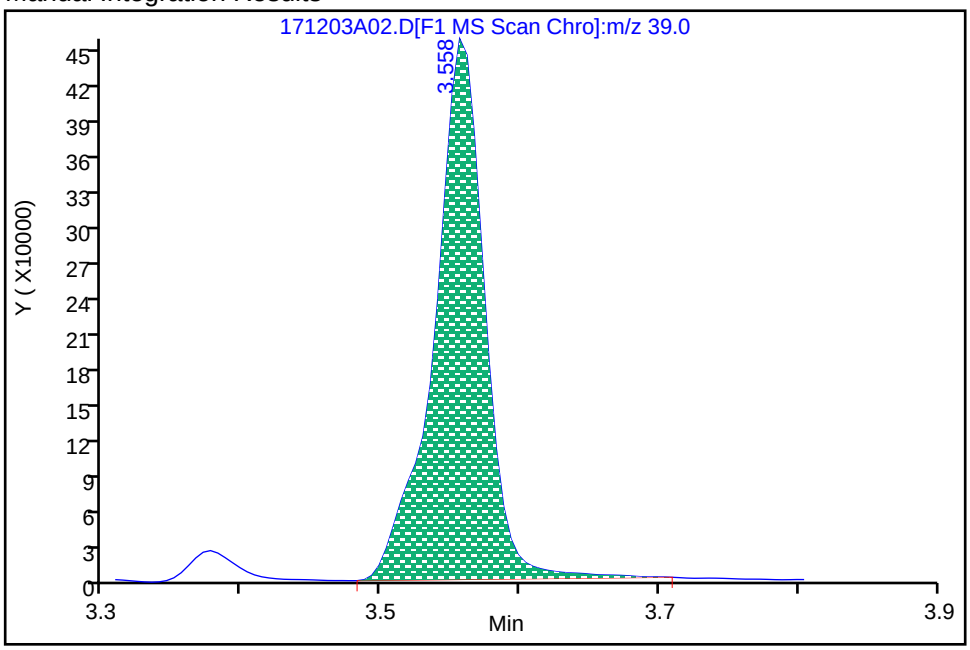
Processing Integration Results

RT: 3.558
Area: 1183785
Amount: 563.93
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.558
Area: 1135991
Amount: 483.27
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 10:58:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

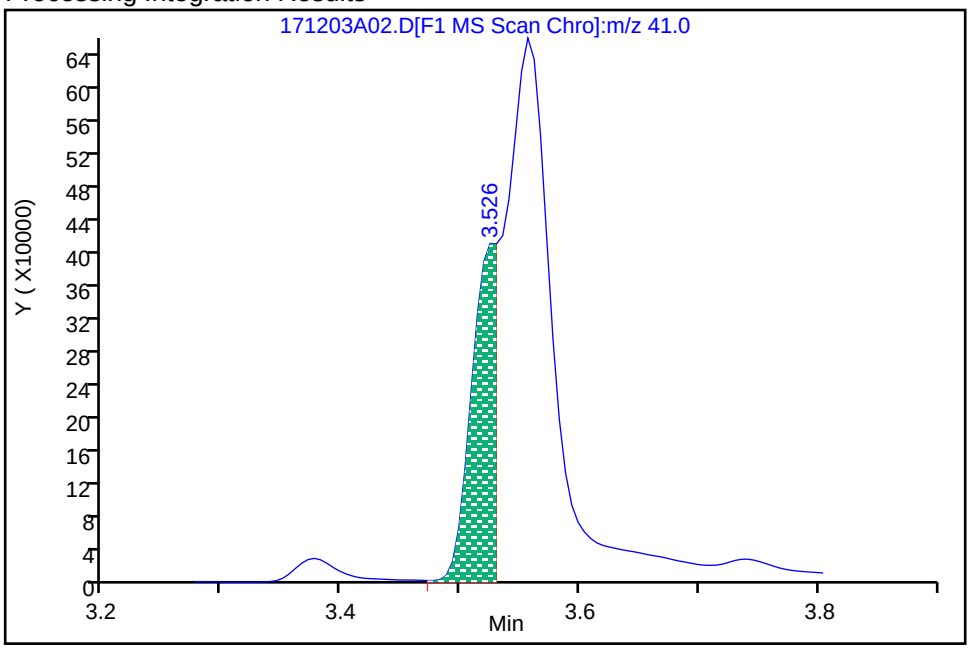
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D		
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR
Sample Info:	17120319, VSTD050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

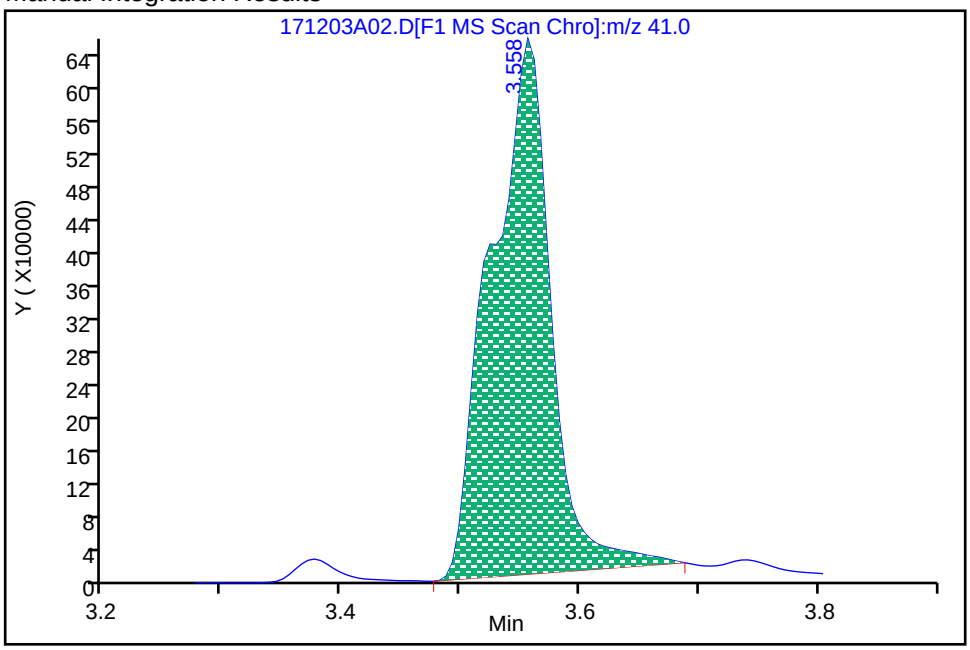
Processing Integration Results

RT: 3.526
Area: 561829
Amount: 563.93
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.558
Area: 2235941
Amount: 483.27
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 10:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

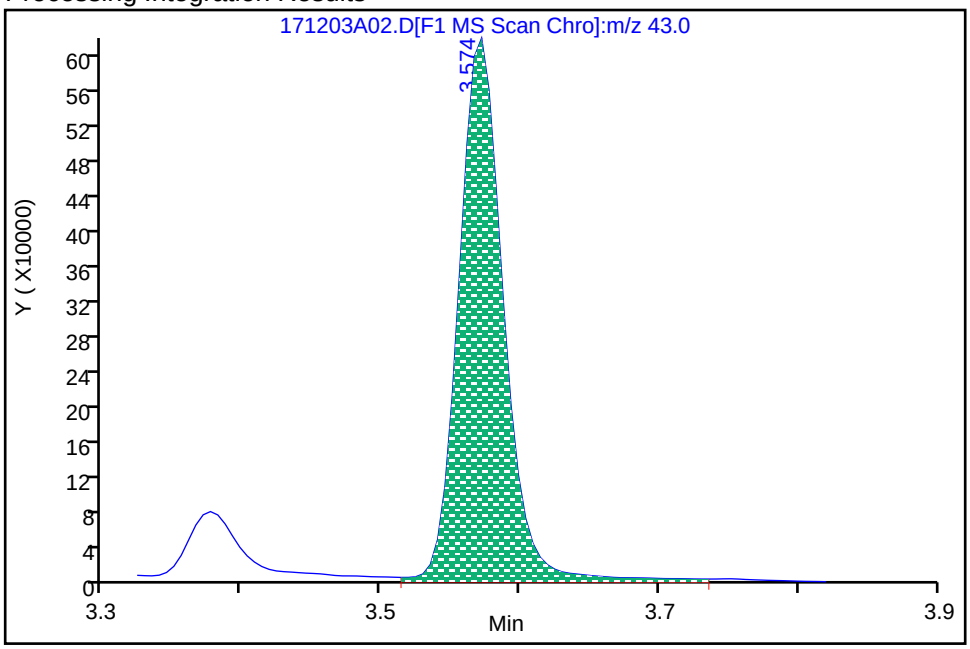
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D		
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR
Sample Info:	17120319, VSTD050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

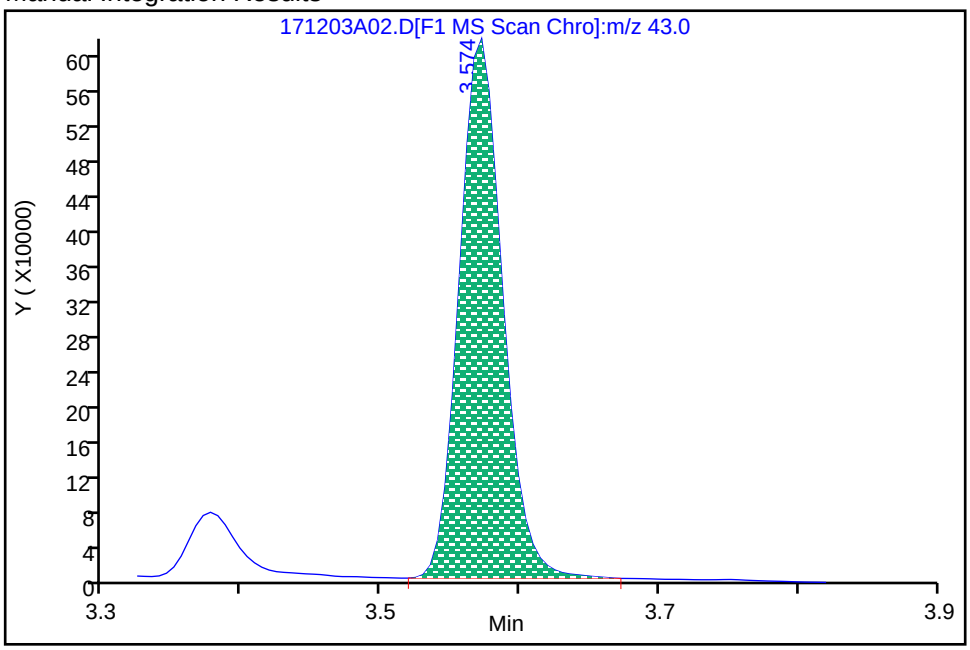
Processing Integration Results

RT: 3.574
Area: 1370522
Amount: 49.918
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.574
Area: 1307589
Amount: 48.338
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:31:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

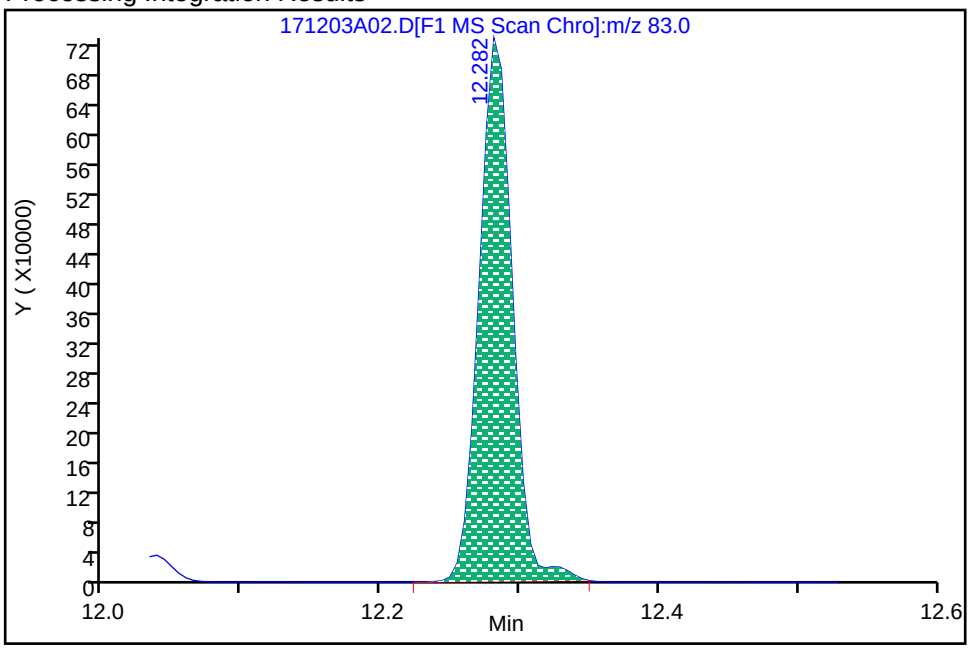
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D		
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR
Sample Info:	17120319, VSTD050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

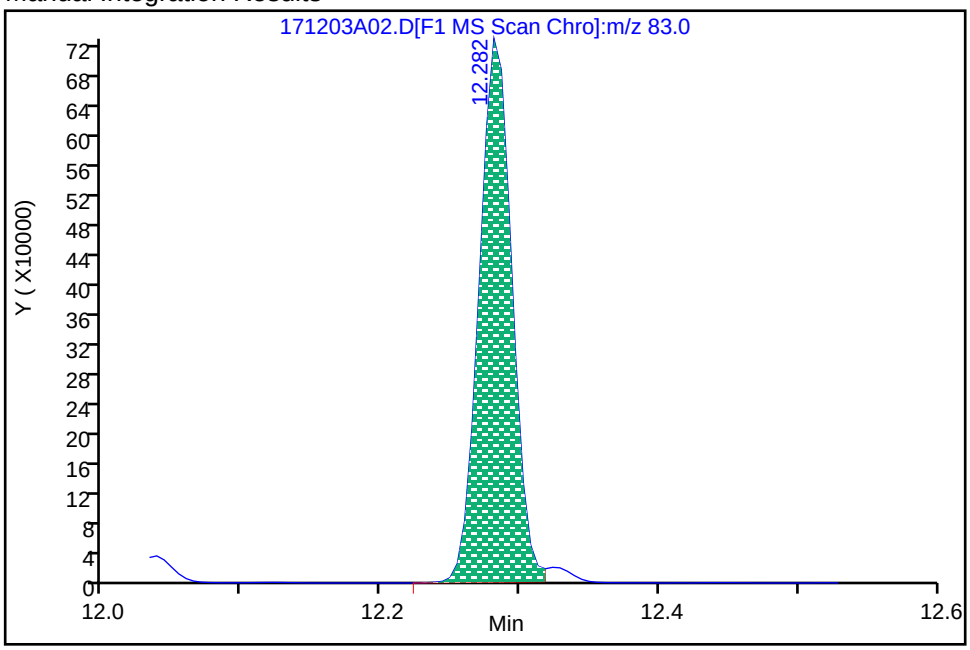
Processing Integration Results

RT: 12.282
Area: 1194822
Amount: 50.703
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.282
Area: 1175264
Amount: 49.873
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 10:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

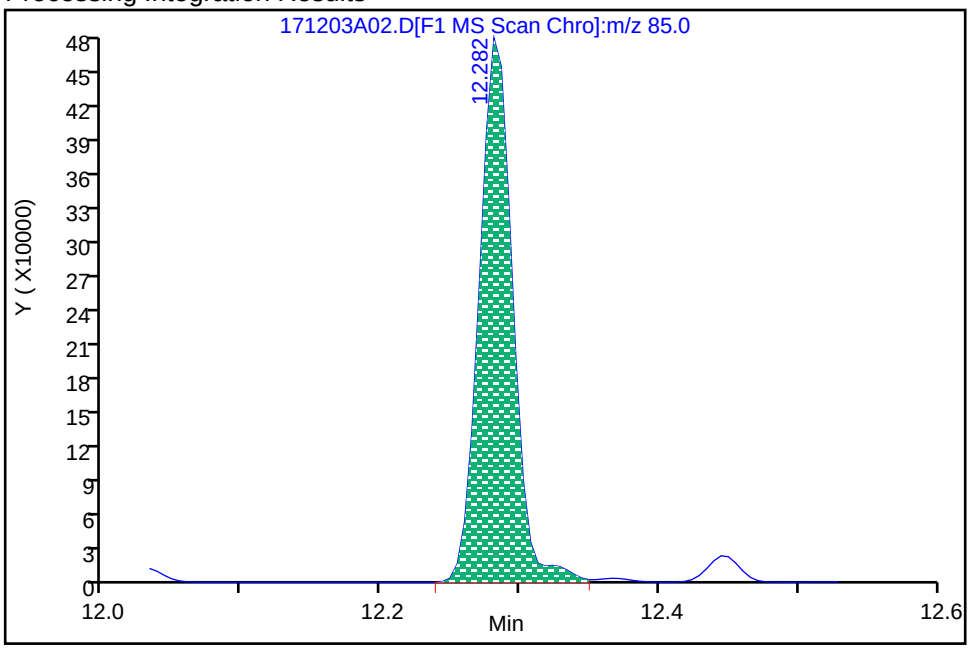
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A02.D		
Injection Date:	03-Dec-2019 09:23:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BR
Sample Info:	17120319, VSTD050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

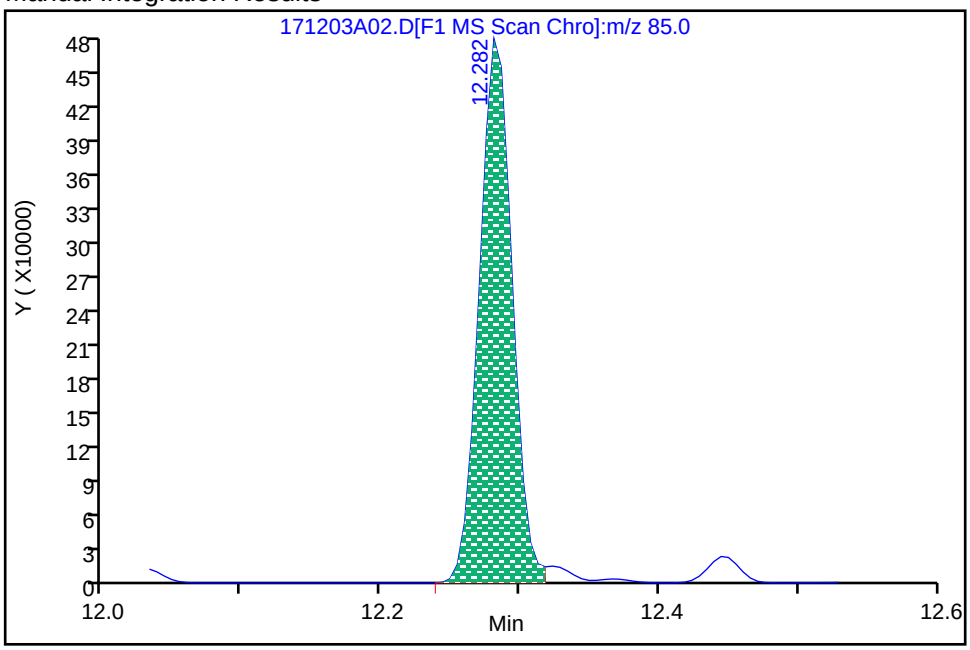
Processing Integration Results

RT: 12.282
Area: 791469
Amount: 50.703
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.282
Area: 775482
Amount: 49.873
Amount Units: ug/L



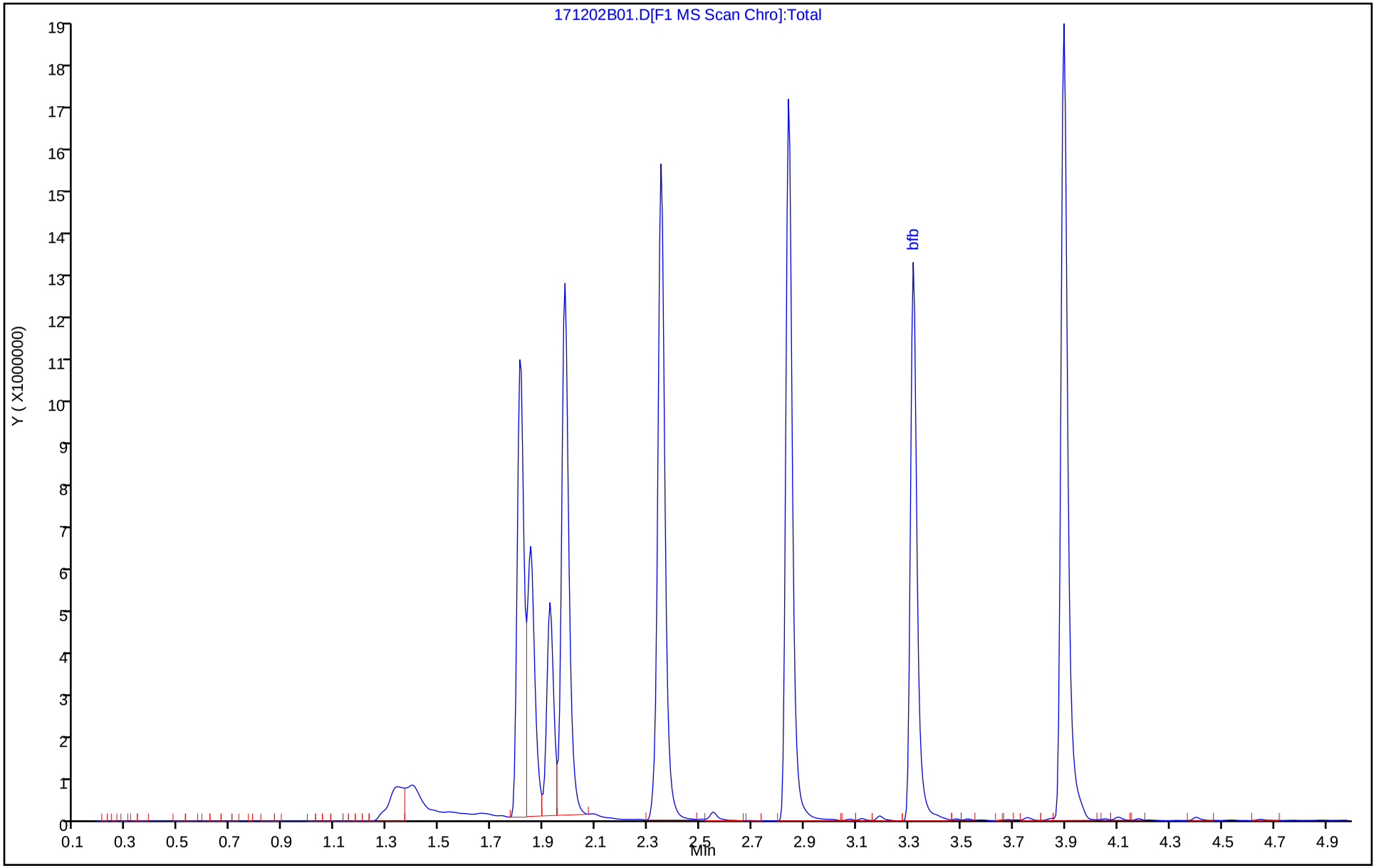
Data Editor: tml, 03-Dec-2019 10:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

RAW QC DATA

Report Date: 04-Dec-2019 13:03:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B01.D				
Injection Date:	02-Dec-2019 23:45:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	15547	Lab ID:	BFBBQ		
Sample Info:	17120219B, BFBBQ				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



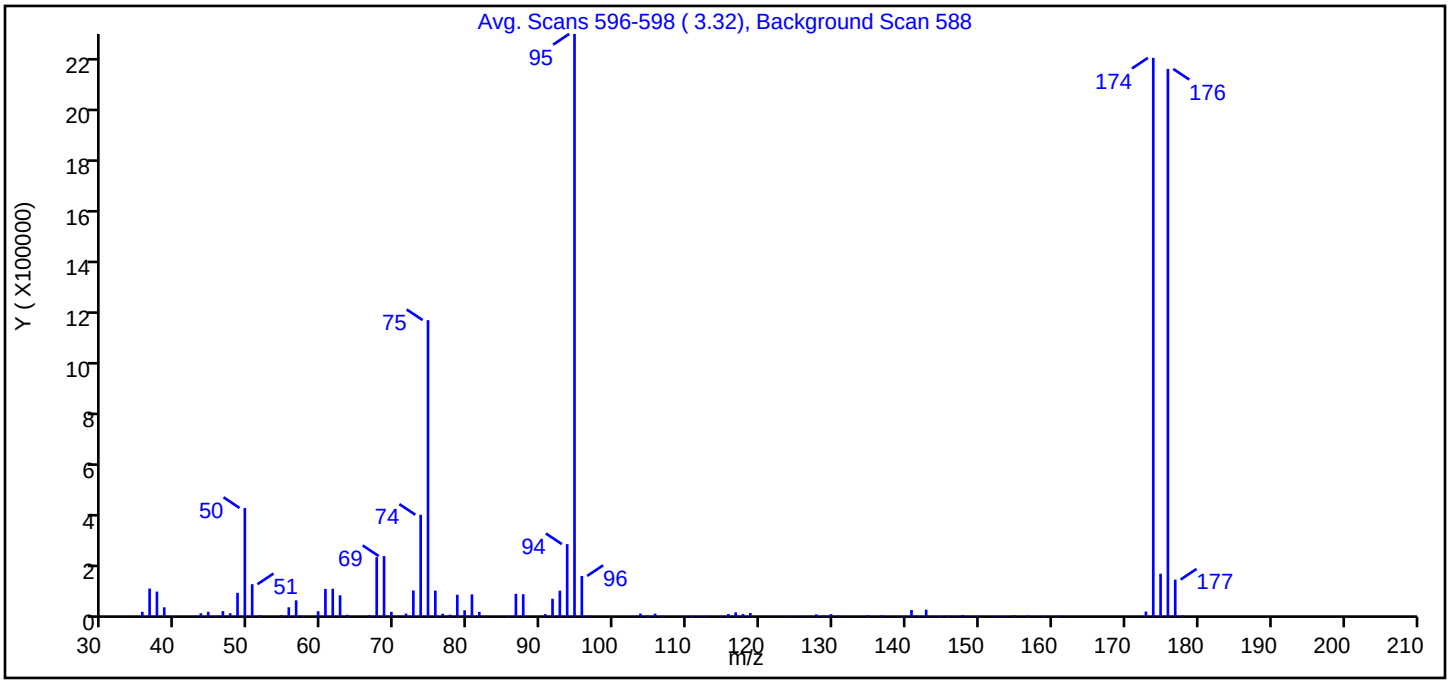
Report Date: 04-Dec-2019 13:03:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B01.D		
Injection Date:	02-Dec-2019 23:45:30	Inst. ID:	msd17.i
Client ID:	15547	Lab ID:	BFBBQ
Sample Info:	17120219B, BFBBQ		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.6
75	30.00 - 60.00% of mass 95	50.9
96	5.00 - 9.00% of mass 95	7.0
173	Less than 2.00% of mass 174	0.9 (0.9) 1
174	50.00 - 150.00% of mass 95	95.9
175	5.00 - 9.00% of mass 174	7.4 (7.7) 1
176	95.00 - 101.00% of mass 174	94.0 (98.0) 1
177	5.00 - 9.00% of mass 176	6.4 (6.8) 2

1-Value is % Mass 174 2-Value is % Mass 176

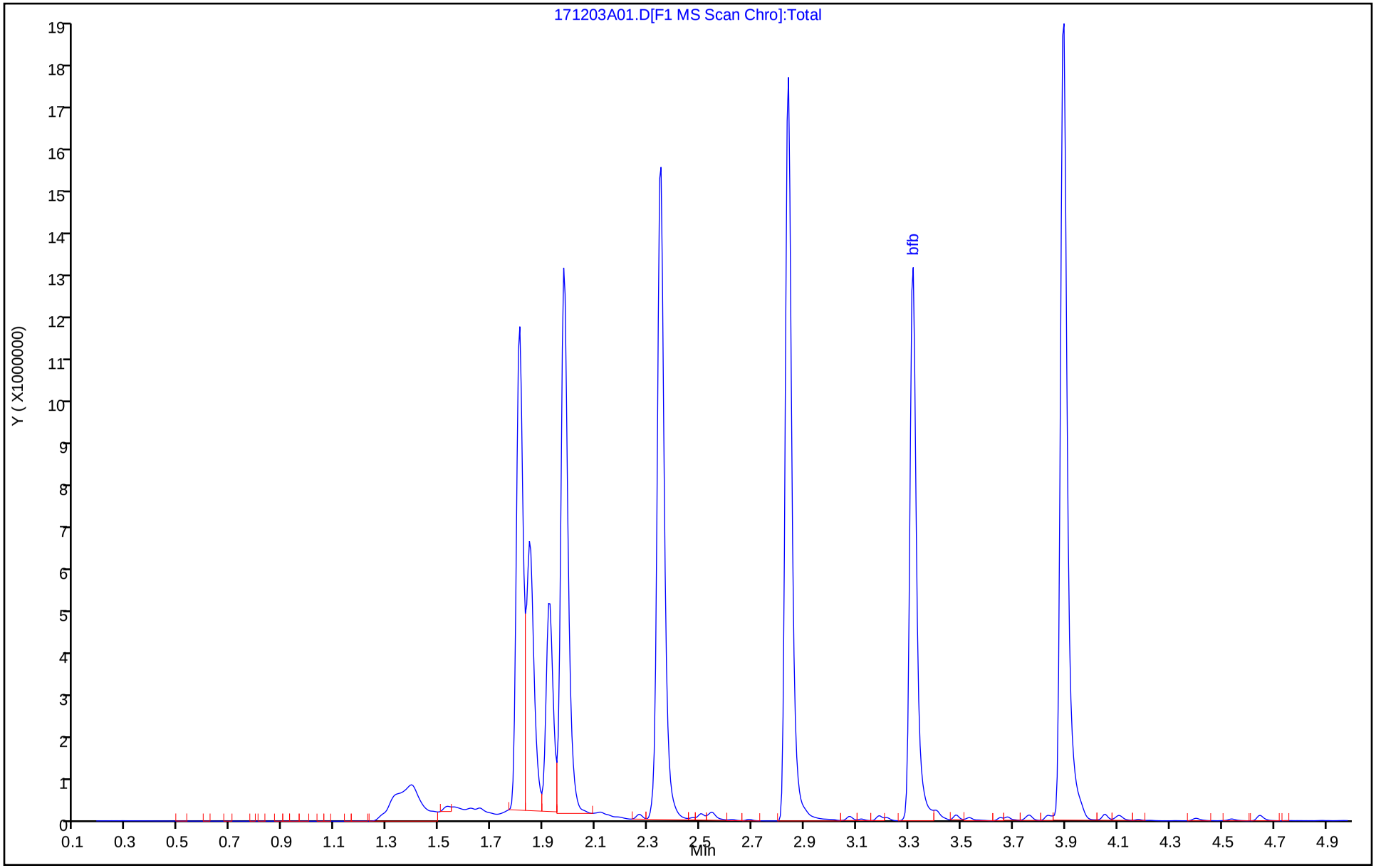
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B01.D
Injection Date: 02-Dec-2019 23:45:45
Spectrum: Avg. Scans 596-598 (3.32), Background Scan 588
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	150	68.00	227776	106.00	11246	142.00	2990
36.00	18416	69.00	231936	107.00	2466	143.00	26576
37.00	107448	70.00	18304	110.00	1611	144.00	1562
38.00	95888	71.00	592	111.00	2550	145.00	2176
39.00	35512	72.00	11455	112.00	1918	146.00	3499
40.00	1062	73.00	100248	113.00	2632	147.00	1773
41.00	188	74.00	390400	115.00	2752	148.00	6099
42.00	186	75.00	1136640	116.00	9803	149.00	1634
43.00	983	76.00	99600	117.00	16208	150.00	2636
44.00	12817	77.00	11104	118.00	9758	151.00	298
45.00	18400	78.00	7420	119.00	13787	152.00	1093
46.00	1770	79.00	83680	120.00	552	153.00	1687
47.00	20944	80.00	24248	122.00	482	154.00	1572
48.00	12867	81.00	85368	123.00	850	155.00	5936
49.00	91024	82.00	18160	124.00	1756	156.00	715
50.00	416576	83.00	1997	125.00	826	157.00	4390
51.00	124264	84.00	242	126.00	1130	158.00	417
52.00	5420	85.00	84	127.00	743	159.00	2658
53.00	169	86.00	2020	128.00	8545	160.00	145
55.00	5903	87.00	87416	129.00	4055	161.00	2857
56.00	35656	88.00	85712	130.00	9465	169.00	259
57.00	62376	91.00	9714	131.00	3614	170.00	298
58.00	2520	92.00	68368	132.00	371	173.00	19312
59.00	406	93.00	99488	133.00	122	174.00	2142208
60.00	20472	94.00	277888	134.00	739	175.00	164416
61.00	106112	95.00	2233856	135.00	4912	176.00	2099712
62.00	106664	96.00	155904	136.00	729	177.00	141952
63.00	81888	97.00	4485	137.00	4868	178.00	3771
64.00	7031	98.00	172	138.00	245	193.00	478
65.00	601	103.00	1159	139.00	923	207.00	55
66.00	312	104.00	11662	140.00	1937	209.00	321
67.00	5515	105.00	3501	141.00	25200		

Report Date: 04-Dec-2019 13:38:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A01.D				
Injection Date:	03-Dec-2019 08:59:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	15588	Lab ID:	BFBBR		
Sample Info:	17120319, BFBBR				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



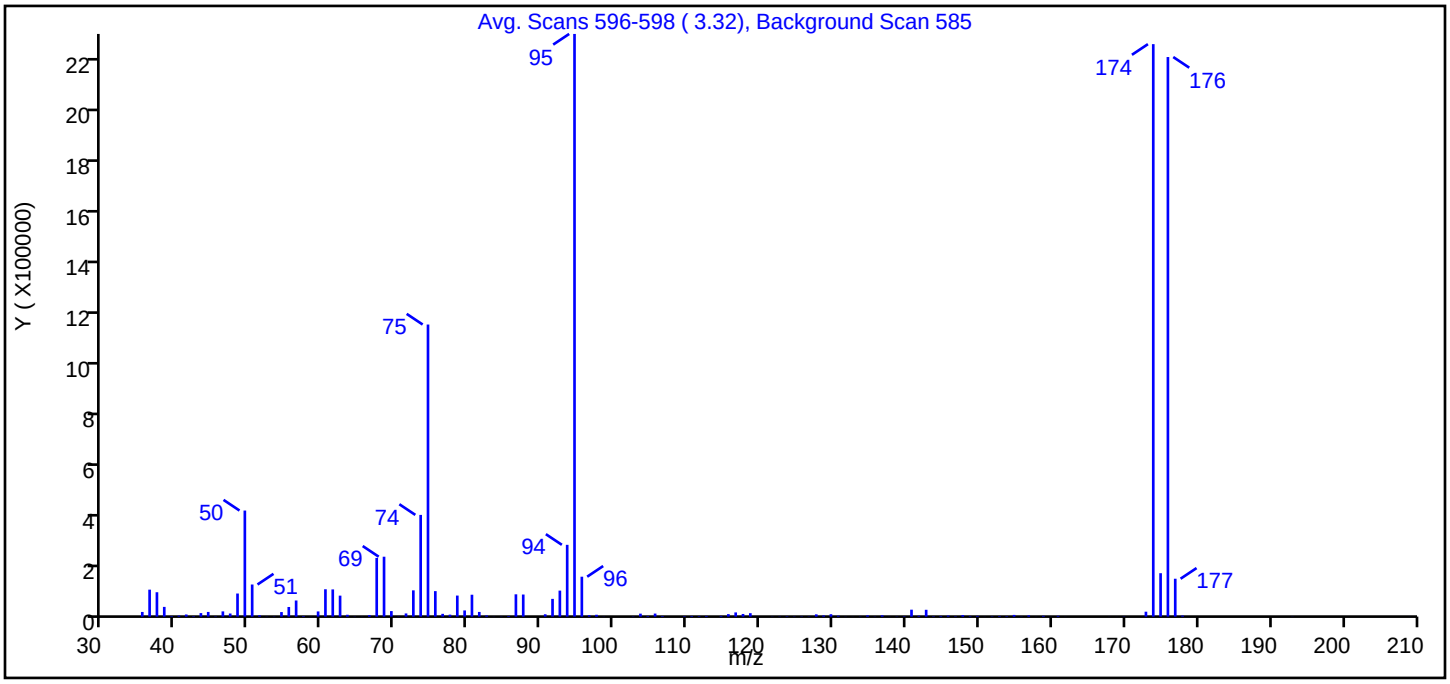
Report Date: 04-Dec-2019 13:38:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A01.D		
Injection Date:	03-Dec-2019 08:59:30	Inst. ID:	msd17.i
Client ID:	15588	Lab ID:	BFBBR
Sample Info:	17120319, BFBBR		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.2
75	30.00 - 60.00% of mass 95	50.1
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.8 (0.9) 1
174	50.00 - 150.00% of mass 95	98.2
175	5.00 - 9.00% of mass 174	7.4 (7.6) 1
176	95.00 - 101.00% of mass 174	96.0 (97.7) 1
177	5.00 - 9.00% of mass 176	6.5 (6.8) 2

1-Value is % Mass 174 2-Value is % Mass 176

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A01.D
Injection Date: 03-Dec-2019 08:59:10
Spectrum: Avg. Scans 596-598 (3.32), Background Scan 585
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	17720	69.00	228352	107.00	2364	144.00	1610
37.00	102752	70.00	21048	110.00	1783	145.00	2258
38.00	92904	71.00	860	111.00	2384	146.00	3908
39.00	37024	72.00	12046	112.00	1775	147.00	1476
40.00	2141	73.00	100128	113.00	2589	148.00	5830
41.00	3714	74.00	387776	115.00	2418	149.00	1809
42.00	8065	75.00	1113600	116.00	9456	150.00	2643
43.00	1943	76.00	97120	117.00	15957	151.00	299
44.00	13416	77.00	10583	118.00	10059	152.00	1206
45.00	17776	78.00	7442	119.00	13084	153.00	2068
46.00	1293	79.00	80208	120.00	127	154.00	1738
47.00	19888	80.00	23544	122.00	521	155.00	6474
48.00	11778	81.00	83408	123.00	730	156.00	708
49.00	88000	82.00	17776	124.00	1447	157.00	4483
50.00	404352	83.00	4303	125.00	849	158.00	271
51.00	122376	84.00	369	126.00	1102	159.00	2943
52.00	4934	85.00	633	127.00	870	160.00	252
53.00	556	86.00	2298	128.00	8645	161.00	2841
54.00	823	87.00	85000	129.00	4313	162.00	237
55.00	17264	88.00	84200	130.00	9189	168.00	218
56.00	36688	91.00	8928	131.00	3398	169.00	169
57.00	61416	92.00	67576	132.00	449	170.00	810
58.00	2330	93.00	99104	133.00	249	173.00	18728
59.00	422	94.00	273664	134.00	668	174.00	2182656
60.00	19720	95.00	2221568	135.00	4710	175.00	165504
61.00	104272	96.00	152128	136.00	720	176.00	2133504
62.00	103656	97.00	5119	137.00	4977	177.00	144384
63.00	79936	98.00	7067	138.00	268	178.00	3966
64.00	7045	99.00	477	139.00	810	193.00	403
65.00	623	103.00	1028	140.00	1602	209.00	164
66.00	357	104.00	11272	141.00	26392		
67.00	5488	105.00	2338	142.00	3221		
68.00	223680	106.00	11552	143.00	25984		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	17720	69.00	228352	107.00	2364	144.00	1610
37.00	102752	70.00	21048	110.00	1783	145.00	2258
38.00	92904	71.00	860	111.00	2384	146.00	3908
39.00	37024	72.00	12046	112.00	1775	147.00	1476
40.00	2141	73.00	100128	113.00	2589	148.00	5830
41.00	3714	74.00	387776	115.00	2418	149.00	1809
42.00	8065	75.00	1113600	116.00	9456	150.00	2643
43.00	1943	76.00	97120	117.00	15957	151.00	299
44.00	13416	77.00	10583	118.00	10059	152.00	1206
45.00	17776	78.00	7442	119.00	13084	153.00	2068
46.00	1293	79.00	80208	120.00	127	154.00	1738
47.00	19888	80.00	23544	122.00	521	155.00	6474
48.00	11778	81.00	83408	123.00	730	156.00	708
49.00	88000	82.00	17776	124.00	1447	157.00	4483
50.00	404352	83.00	4303	125.00	849	158.00	271
51.00	122376	84.00	369	126.00	1102	159.00	2943
52.00	4934	85.00	633	127.00	870	160.00	252
53.00	556	86.00	2298	128.00	8645	161.00	2841
54.00	823	87.00	85000	129.00	4313	162.00	237
55.00	17264	88.00	84200	130.00	9189	168.00	218
56.00	36688	91.00	8928	131.00	3398	169.00	169
57.00	61416	92.00	67576	132.00	449	170.00	810
58.00	2330	93.00	99104	133.00	249	173.00	18728
59.00	422	94.00	273664	134.00	668	174.00	2182656
60.00	19720	95.00	2221568	135.00	4710	175.00	165504
61.00	104272	96.00	152128	136.00	720	176.00	2133504
62.00	103656	97.00	5119	137.00	4977	177.00	144384
63.00	79936	98.00	7067	138.00	268	178.00	3966
64.00	7045	99.00	477	139.00	810	193.00	403
65.00	623	103.00	1028	140.00	1602	209.00	164
66.00	357	104.00	11272	141.00	26392		
67.00	5488	105.00	2338	142.00	3221		
68.00	223680	106.00	11552	143.00	25984		

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	5.0	ug/L	12/03/2019 1035
Benzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Bromodichloromethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Bromoform	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	12/03/2019 1035
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/03/2019 1035
Carbon disulfide	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Chlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Chloroethane	ND		1	2.0	0.40	ug/L	12/03/2019 1035
Chloroform	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	12/03/2019 1035
Cyclohexane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Dibromochloromethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	12/03/2019 1035
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Ethylbenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
2-Hexanone	ND		1	10	2.0	ug/L	12/03/2019 1035
Isopropylbenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Methyl acetate	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	12/03/2019 1035
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	12/03/2019 1035
Methylcyclohexane	ND		1	5.0	0.40	ug/L	12/03/2019 1035
Methylene chloride	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Styrene	ND		1	1.0	0.41	ug/L	12/03/2019 1035
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Tetrachloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Toluene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	12/03/2019 1035
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Vinyl chloride	ND		1	1.0	0.40	ug/L	12/03/2019 1035
Xylenes (total)	ND		1	1.0	0.40	ug/L	12/03/2019 1035

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A05.D		
Lab Sample ID:	VBLKBR	Client Sample ID:	VBLKBR
Injection Date:	03-Dec-2019 10:35:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120319, VBLKBR		
Method:	\\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m		
Method Date:	04-Dec-2019 13:36:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	BLANK	ALS Bottle:	5
Cpnd Sublist:	std.sub		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	04-Dec-2019 13:36:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.398		ND			
2 Chloromethane	50.0		1.576		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.027		ND			
5 Chloroethane	64.0		2.142		ND			
6 Trichlorofluoromethane	101.0		2.425		ND			
8 Ethyl ether	59.0		2.777		ND			
9 Acrolein	56.0		2.950		ND			
10 Acetone	43.0		3.144		ND			
11 1,1-Dichloroethene	96.0		3.060		ND			
12 Freon 113	101.0		3.102		ND			
13 Methyl iodide	142.0		3.238		ND			
14 Carbon disulfide	76.0		3.306		ND			
15 Acetonitrile	40.0		3.526		ND			
17 Allyl chloride	76.0		3.563		ND			
16 Methyl Acetate	43.0		3.574		ND			
18 Methylene chloride	84.0		3.741		ND			
20 Acrylonitrile	53.0		4.072		ND			
21 trans-1,2-Dichloroethene	96.0		4.093		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.098		ND			
23 Hexane	57.0		4.475		ND			
24 1,1-Dichloroethane	63.0		4.685		ND			
25 Vinyl acetate	86.0		4.727		ND			
26 Diisopropyl ether (IPE)	87.0		4.764		ND			
27 Chloroprene	53.0		4.774		ND			
29 cis-1,2-Dichloroethene	96.0		5.435		ND			
30 2-Butanone (MEK)	72.0		5.445		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0		5.430		ND			
32 Propionitrile	54.0		5.535		ND			
33 Ethyl Acetate	43.0		5.524		ND			
34 Methacrylonitrile	67.0		5.723		ND			
35 Bromochloromethane	128.0		5.739		ND			
36 Tetrahydrofuran	42.0		5.744		ND			
37 Chloroform	83.0		5.902		ND			
$ 39 dibromofluoromethane	111.0	6.106	6.101	0.005	1267248	48.067	48.067	
40 1,1,1-Trichloroethane	97.0		6.069		ND			
* 41 Pentafluorobenzene	168.0	6.185	6.179	0.005	3357544	50.000	50.000	
42 Cyclohexane	41.0		6.143		ND			
43 1,1-Dichloropropene	75.0		6.284		ND			
44 Carbon tetrachloride	119.0		6.258		ND			
45 Isobutyl alcohol	42.0		6.525		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.525	6.520	0.005	1408712	47.730	47.730	
48 Benzene	78.0		6.531		ND			
49 Isopropyl Acetate	43.0		6.678		ND			
50 1,2-Dichloroethane	62.0		6.620		ND			
* 52 1,4-Difluorobenzene	114.0	7.134	7.128	0.005	4609231	50.000	50.000	
53 Trichloroethene	130.0		7.406		ND			
54 Methylcyclohexane	83.0		7.689		ND			
55 1,2-Dichloropropane	63.0		7.747		ND			
56 Dibromomethane	93.0		7.857		ND			
57 Methyl methacrylate	41.0		7.873		ND			
58 1,4-Dioxane	88.0		7.852		ND			
59 Bromodichloromethane	83.0		8.114		ND			
60 2-nitropropane	43.0		8.418		ND			
61 2-Chloroethylvinyl ether	63.0		8.518		ND			
62 cis-1,3-Dichloropropene	75.0		8.696		ND			
63 4-Methyl-2-pentanone	43.0		8.916		ND			
$ 64 Toluene-d8	98.0	9.037	9.032	0.005	4327420	49.818	49.818	
65 Toluene	92.0		9.121		ND			
66 trans-1,3-Dichloropropene	75.0		9.477		ND			
67 Ethyl methacrylate	69.0		9.577		ND			
68 1,1,2-Trichloroethane	97.0		9.729		ND			
69 Tetrachloroethene	164.0		9.802		ND			
70 1,3-Dichloropropane	76.0		9.928		ND			
71 2-Hexanone	43.0		10.028		ND			
72 Dibromochloromethane	129.0		10.185		ND			
73 n-Butyl acetate	43.0		10.190		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.311		ND			
* 76 Chlorobenzene-d5	117.0	10.861	10.862	0.000	3696718	50.000	50.000	
77 Chlorobenzene	112.0		10.893		ND			
78 1,1,1,2-Tetrachloroethane	131.0		11.003		ND			
79 Ethylbenzene	106.0		11.014		ND			
80 m+p-Xylenes	106.0		11.166		ND			
81 o-Xylene	106.0		11.569		ND			
82 Styrene	104.0		11.596		ND			
83 Bromoform	173.0		11.774		ND			
84 Isopropylbenzene	105.0		11.957		ND			
85 Cyclohexanone	55.0		12.041		ND			

Report Date: 04-Dec-2019 13:38:18 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A05.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.125	0.000	1257143	50.579	50.579	
88 1,1,2,2-Tetrachloroethane	83.0		12.282		ND			
87 Bromobenzene	156.0		12.256		ND			
89 1,2,3-Trichloropropane	110.0		12.330		ND			
90 trans-1,4-Dichloro-2-butene	53.0		12.319		ND			
91 n-Propylbenzene	91.0		12.372		ND			
92 2-Chlorotoluene	91.0		12.445		ND			
93 1,3,5-Trimethylbenzene	105.0		12.550		ND			
94 4-Chlorotoluene	126.0		12.571		ND			
95 tert-Butylbenzene	119.0		12.843		ND			
96 1,2,4-Trimethylbenzene	105.0		12.901		ND			
97 sec-Butylbenzene	105.0		13.053		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
99 p-Isopropyltoluene	119.0		13.195		ND			
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.226	0.000	1266246	50.000	50.000	
101 1,4-Dichlorobenzene	146.0		13.247		ND			
102 Benzyl chloride	91.0		13.357		ND			
103 n-Butylbenzene	91.0		13.562		ND			
104 1,2-Dichlorobenzene	146.0		13.572		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.259		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
107 Hexachlorobutadiene	225.0		15.061		ND			
108 Naphthalene	128.0		15.166		ND			
109 1,2,3-Trichlorobenzene	180.0		15.350		ND			
S 110 Xylenes (total)	106.0				ND			
S 111 1,2-Dichloroethene (total)	96.0				ND			

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

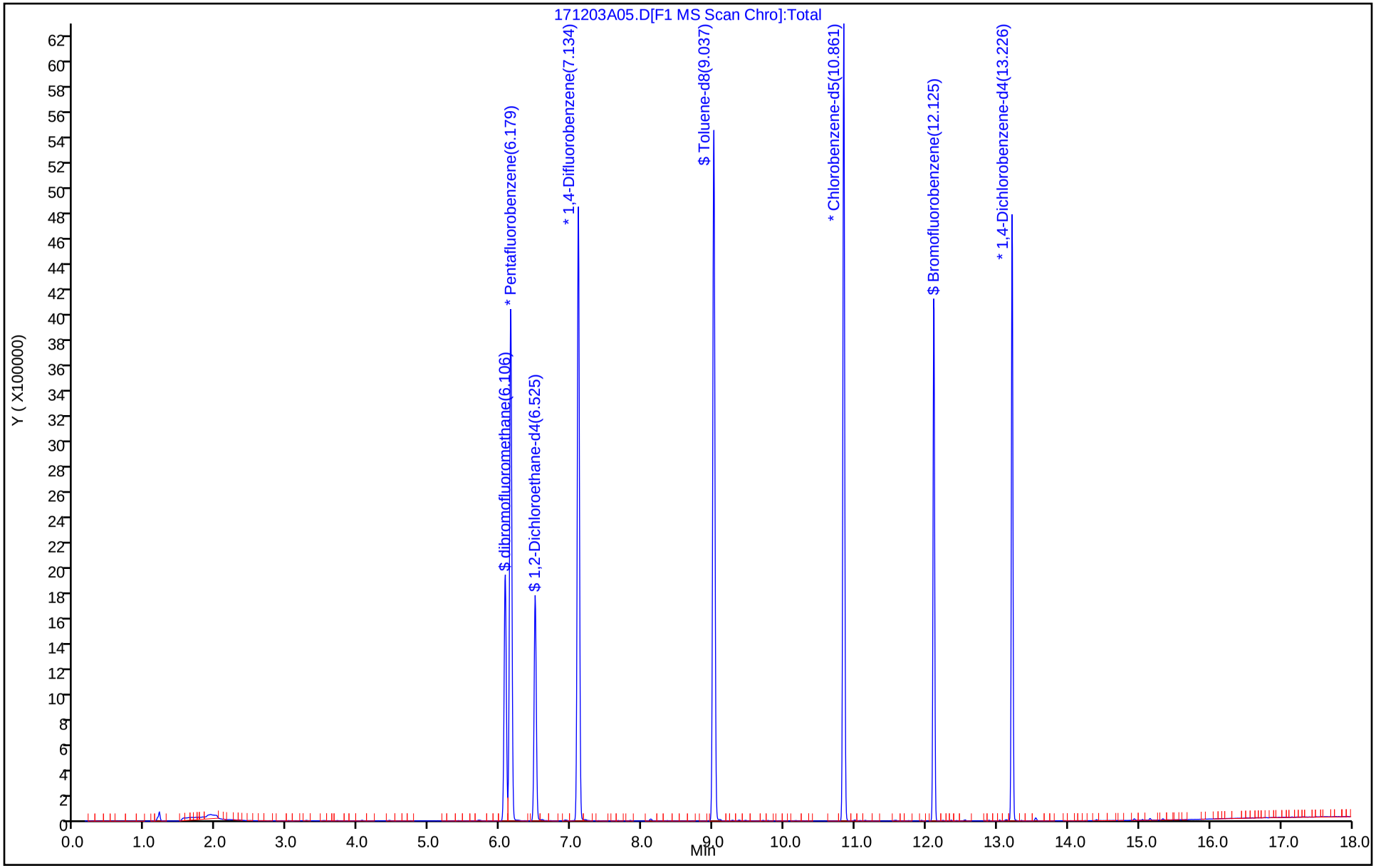
QC Flag Legend

Processing Flags
Review Flags

Report Date: 04-Dec-2019 13:38:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A05.D				
Injection Date:	03-Dec-2019 10:35:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	VBLKBR	Lab ID:	VBLKBR		
Sample Info:	17120319, VBLKBR				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	12/03/2019 0947
Benzene	50	50		1	100	70-130	12/03/2019 0947
Bromodichloromethane	50	52		1	103	70-130	12/03/2019 0947
Bromoform	50	48		1	96	70-130	12/03/2019 0947
Bromomethane (Methyl bromide)	50	41		1	81	70-130	12/03/2019 0947
2-Butanone (MEK)	100	96		1	96	70-130	12/03/2019 0947
Carbon disulfide	50	43		1	86	70-130	12/03/2019 0947
Carbon tetrachloride	50	49		1	99	70-130	12/03/2019 0947
Chlorobenzene	50	50		1	99	70-130	12/03/2019 0947
Chloroethane	50	45		1	89	70-130	12/03/2019 0947
Chloroform	50	50		1	100	70-130	12/03/2019 0947
Chloromethane (Methyl chloride)	50	39		1	79	60-140	12/03/2019 0947
Cyclohexane	50	50		1	99	70-130	12/03/2019 0947
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	12/03/2019 0947
Dibromochloromethane	50	52		1	104	70-130	12/03/2019 0947
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	12/03/2019 0947
1,2-Dichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,3-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
1,4-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
Dichlorodifluoromethane	50	42		1	84	60-140	12/03/2019 0947
1,1-Dichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,2-Dichloroethane	50	49		1	97	70-130	12/03/2019 0947
1,1-Dichloroethene	50	52		1	103	70-130	12/03/2019 0947
cis-1,2-Dichloroethene	50	49		1	97	70-130	12/03/2019 0947
trans-1,2-Dichloroethene	50	53		1	106	70-130	12/03/2019 0947
1,2-Dichloropropane	50	50		1	101	70-130	12/03/2019 0947
cis-1,3-Dichloropropene	50	55		1	110	70-130	12/03/2019 0947
trans-1,3-Dichloropropene	50	55		1	109	70-130	12/03/2019 0947
Ethylbenzene	50	50		1	101	70-130	12/03/2019 0947
2-Hexanone	100	95		1	95	70-130	12/03/2019 0947
Isopropylbenzene	50	51		1	102	70-130	12/03/2019 0947
Methyl acetate	50	49		1	99	70-130	12/03/2019 0947
Methyl tertiary butyl ether (MTBE)	50	48		1	95	70-130	12/03/2019 0947
4-Methyl-2-pentanone	100	96		1	96	70-130	12/03/2019 0947
Methylcyclohexane	50	50		1	101	70-130	12/03/2019 0947
Methylene chloride	50	42		1	84	70-130	12/03/2019 0947
Styrene	50	52		1	104	70-130	12/03/2019 0947
1,1,2,2-Tetrachloroethane	50	48		1	95	70-130	12/03/2019 0947
Tetrachloroethene	50	50		1	99	70-130	12/03/2019 0947
Toluene	50	50		1	100	70-130	12/03/2019 0947
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	12/03/2019 0947
1,2,4-Trichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,1,1-Trichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,1,2-Trichloroethane	50	48		1	96	70-130	12/03/2019 0947

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	12/03/2019 0947
Trichlorofluoromethane	50	42		1	84	70-130	12/03/2019 0947
Vinyl chloride	50	39		1	78	70-130	12/03/2019 0947
Xylenes (total)	100	100		1	102	70-130	12/03/2019 0947

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		96	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A03.D
Lab Sample ID: VLCS050BR Client Sample ID: 50uL/100mL 15608/11
Injection Date: 03-Dec-2019 09:47:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, VLCS050BR
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: LCS ALS Bottle: 3
Cpnd Sublist: std.sub Spike List File: Limswater.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	42.085	-15.8	84.2	60- 140
2 Chloromethane	50	39.334	-21.3	78.7	60- 140
3 Vinyl chloride	50	38.989	-22	78	70- 130
4 Bromomethane	50	40.568	-18.9	81.1	70- 130
5 Chloroethane	50	44.507	-11	89	70- 130
6 Trichlorofluoromethane	50	42.237	-15.5	84.5	70- 130
8 Ethyl ether	50	49.912	-0.2	99.8	70- 130
9 Acrolein	500	471.87	-5.6	94.4	60- 140
10 Acetone	100	98.258	-1.7	98.3	60- 140
11 1,1-Dichloroethene	50	51.523	3	103	70- 130
12 Freon 113	50	47.147	-5.7	94.3	70- 130
13 Methyl iodide	50	43.068	-13.9	86.1	70- 130
14 Carbon disulfide	50	43.16	-13.7	86.3	70- 130
15 Acetonitrile	500	513.77	2.8	102	60- 140
16 Methyl Acetate	50	49.344	-1.3	98.7	70- 130
17 Allyl chloride	50	59.792	19.6	119	70- 130
18 Methylene chloride	50	42.017	-16	84	70- 130
20 Acrylonitrile	100	97.786	-2.2	97.8	70- 130
21 trans-1,2-Dichloroethene	50	52.75	5.5	105	70- 130
22 tert-Butyl methyl ether(MTB	50	47.694	-4.6	95.4	70- 130
23 Hexane	50	48.286	-3.4	96.6	70- 130
24 1,1-Dichloroethane	50	49.362	-1.3	98.7	70- 130
25 Vinyl acetate	50	52.977	6	105	60- 140
26 Diisopropyl ether (IPE)	50	50.809	1.6	101	70- 130
27 Chloroprene	50	52.926	5.9	105	70- 130
29 cis-1,2-Dichloroethene	50	48.677	-2.6	97.4	70- 130
30 2-Butanone (MEK)	100	96.399	-3.6	96.4	70- 130
31 2,2-Dichloropropane	50	49.847	-0.3	99.7	70- 130
32 Propionitrile	500	498.29	-0.3	99.7	70- 130
33 Ethyl Acetate	50	47.153	-5.7	94.3	70- 130
34 Methacrylonitrile	250	242.47	-3	97	70- 130
35 Bromochloromethane	50	47.711	-4.6	95.4	70- 130
36 Tetrahydrofuran	50	45.483	-9	91	70- 130
37 Chloroform	50	49.854	-0.3	99.7	70- 130
40 1,1,1-Trichloroethane	50	49.328	-1.3	98.7	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
42 Cyclohexane	50	49.634	-0.7	99.3	70- 130
43 1,1-Dichloropropene	50	49.513	-1	99	70- 130
44 Carbon tetrachloride	50	49.289	-1.4	98.6	70- 130
45 Isobutyl alcohol	500	540.67	8.1	108	60- 140
48 Benzene	50	49.919	-0.2	99.8	70- 130
49 Isopropyl Acetate	50	50.523	1	101	70- 130
50 1,2-Dichloroethane	50	48.72	-2.6	97.4	70- 130
53 Trichloroethene	50	50.185	0.4	100	70- 130
54 Methylcyclohexane	50	50.384	0.8	100	70- 130
55 1,2-Dichloropropane	50	50.262	0.5	100	70- 130
56 Dibromomethane	50	48.355	-3.3	96.7	70- 130
57 Methyl methacrylate	50	50.253	0.5	100	70- 130
58 1,4-Dioxane	500	571.51	14.3	114	60- 140
59 Bromodichloromethane	50	51.68	3.4	103	70- 130
60 2-nitropropane	50	49.808	-0.4	99.6	70- 130
61 2-Chloroethylvinyl ether	50	47.217	-5.6	94.4	70- 130
62 cis-1,3-Dichloropropene	50	55.01	10	110	70- 130
63 4-Methyl-2-pentanone	100	95.964	-4	96	70- 130
65 Toluene	50	49.868	-0.3	99.7	70- 130
66 trans-1,3-Dichloropropene	50	54.732	9.5	109	70- 130
67 Ethyl methacrylate	50	51.586	3.2	103	70- 130
68 1,1,2-Trichloroethane	50	48.108	-3.8	96.2	70- 130
69 Tetrachloroethene	50	49.695	-0.6	99.4	70- 130
70 1,3-Dichloropropane	50	49.639	-0.7	99.3	70- 130
71 2-Hexanone	100	94.593	-5.4	94.6	70- 130
72 Dibromochloromethane	50	52.039	4.1	104	70- 130
73 n-Butyl acetate	50	50.239	0.5	100	70- 130
75 1,2-Dibromoethane (EDB)	50	49.734	-0.5	99.5	70- 130
77 Chlorobenzene	50	49.54	-0.9	99.1	70- 130
78 1,1,1,2-Tetrachloroethane	50	50.752	1.5	101	70- 130
79 Ethylbenzene	50	50.493	1	100	70- 130
80 m+p-Xylenes	50	51.091	2.2	102	70- 130
81 o-Xylene	50	50.744	1.5	101	70- 130
82 Styrene	50	51.815	3.6	103	70- 130
83 Bromoform	50	47.972	-4.1	95.9	70- 130
84 Isopropylbenzene	50	50.892	1.8	101	70- 130
85 Cyclohexanone	500	572.65	14.5	114	70- 130
87 Bromobenzene	50	49.857	-0.3	99.7	70- 130
88 1,1,2,2-Tetrachloroethane	50	47.521	-5	95	70- 130
89 1,2,3-Trichloropropane	50	49.818	-0.4	99.6	70- 130
90 trans-1,4-Dichloro-2-butene	50	46.596	-6.8	93.2	70- 130
91 n-Propylbenzene	50	49.262	-1.5	98.5	70- 130
92 2-Chlorotoluene	50	49.429	-1.1	98.9	70- 130
93 1,3,5-Trimethylbenzene	50	50.974	1.9	101	70- 130
94 4-Chlorotoluene	50	50.467	0.9	100	70- 130
95 tert-Butylbenzene	50	48.728	-2.5	97.5	70- 130
96 1,2,4-Trimethylbenzene	50	50.837	1.7	101	70- 130

Report Date: 04-Dec-2019 13:38:16 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A03.D

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
97 sec-Butylbenzene	50	48.608	-2.8	97.2	70- 130
98 1,3-Dichlorobenzene	50	49.345	-1.3	98.7	70- 130
99 p-Isopropyltoluene	50	51.43	2.9	102	70- 130
101 1,4-Dichlorobenzene	50	49.448	-1.1	98.9	70- 130
102 Benzyl chloride	50	56.939	13.9	113	60- 140
103 n-Butylbenzene	50	52.032	4.1	104	70- 130
104 1,2-Dichlorobenzene	50	48.888	-2.2	97.8	70- 130
105 1,2-Dibromo-3-chloropropane	50	48.082	-3.8	96.2	70- 130
106 1,2,4-Trichlorobenzene	50	49.172	-1.7	98.3	70- 130
107 Hexachlorobutadiene	50	49.729	-0.5	99.5	60- 140
108 Naphthalene	50	51.09	2.2	102	70- 130
109 1,2,3-Trichlorobenzene	50	49.109	-1.8	98.2	70- 130
S 110 Xylenes (total)	100	101.83	1.8	101	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A03.D
Lab Sample ID: VLCS050BR Client Sample ID: 50uL/100mL 15608/11
Injection Date: 03-Dec-2019 09:47:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, VLCS050BR
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: LCS ALS Bottle: 3
Cpnd Sublist: std.sub Spike List File: Limswater.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 11:02:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	529318	42.085	42.085	
2 Chloromethane	50.0	1.576	1.576	0.001	416451	39.334	39.334	
3 Vinyl chloride	62.0	1.697	1.691	0.005	484728	38.989	38.989	
4 Bromomethane	94.0	2.027	2.027	0.000	482762	40.568	40.568	
5 Chloroethane	64.0	2.142	2.142	0.000	392723	44.507	44.507	
6 Trichlorofluoromethane	101.0	2.425	2.425	0.000	1129855	42.237	42.237	
8 Ethyl ether	59.0	2.777	2.777	0.000	895323	49.912	49.912	
9 Acrolein	56.0	2.950	2.950	0.000	2386582	471.87	471.87	
10 Acetone	43.0	3.144	3.144	0.000	1094247	98.258	98.258	
11 1,1-Dichloroethene	96.0	3.065	3.060	0.006	801192	51.523	51.523	
12 Freon 113	101.0	3.102	3.102	0.000	722495	47.147	47.147	
13 Methyl iodide	142.0	3.238	3.238	0.000	1409129	43.068	43.068	
14 Carbon disulfide	76.0	3.312	3.306	0.005	2098631	43.160	43.160	
15 Acetonitrile	40.0	3.527	3.526	0.000	811776	513.77	513.77	M
17 Allyl chloride	76.0	3.563	3.563	0.000	586587	59.792	59.792	
16 Methyl Acetate	43.0	3.574	3.574	0.000	1398925	49.344	49.344	
18 Methylene chloride	84.0	3.747	3.741	0.005	845795	42.017	42.017	
20 Acrylonitrile	53.0	4.072	4.072	0.000	1297346	97.786	97.786	
21 trans-1,2-Dichloroethene	96.0	4.098	4.093	0.005	1182392	52.750	52.750	
22 tert-Butyl methyl ether(MTBE)	73.0	4.103	4.098	0.006	2682001	47.694	47.694	
23 Hexane	57.0	4.476	4.475	0.000	1440753	48.286	48.286	
24 1,1-Dichloroethane	63.0	4.685	4.685	0.000	1859075	49.362	49.362	
25 Vinyl acetate	86.0	4.732	4.727	0.005	341560	52.977	52.977	
26 Diisopropyl ether (IPE)	87.0	4.769	4.764	0.006	972930	50.809	50.809	
27 Chloroprene	53.0	4.774	4.774	0.000	1541923	52.926	52.926	
29 cis-1,2-Dichloroethene	96.0	5.440	5.435	0.006	1288324	48.677	48.677	
30 2-Butanone (MEK)	72.0	5.451	5.445	0.005	606429	96.399	96.399	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.430	0.005	1224882	49.847	49.847	
32 Propionitrile	54.0	5.535	5.535	0.000	2700761	498.29	498.29	
33 Ethyl Acetate	43.0	5.524	5.524	0.000	1980030	47.153	47.153	
34 Methacrylonitrile	67.0	5.729	5.723	0.005	3742278	242.47	242.47	
35 Bromochloromethane	128.0	5.744	5.739	0.005	707203	47.711	47.711	
36 Tetrahydrofuran	42.0	5.744	5.744	0.000	786206	45.483	45.483	
37 Chloroform	83.0	5.902	5.902	0.000	2073738	49.854	49.854	
$ 39 dibromofluoromethane	111.0	6.101	6.101	0.000	1335173	49.389	49.389	
40 1,1,1-Trichloroethane	97.0	6.075	6.069	0.005	1755968	49.328	49.328	
* 41 Pentafluorobenzene	168.0	6.180	6.179	0.000	3442850	50.000	50.000	
42 Cyclohexane	41.0	6.143	6.143	0.000	790514	49.634	49.634	
43 1,1-Dichloropropene	75.0	6.284	6.284	0.000	1499558	49.513	49.513	
44 Carbon tetrachloride	119.0	6.263	6.258	0.005	1632099	49.289	49.289	
45 Isobutyl alcohol	42.0	6.531	6.525	0.005	629666	540.67	540.67	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.520	0.005	1440540	48.009	48.009	
48 Benzene	78.0	6.536	6.531	0.006	4262478	49.919	49.919	
49 Isopropyl Acetate	43.0	6.683	6.678	0.005	2847028	50.523	50.523	
50 1,2-Dichloroethane	62.0	6.625	6.620	0.006	1616766	48.720	48.720	
* 52 1,4-Difluorobenzene	114.0	7.134	7.128	0.005	4685938	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.406	0.005	1409777	50.185	50.185	
54 Methylcyclohexane	83.0	7.690	7.689	0.000	1778501	50.384	50.384	
55 1,2-Dichloropropane	63.0	7.752	7.747	0.005	1063879	50.262	50.262	
56 Dibromomethane	93.0	7.857	7.857	0.000	815413	48.355	48.355	
57 Methyl methacrylate	41.0	7.878	7.873	0.006	1384892	50.253	50.253	
58 1,4-Dioxane	88.0	7.852	7.852	0.001	163897	571.51	571.51	
59 Bromodichloromethane	83.0	8.114	8.114	0.000	1548545	51.680	51.680	
60 2-nitropropane	43.0	8.424	8.418	0.005	701302	49.808	49.808	
61 2-Chloroethylvinyl ether	63.0	8.523	8.518	0.006	887034	47.217	47.217	
62 cis-1,3-Dichloropropene	75.0	8.696	8.696	0.000	1911639	55.010	55.010	
63 4-Methyl-2-pentanone	43.0	8.916	8.916	0.000	3566221	95.964	95.964	
$ 64 Toluene-d8	98.0	9.037	9.032	0.006	4407749	49.920	49.920	
65 Toluene	92.0	9.126	9.121	0.006	2848042	49.868	49.868	
66 trans-1,3-Dichloropropene	75.0	9.483	9.477	0.005	1806655	54.732	54.732	
67 Ethyl methacrylate	69.0	9.582	9.577	0.006	1871625	51.586	51.586	
68 1,1,2-Trichloroethane	97.0	9.734	9.729	0.005	1117061	48.108	48.108	
69 Tetrachloroethene	164.0	9.803	9.802	0.000	1155645	49.695	49.695	
70 1,3-Dichloropropane	76.0	9.934	9.928	0.005	1808339	49.639	49.639	
71 2-Hexanone	43.0	10.028	10.028	0.000	3093308	94.593	94.593	
72 Dibromochloromethane	129.0	10.190	10.185	0.005	1327429	52.039	52.039	
73 n-Butyl acetate	43.0	10.190	10.190	0.000	2434092	50.239	50.239	
75 1,2-Dibromoethane (EDB)	107.0	10.311	10.311	0.000	1249796	49.734	49.734	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3757656	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.893	0.001	2995346	49.540	49.540	
78 1,1,1,2-Tetrachloroethane	131.0	11.003	11.003	0.000	1106116	50.752	50.752	
79 Ethylbenzene	106.0	11.014	11.014	0.000	1616309	50.493	50.493	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	1951481	51.091	51.091	
81 o-Xylene	106.0	11.569	11.569	0.000	1719194	50.744	50.744	
82 Styrene	104.0	11.596	11.596	0.000	2967855	51.815	51.815	
83 Bromoform	173.0	11.774	11.774	0.000	894129	47.972	47.972	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	4211954	50.892	50.892	
85 Cyclohexanone	55.0	12.041	12.041	0.000	538963	572.65	572.65	

Report Date: 04-Dec-2019 13:38:16 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.125	0.000	1303115	51.579	51.579	
88 1,1,2,2-Tetrachloroethane	83.0	12.282	12.282	0.000	1144443	47.521	47.521	M
87 Bromobenzene	156.0	12.256	12.256	0.000	1178525	49.857	49.857	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	485458	49.818	49.818	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	325604	46.596	46.596	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	4504835	49.262	49.262	
92 2-Chlorotoluene	91.0	12.445	12.445	0.001	2585695	49.429	49.429	
93 1,3,5-Trimethylbenzene	105.0	12.550	12.550	0.000	2862017	50.974	50.974	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	989341	50.467	50.467	
95 tert-Butylbenzene	119.0	12.844	12.843	0.000	2573173	48.728	48.728	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	2722832	50.837	50.837	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	3474467	48.608	48.608	
98 1,3-Dichlorobenzene	146.0	13.153	13.153	0.000	1670837	49.345	49.345	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	2905931	51.430	51.430	
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.226	0.000	1331218	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.247	13.247	0.000	1653012	49.448	49.448	
102 Benzyl chloride	91.0	13.357	13.357	0.000	1960222	56.939	56.939	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	2362963	52.032	52.032	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	1474275	48.888	48.888	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	242738	48.082	48.082	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	918382	49.172	49.172	
107 Hexachlorobutadiene	225.0	15.061	15.061	0.000	451208	49.729	49.729	
108 Naphthalene	128.0	15.166	15.166	0.000	2709628	51.090	51.090	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	854726	49.109	49.109	
S 110 Xylenes (total)	106.0	16.000		0.000		101.83	101.83	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		101.43	101.43	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

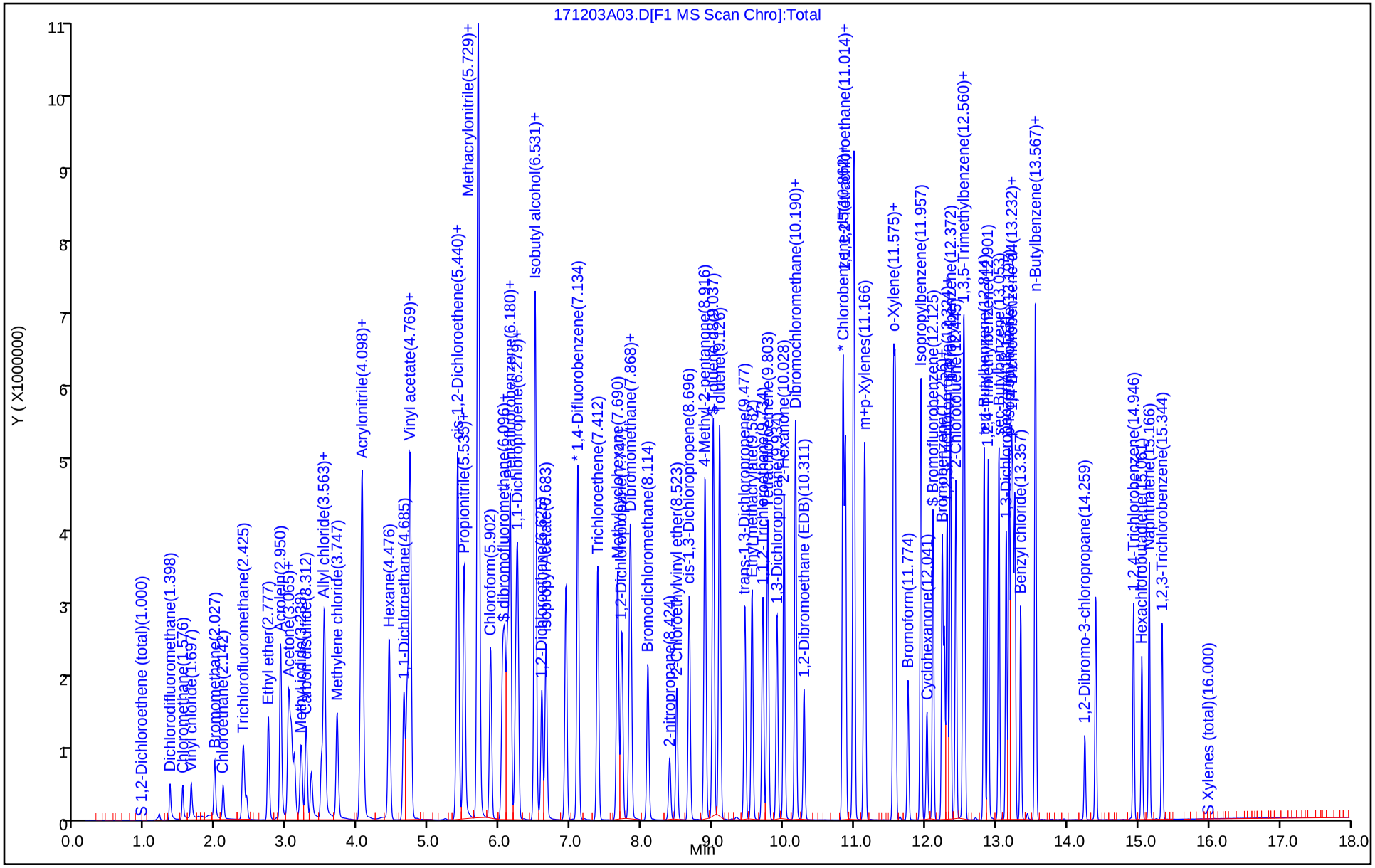
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:38:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A03.D				
Injection Date:	03-Dec-2019 09:47:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050BR		
Sample Info:	17120319, VLCS050BR				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:38:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

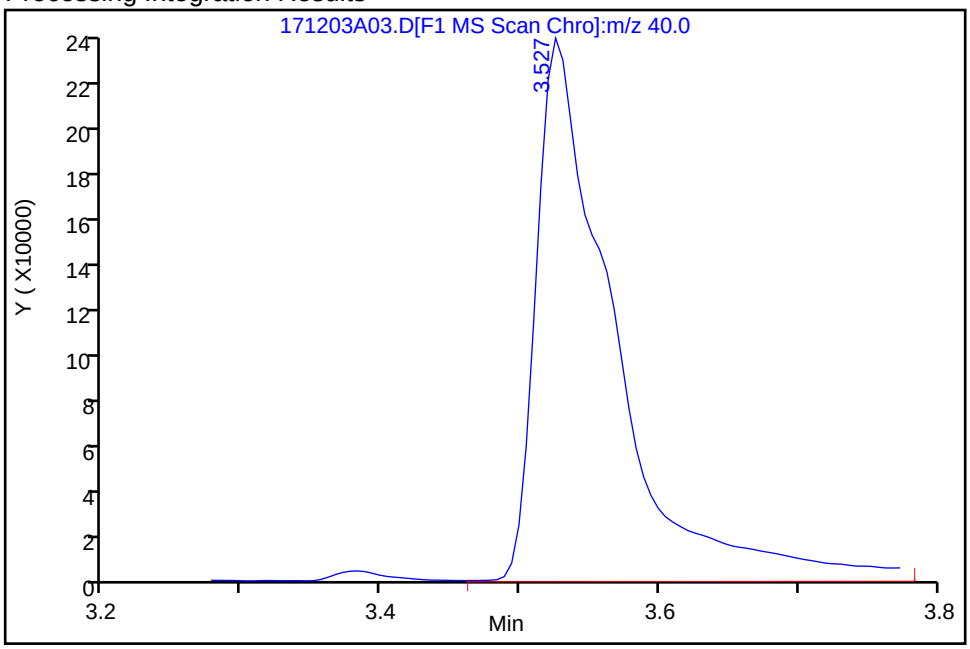
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A03.D		
Injection Date:	03-Dec-2019 09:47:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050BR
Sample Info:	17120319, VLCS050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

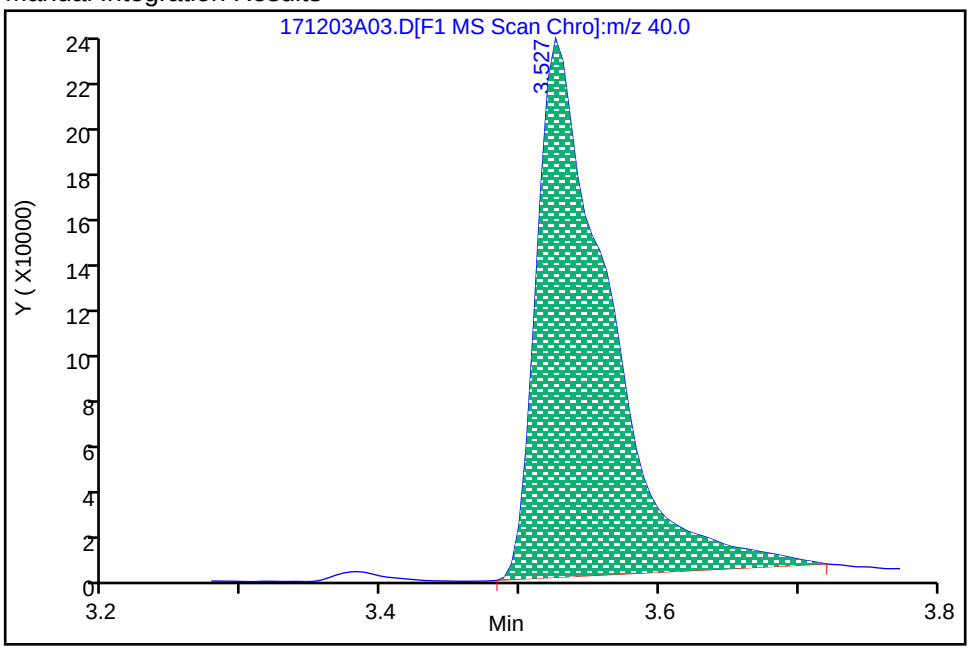
Processing Integration Results

RT: 3.527
Area: 896795
Conc: 567.58
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.527
Area: 811776
Conc: 513.77
Conc Units: ug/L



Data Editor: tml, 03-Dec-2019 11:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

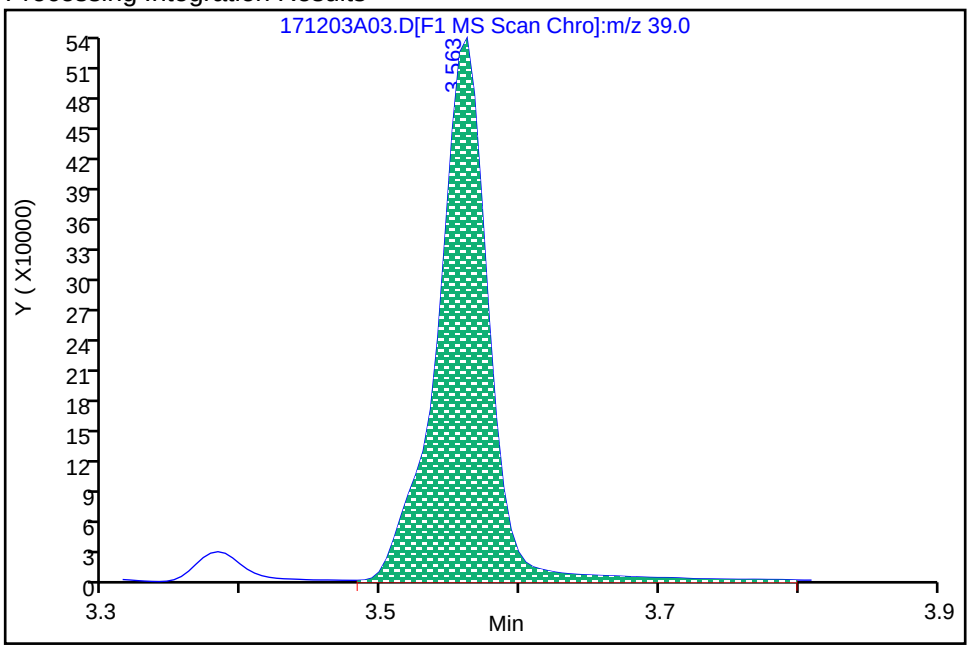
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A03.D		
Injection Date:	03-Dec-2019 09:47:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050BR
Sample Info:	17120319, VLCS050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

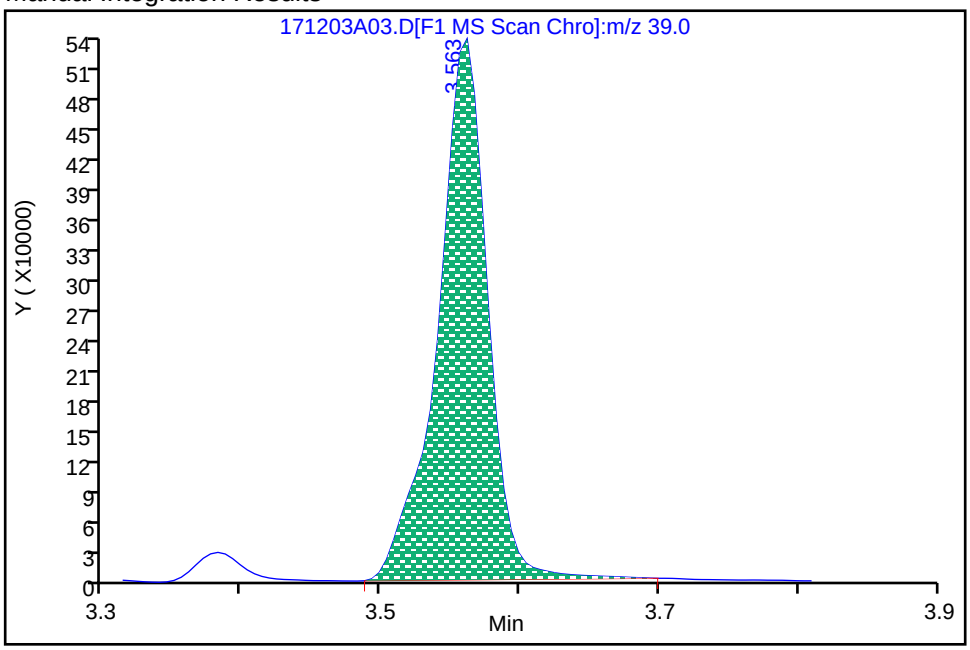
Processing Integration Results

RT: 3.563
Area: 1379577
Conc: 567.58
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 1319068
Conc: 513.77
Conc Units: ug/L



Data Editor: tml, 03-Dec-2019 11:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

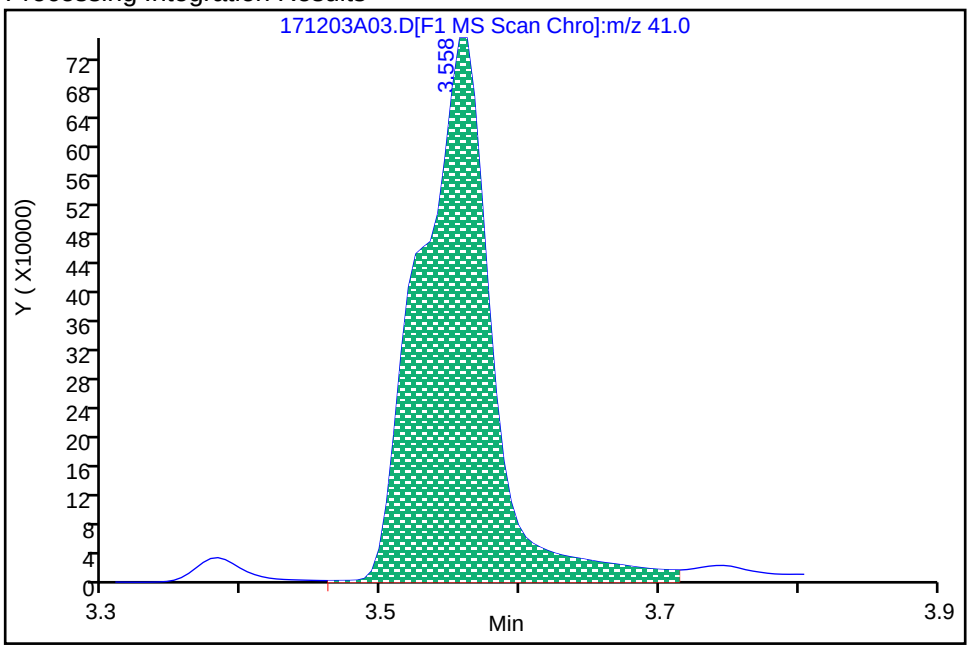
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A03.D		
Injection Date:	03-Dec-2019 09:47:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050BR
Sample Info:	17120319, VLCS050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

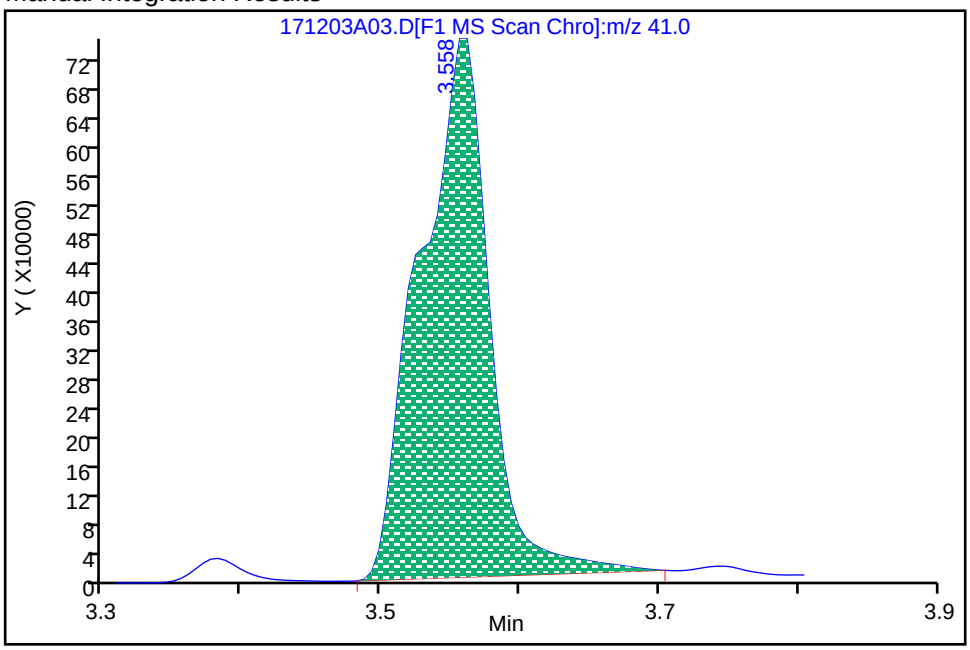
Processing Integration Results

RT: 3.558
Area: 2689065
Conc: 567.58
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.558
Area: 2544804
Conc: 513.77
Conc Units: ug/L



Data Editor: tml, 03-Dec-2019 11:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

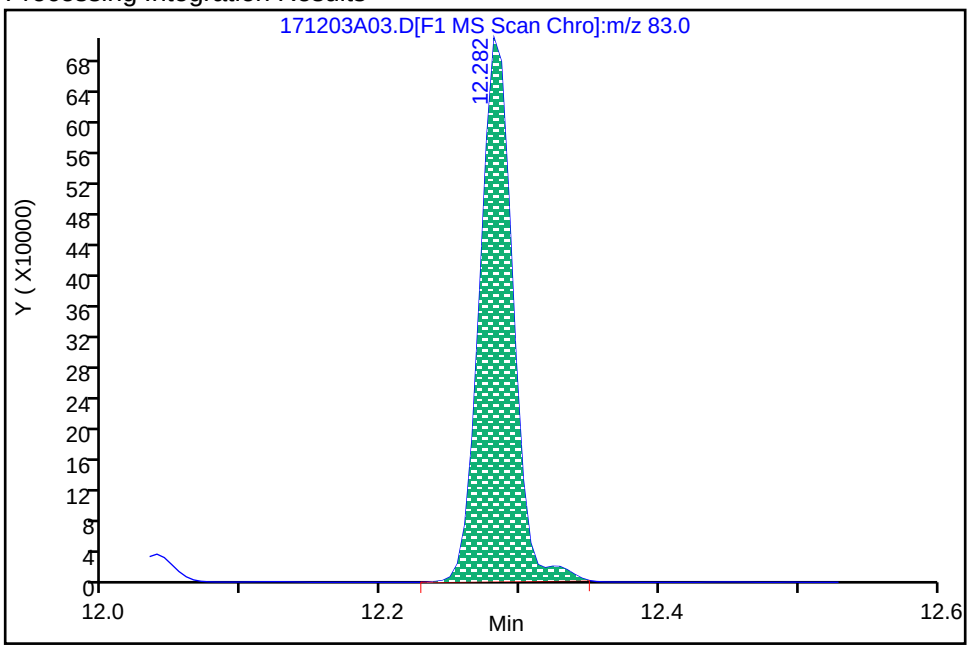
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A03.D		
Injection Date:	03-Dec-2019 09:47:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050BR
Sample Info:	17120319, VLCS050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

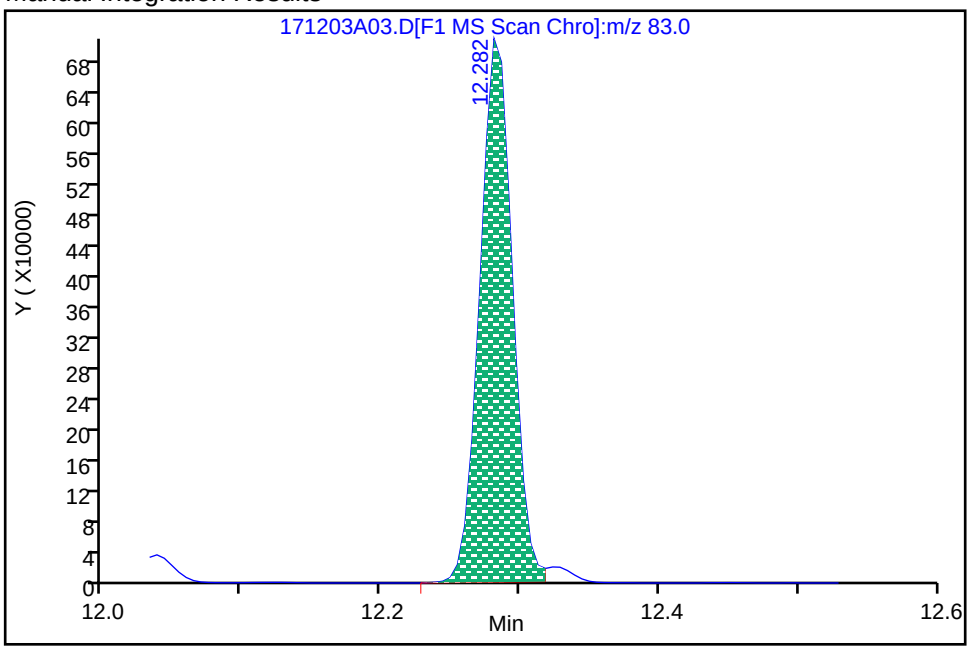
Processing Integration Results

RT: 12.282
Area: 1164310
Conc: 48.345
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 12.282
Area: 1144443
Conc: 47.521
Conc Units: ug/L



Data Editor: tml, 03-Dec-2019 11:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:38:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

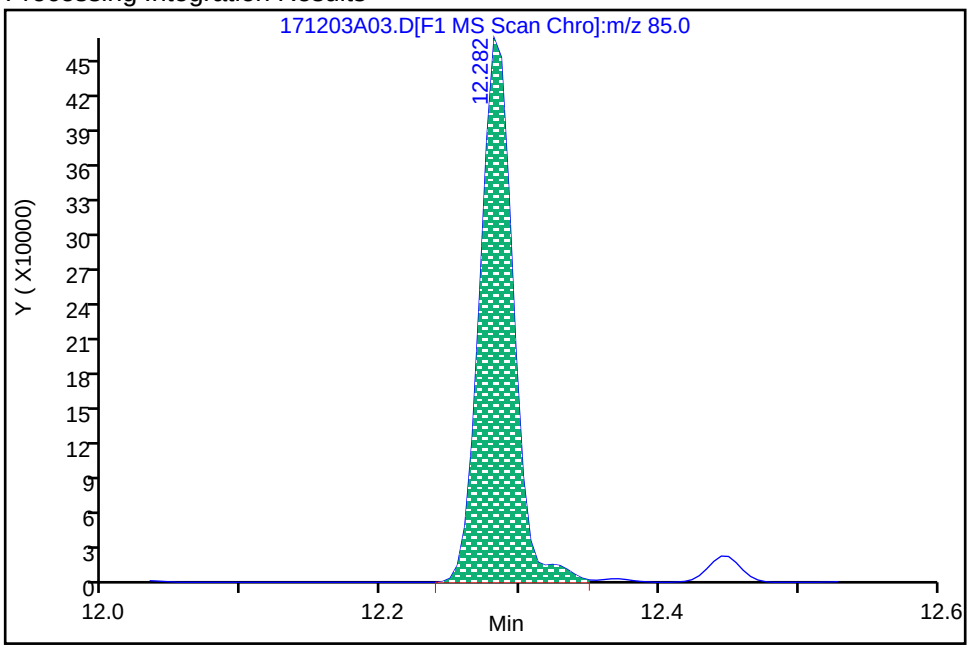
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A03.D		
Injection Date:	03-Dec-2019 09:47:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050BR
Sample Info:	17120319, VLCS050BR		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

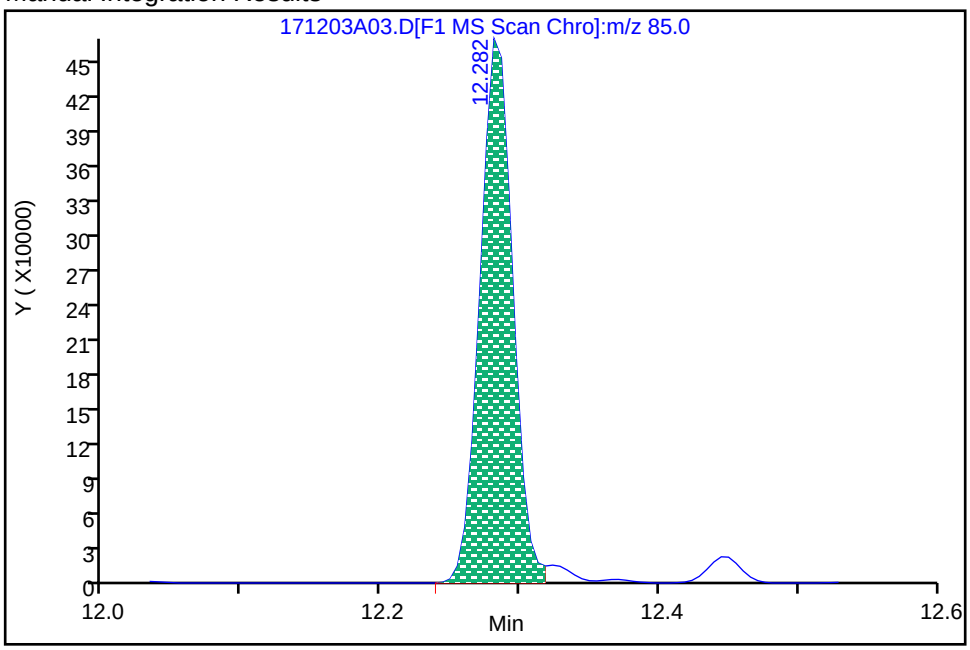
Processing Integration Results

RT: 12.282
Area: 769799
Conc: 48.345
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 12.282
Area: 753619
Conc: 47.521
Conc Units: ug/L



Data Editor: tml, 03-Dec-2019 11:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Volatile Organic Compounds by GC/MS - MS

Sample ID: UL03010-002MS
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	100	82		1	82	60-140	12/03/2019 1626
Benzene	ND	50	50		1	101	70-130	12/03/2019 1626
Bromodichloromethane	ND	50	49		1	99	70-130	12/03/2019 1626
Bromoform	ND	50	35		1	70	70-130	12/03/2019 1626
Bromomethane (Methyl bromide)	ND	50	43		1	87	70-130	12/03/2019 1626
2-Butanone (MEK)	ND	100	90		1	90	70-130	12/03/2019 1626
Carbon disulfide	ND	50	41		1	81	70-130	12/03/2019 1626
Carbon tetrachloride	ND	50	51		1	102	70-130	12/03/2019 1626
Chlorobenzene	ND	50	49		1	99	70-130	12/03/2019 1626
Chloroethane	ND	50	47		1	94	70-130	12/03/2019 1626
Chloroform	ND	50	50		1	99	70-130	12/03/2019 1626
Chloromethane (Methyl chloride)	ND	50	42		1	84	60-140	12/03/2019 1626
Cyclohexane	ND	50	53		1	105	70-130	12/03/2019 1626
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	44		1	88	70-130	12/03/2019 1626
Dibromochloromethane	ND	50	46		1	93	70-130	12/03/2019 1626
1,2-Dibromoethane (EDB)	ND	50	48		1	97	70-130	12/03/2019 1626
1,2-Dichlorobenzene	ND	50	48		1	97	70-130	12/03/2019 1626
1,3-Dichlorobenzene	ND	50	48		1	96	70-130	12/03/2019 1626
1,4-Dichlorobenzene	ND	50	49		1	97	70-130	12/03/2019 1626
Dichlorodifluoromethane	ND	50	48		1	96	60-140	12/03/2019 1626
1,1-Dichloroethane	ND	50	50		1	100	70-130	12/03/2019 1626
1,2-Dichloroethane	ND	50	48		1	96	70-130	12/03/2019 1626
1,1-Dichloroethene	ND	50	51		1	103	70-130	12/03/2019 1626
cis-1,2-Dichloroethene	ND	50	49		1	98	70-130	12/03/2019 1626
trans-1,2-Dichloroethene	ND	50	54		1	107	70-130	12/03/2019 1626
1,2-Dichloropropane	ND	50	50		1	100	70-130	12/03/2019 1626
cis-1,3-Dichloropropene	ND	50	52		1	104	70-130	12/03/2019 1626
trans-1,3-Dichloropropene	ND	50	51		1	103	70-130	12/03/2019 1626
Ethylbenzene	ND	50	51		1	103	70-130	12/03/2019 1626
2-Hexanone	ND	100	94		1	94	70-130	12/03/2019 1626
Isopropylbenzene	ND	50	52		1	104	70-130	12/03/2019 1626
Methyl acetate	ND	50	46		1	92	70-130	12/03/2019 1626
Methyl tertiary butyl ether (MTBE)	ND	50	44		1	88	70-130	12/03/2019 1626
4-Methyl-2-pentanone	ND	100	94		1	94	70-130	12/03/2019 1626
Methylcyclohexane	ND	50	55		1	111	70-130	12/03/2019 1626
Methylene chloride	ND	50	39		1	78	70-130	12/03/2019 1626
Styrene	ND	50	51		1	101	70-130	12/03/2019 1626
1,1,2,2-Tetrachloroethane	ND	50	46		1	92	70-130	12/03/2019 1626
Tetrachloroethene	ND	50	51		1	102	70-130	12/03/2019 1626
Toluene	ND	50	51		1	102	70-130	12/03/2019 1626
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	50		1	101	70-130	12/03/2019 1626
1,2,4-Trichlorobenzene	ND	50	47		1	94	70-130	12/03/2019 1626
1,1,1-Trichloroethane	ND	50	51		1	102	70-130	12/03/2019 1626
1,1,2-Trichloroethane	ND	50	47		1	95	70-130	12/03/2019 1626

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: UL03010-002MS
Batch: 37730
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	50	50		1	100	70-130	12/03/2019 1626
Trichlorofluoromethane	ND	50	47		1	93	70-130	12/03/2019 1626
Vinyl chloride	ND	50	42		1	85	70-130	12/03/2019 1626
Xylenes (total)	ND	100	100		1	102	70-130	12/03/2019 1626

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Report Date: 04-Dec-2019 13:38:28 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120319.b\171203A17.D
Lab Sample ID: UL03010-002 Client Sample ID: MPG1-21-Water-RW-12
Injection Date: 03-Dec-2019 16:26:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120319, UL03010-002,MS
Misc. Info: XRSK01
Method: \\Organics\DD\chem\msd17.i\17120319.b\8260B-17.m
Method Date: 04-Dec-2019 13:36:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: MS ALS Bottle: 17
Cpnd Sublist: sample.sb
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 13:37:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.190	6.179	0.010	3338162	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.144	7.128	0.015	4513273	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.867	10.862	0.005	3537515	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.226	0.005	1262144	50.000	50.000	
1 Dichlorodifluoromethane	85.0	1.403	1.398	0.005	583157	47.819	47.819	
2 Chloromethane	50.0	1.581	1.576	0.005	429902	41.878	41.878	
3 Vinyl chloride	62.0	1.702	1.691	0.010	512173	42.488	42.488	
4 Bromomethane	94.0	2.032	2.027	0.005	501428	43.458	43.458	
5 Chloroethane	64.0	2.152	2.142	0.010	403020	47.106	47.106	
6 Trichlorofluoromethane	101.0	2.436	2.425	0.010	1210308	46.663	46.663	
11 1,1-Dichloroethene	96.0	3.075	3.060	0.016	774856	51.392	51.392	
12 Freon 113	101.0	3.112	3.102	0.010	746698	50.255	50.255	
10 Acetone	43.0	3.154	3.144	0.010	887099	82.155	82.155	
14 Carbon disulfide	76.0	3.322	3.306	0.015	1918097	40.684	40.684	
16 Methyl Acetate	43.0	3.584	3.574	0.010	1268957	46.164	46.164	
18 Methylene chloride	84.0	3.757	3.741	0.015	761349	39.008	39.008	
21 trans-1,2-Dichloroethene	96.0	4.108	4.093	0.016	1166046	53.652	53.652	
22 tert-Butyl methyl ether(MTBE)	73.0	4.113	4.098	0.016	2395781	43.940	43.940	
24 1,1-Dichloroethane	63.0	4.695	4.685	0.010	1821536	49.882	49.882	
29 cis-1,2-Dichloroethene	96.0	5.450	5.435	0.016	1251924	48.786	48.786	
30 2-Butanone (MEK)	72.0	5.461	5.445	0.015	548167	89.871	89.871	
37 Chloroform	83.0	5.912	5.902	0.010	1998510	49.552	49.552	
40 1,1,1-Trichloroethane	97.0	6.085	6.069	0.015	1751834	50.755	50.755	
42 Cyclohexane	41.0	6.153	6.143	0.010	813637	52.688	52.688	
44 Carbon tetrachloride	119.0	6.274	6.258	0.015	1642383	51.155	51.155	
$ 46 1,2-Dichloroethane-d4	65.0	6.536	6.520	0.015	1401887	48.508	48.508	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0	6.541	6.531	0.010	4144794	50.398	50.398	
50 1,2-Dichloroethane	62.0	6.635	6.620	0.016	1533155	47.968	47.968	
53 Trichloroethene	130.0	7.422	7.406	0.015	1357321	50.167	50.167	
54 Methylcyclohexane	83.0	7.700	7.689	0.010	1885755	55.466	55.466	
55 1,2-Dichloropropane	63.0	7.757	7.747	0.010	1018854	49.977	49.977	
59 Bromodichloromethane	83.0	8.124	8.114	0.010	1422564	49.292	49.292	
62 cis-1,3-Dichloropropene	75.0	8.706	8.696	0.010	1741231	52.024	52.024	
63 4-Methyl-2-pentanone	43.0	8.927	8.916	0.010	3370709	94.173	94.173	
$ 64 Toluene-d8	98.0	9.042	9.032	0.010	4274434	51.422	51.422	
65 Toluene	92.0	9.136	9.121	0.016	2751971	51.185	51.185	
66 trans-1,3-Dichloropropene	75.0	9.488	9.477	0.010	1593246	51.270	51.270	
68 1,1,2-Trichloroethane	97.0	9.739	9.729	0.010	1033617	47.285	47.285	
69 Tetrachloroethene	164.0	9.813	9.802	0.010	1118019	51.069	51.069	
71 2-Hexanone	43.0	10.038	10.028	0.011	2879205	93.525	93.525	
72 Dibromochloromethane	129.0	10.195	10.185	0.010	1114497	46.410	46.410	
75 1,2-Dibromoethane (EDB)	107.0	10.321	10.311	0.010	1143333	48.329	48.329	
77 Chlorobenzene	112.0	10.898	10.893	0.005	2809524	49.359	49.359	
79 Ethylbenzene	106.0	11.024	11.014	0.010	1548033	51.370	51.370	
80 m+p-Xylenes	106.0	11.171	11.166	0.005	1835766	51.052	51.052	
81 o-Xylene	106.0	11.580	11.569	0.010	1617844	50.724	50.724	
82 Styrene	104.0	11.601	11.596	0.005	2733925	50.701	50.701	
83 Bromoform	173.0	11.779	11.774	0.005	616770	35.224	35.224	
84 Isopropylbenzene	105.0	11.962	11.957	0.005	4033452	51.768	51.768	
$ 86 Bromofluorobenzene	95.0	12.130	12.125	0.005	1225265	51.515	51.515	
88 1,1,2,2-Tetrachloroethane	83.0	12.293	12.282	0.010	1045885	45.805	45.805	
98 1,3-Dichlorobenzene	146.0	13.163	13.153	0.011	1544845	48.121	48.121	
101 1,4-Dichlorobenzene	146.0	13.257	13.247	0.010	1538262	48.533	48.533	
104 1,2-Dichlorobenzene	146.0	13.577	13.572	0.005	1380632	48.289	48.289	
105 1,2-Dibromo-3-chloropropane	75.0	14.264	14.259	0.005	210381	43.954	43.954	
106 1,2,4-Trichlorobenzene	180.0	14.951	14.946	0.005	831046	46.931	46.931	
S 110 Xylenes (total)	106.0	16.000		0.000		101.78	101.78	Q

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

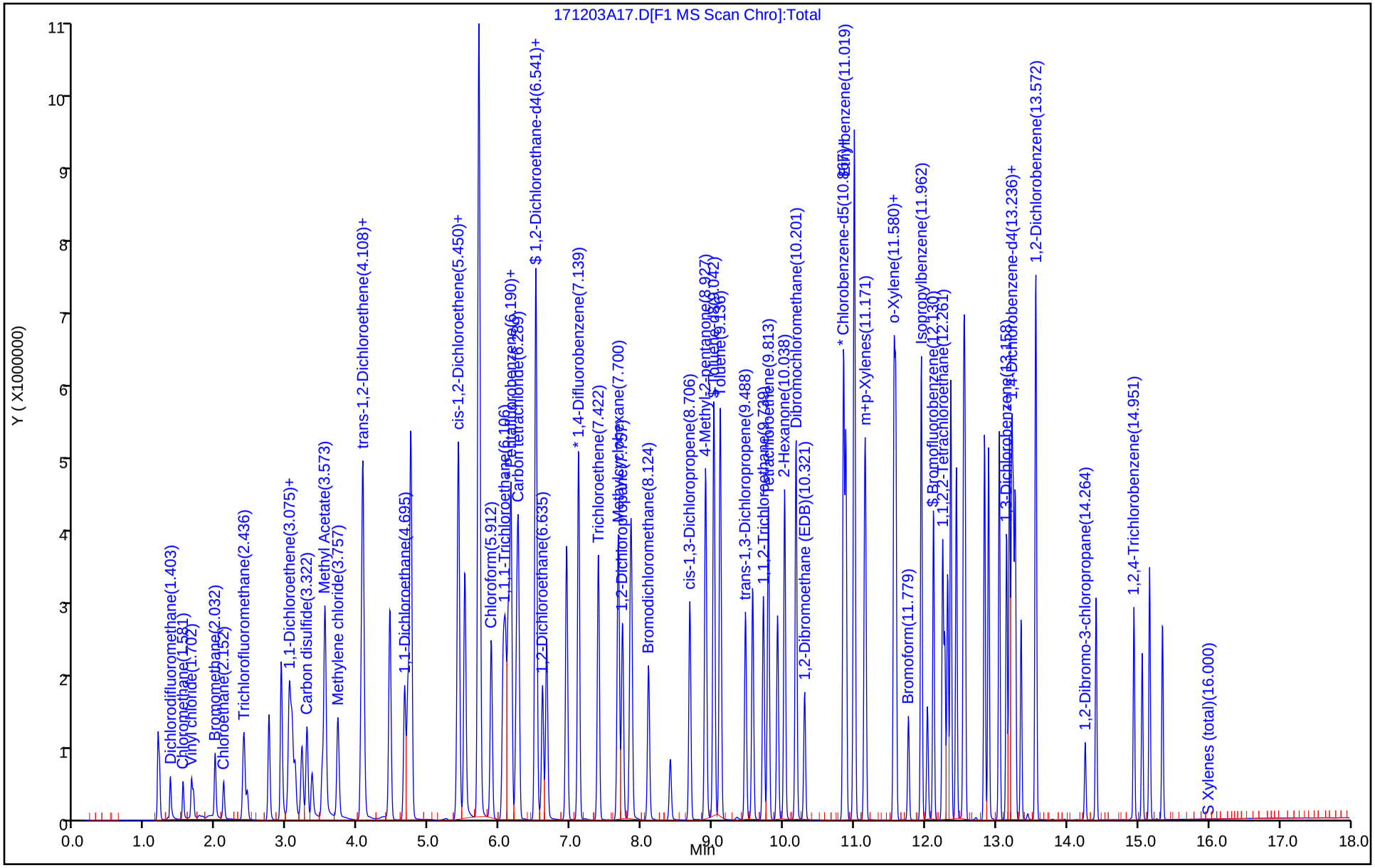
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags

Report Date: 04-Dec-2019 13:38:28 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120319.b\171203A17.D				
Injection Date:	03-Dec-2019 16:26:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-21-Water-RW-12	Lab ID:	UL03010-002		
Sample Info:	17120319, UL03010-002,MS				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



MISC. DATA

Shealy Environmental Services
Run Log Report

IS: 15587
SS: 15547

Batch Path: \\Organics\DD\chem\msd17.i\17120219B.b
Inst. ID: msd17.i Method: 8260B-17
Matrix: Water Operator: TML
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBBQ	02-Dec-2019 23:45:30	171202B01.D	BFB		15547	Water	1	all				Yes					8260B-17
2	VIBLK	03-Dec-2019 00:10:30	171202B02.D	Client		VIBLK	Water	1	std									8260B-17
3	VIBLK	03-Dec-2019 00:34:30	171202B03.D	Client		VIBLK	Water	1	std									8260B-17
4	VIBLK	03-Dec-2019 00:58:30	171202B04.D	Client		VIBLK	Water	1	std									8260B-17
5	VSTD0.5BQ	03-Dec-2019 01:21:30	171202B05.D	Ical	1	1mL/100mL VSTD050	Water	1	std									8260B-17
6	VSTD001BQ	03-Dec-2019 01:44:30	171202B06.D	Ical	2	2mL/100mL VSTD050	Water	1	std									8260B-17
7	VSTD005BQ	03-Dec-2019 02:08:30	171202B07.D	Ical	3	5uL/100mL 15613/10	Water	1	std									8260B-17
8	VSTD020BQ	03-Dec-2019 02:32:30	171202B08.D	Ical	4	20uL/100mL 15613/10	Water	1	std									8260B-17
9	VSTD050BQ	03-Dec-2019 02:56:30	171202B09.D	Ical	5	50uL/100mL 15613/10	Water	1	std									8260B-17
10	VSTD100BQ	03-Dec-2019 03:19:30	171202B10.D	Ical	6	100uL/100mL15613/10	Water	1	std									8260B-17
11	VSTD200BQ	03-Dec-2019 03:43:30	171202B11.D	Ical	7	200uL/100mL15613/10	Water	1	std									8260B-17
12	VIBLK	03-Dec-2019 04:07:30	171202B12.D	Client		VIBLK	Water	1	std									8260B-17
13	VICV050BQ	03-Dec-2019 04:30:30	171202B13.D	ICV		50uL/100mL 15608/11	Water	1	std	8260ICV70-130							passes 8260	8260B-17
13	VICV050BQ	03-Dec-2019 04:30:30	171202B13_dodI	ICV		50uL/100mL 15608/11	Water	1	std_5.0	DoDICV80-120							* passes DOD	8260B-17

ICV passes 8260

ICAL Summary:
Acetonitrile 10-2000 (lvl 1 off)

Weighted Linear
Bromoform (5958)
trans-1,4-dichloro-2-butene (2546)

* ICV passes DOD except:
1,1-Dichloroethene 122%
Allyl Chloride 125%

Shealy Environmental Services
Run Log Report

BATCH: UQ37730 (8260B)
IS: 15614
SS: 15547

Batch Path: \\Organics\DD\chem\msd17.i\17120319.b
Inst. ID: msd17.i Method: 8260B-17
Matrix: Water Operator: TML
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBBR	03-Dec-2019 08:59:30	171203A01.D	BFB	15588	Water	1	all				Yes					BFB-17
2	VSTD050BR	03-Dec-2019 09:23:30	171203A02.D	Ccv	50uL/100mL 15613/10	Water	1	std									8260B-17
3	VLCS050BR	03-Dec-2019 09:47:30	171203A03.D	LCS	50uL/100mL 15608/11	Water	1	std	Limswater								8260B-17
4	VIBLK	03-Dec-2019 10:11:30	171203A04.D	Client	VIBLK	Water	1	std									8260B-17
5	VBLKBR	03-Dec-2019 10:35:30	171203A05.D	BLANK	VBLKBR	Water	1	std									8260B-17
6	VIBLK	03-Dec-2019 12:04:30	171203A06.D	Client	VIBLK	Water	1	std									8260B-17
7	UL03010-006	03-Dec-2019 12:28:30	171203A07.D	Client	MPG1-FB-120129	Water	1	sample									8260B-17
8	UL03010-007	03-Dec-2019 12:52:30	171203A08.D	Client	MPG1-TB-120129	Water	1	sample									8260B-17
9	UL02023-008	03-Dec-2019 13:16:30	171203A09.D	Client	EB-01-120219	Water	1	sample									8260B-17
10	UL02023-009	03-Dec-2019 13:39:30	171203A10.D	Client	TB-01-120219	Water	1	sample									8260B-17
11	UL03010-001	03-Dec-2019 14:03:30	171203A11.D	Client	MPG1-20-Water-RW-12	Water	1	sample									8260B-17
12	UL03010-002	03-Dec-2019 14:27:30	171203A12.D	Client	MPG1-21-Water-RW-12	Water	1	sample									8260B-17
13	UL03010-003	03-Dec-2019 14:51:30	171203A13.D	Client	MPG1-22-Water-RW-12	Water	1	sample									8260B-17
14	UL03010-004	03-Dec-2019 15:14:30	171203A14.D	Client	MPG1-24-Water-RW-12	Water	1	sample									8260B-17
15	UL03010-005	03-Dec-2019 15:39:30	171203A15.D	Client	MPG1-25-Water-RW-12	Water	1	sample									8260B-17
16	UL03010-001	03-Dec-2019 16:03:30	171203A16.D	DUP	MPG1-20-Water-RW-12	Water	1	sample									8260B-17
17	UL03010-002	03-Dec-2019 16:26:30	171203A17.D	MS	MPG1-21-Water-RW-12	Water	1	sample							15608/05/11	21.5ul/43ml	8260B-17

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL03011**

Date Completed:12/08/2019
Revision Date: 02/21/2020

N. Saikaly

02/21/2020 10:58 AM
Approved and released by:
Project Manager: **Nisreen Saikaly**

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL03011

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision (02/21/2020)

This report supersedes and replaces any prior reports issued under this lot number. The details of the applicable revisions are detailed in a Report Revision Notice provided under separate cover.

Report Revision Notice

Revision Date:	
Initial Report Submission Date:	
Lot Number:	UL03011
Client:	TetraTech
PM:	NMS
Classification of Report Revision:	☒Client identified ☐Non-conformance

What changed from original report: (please be specific)

The AIM LCS Summary forms are removed from this level 4 report.

The initial calibration verification (ICV) analyzed on 12/5/19 at 16:39 was not processed correctly. An revised ICV form is included in this report.

The sample ID for UL03011-003 is updated from MPG1-22-Water-RW-120219 to from MPGI-22-Water-RW-120219.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL03011

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-20-Water-RW-120219	Aqueous	12/02/2019 1036	12/03/2019
002	MPGI-21-Water-RW-120219	Aqueous	12/02/2019 0951	12/03/2019
003	MPG1-22-Water-RW-120219	Aqueous	12/02/2019 1114	12/03/2019
004	MPGI-24-Water-RW-120219	Aqueous	12/02/2019 1327	12/03/2019
005	MPGI-25-Water-RW-120219	Aqueous	12/02/2019 1244	12/03/2019
006	MPGI-FB-120219	Aqueous	12/02/2019 1400	12/03/2019

(6 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL03011

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page

(0 detections)

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-001
Description: MPGI-20-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1424	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-001
Description: MPGI-20-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1424	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		50	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		36	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-002
Description: MPGI-21-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1450	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-002
Description: MPGI-21-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1450	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		31	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		45	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		39	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-003
Description: MPGI-22-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1750	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-003
Description: MPG1-22-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1750	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		43	24-127
Nitrobenzene-d5		74	38-127
Phenol-d5		58	28-128
Terphenyl-d14		84	10-148
2,4,6-Tribromophenol		54	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-004
Description: MPGI-24-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1906	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-004
Description: MPGI-24-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1906	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		40	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		67	28-128
Terphenyl-d14		87	10-148
2,4,6-Tribromophenol		53	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-005
Description: MPGI-25-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1605	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-005
Description: MPGI-25-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1605	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		39	37-129
2-Fluorophenol		44	24-127
Nitrobenzene-d5		52	38-127
Phenol-d5		54	28-128
Terphenyl-d14		50	10-148
2,4,6-Tribromophenol		36	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-006
Description: MPGI-FB-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1630	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-006
Description: MPGI-FB-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1630	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		77	37-129
2-Fluorophenol		59	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		85	28-128
Terphenyl-d14		106	10-148
2,4,6-Tribromophenol		46	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Summary

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37759-001
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4,5-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4,6-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4-Dichlorophenol	ND		1	8.0	1.0	ug/L	12/06/2019 1334
2,4-Dimethylphenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
2,4-Dinitrophenol	ND		1	20	1.0	ug/L	12/06/2019 1334
2,4-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2,6-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2-Chloronaphthalene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2-Chlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2-Methylnaphthalene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
2-Methylphenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
2-Nitroaniline	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2-Nitrophenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
3,3'-Dichlorobenzidine	ND		1	4.0	1.8	ug/L	12/06/2019 1334
3+4-Methylphenol	ND		1	4.0	1.5	ug/L	12/06/2019 1334
3-Nitroaniline	ND		1	8.0	1.0	ug/L	12/06/2019 1334
4,6-Dinitro-2-methylphenol	ND		1	20	1.0	ug/L	12/06/2019 1334
4-Bromophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Chloro-3-methyl phenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Chloroaniline	ND		1	8.0	0.50	ug/L	12/06/2019 1334
4-Chlorophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Nitroaniline	ND		1	8.0	1.5	ug/L	12/06/2019 1334
4-Nitrophenol	ND		1	20	2.0	ug/L	12/06/2019 1334
Acenaphthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Acenaphthylene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Acetophenone	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Atrazine	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Benzaldehyde	ND		1	8.0	0.50	ug/L	12/06/2019 1334
Benzo(a)anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(a)pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(b)fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(g,h,i)perylene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(k)fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Chloroethoxy)methane	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Chloroethyl)ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Ethylhexyl)phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Butyl benzyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Caprolactam	ND		1	8.0	2.0	ug/L	12/06/2019 1334
Carbazole	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Chrysene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Dibenzo(a,h)anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37759-001
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Dibenzofuran	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Diethylphthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Dimethyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Di-n-butyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Di-n-octylphthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Fluorene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Hexachlorobenzene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Hexachlorobutadiene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Hexachlorocyclopentadiene	ND		1	20	2.0	ug/L	12/06/2019 1334
Hexachloroethane	ND		1	4.0	1.0	ug/L	12/06/2019 1334
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Isophorone	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Naphthalene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Nitrobenzene	ND		1	4.0	1.5	ug/L	12/06/2019 1334
N-Nitrosodi-n-propylamine	ND		1	4.0	0.50	ug/L	12/06/2019 1334
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Pentachlorophenol	ND		1	20	2.0	ug/L	12/06/2019 1334
Phenanthrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Phenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		32	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		41	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		38	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37759-002
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	19		1	47	30-130	12/06/2019 1359
2,4,5-Trichlorophenol	40	17		1	41	30-123	12/06/2019 1359
2,4,6-Trichlorophenol	40	19		1	48	30-130	12/06/2019 1359
2,4-Dichlorophenol	40	20		1	51	30-121	12/06/2019 1359
2,4-Dimethylphenol	40	21		1	53	20-125	12/06/2019 1359
2,4-Dinitrophenol	80	39		1	49	11-126	12/06/2019 1359
2,4-Dinitrotoluene	40	19		1	47	30-130	12/06/2019 1359
2,6-Dinitrotoluene	40	18		1	44	30-130	12/06/2019 1359
2-Chloronaphthalene	40	18		1	45	30-130	12/06/2019 1359
2-Chlorophenol	40	20		1	49	30-130	12/06/2019 1359
2-Methylnaphthalene	40	21		1	51	40-132	12/06/2019 1359
2-Methylphenol	40	20		1	51	30-130	12/06/2019 1359
2-Nitroaniline	40	21		1	52	30-130	12/06/2019 1359
2-Nitrophenol	40	21		1	52	30-130	12/06/2019 1359
3,3'-Dichlorobenzidine	40	13		1	32	10-126	12/06/2019 1359
3+4-Methylphenol	40	21		1	53	30-130	12/06/2019 1359
3-Nitroaniline	40	17		1	42	30-130	12/06/2019 1359
4,6-Dinitro-2-methylphenol	40	22		1	55	30-130	12/06/2019 1359
4-Bromophenyl phenyl ether	40	17		1	42	30-124	12/06/2019 1359
4-Chloro-3-methyl phenol	40	22		1	55	30-123	12/06/2019 1359
4-Chloroaniline	40	18		1	45	12-157	12/06/2019 1359
4-Chlorophenyl phenyl ether	40	18		1	45	30-121	12/06/2019 1359
4-Nitroaniline	40	25		1	62	30-135	12/06/2019 1359
4-Nitrophenol	80	44		1	56	30-130	12/06/2019 1359
Acenaphthene	40	20		1	51	30-122	12/06/2019 1359
Acenaphthylene	40	20		1	49	30-130	12/06/2019 1359
Acetophenone	40	20		1	50	30-130	12/06/2019 1359
Anthracene	40	20		1	49	30-123	12/06/2019 1359
Atrazine	40	18		1	45	30-130	12/06/2019 1359
Benzaldehyde	40	14		1	34	20-115	12/06/2019 1359
Benzo(a)anthracene	40	19		1	48	40-125	12/06/2019 1359
Benzo(a)pyrene	40	17		1	43	40-128	12/06/2019 1359
Benzo(b)fluoranthene	40	19		1	47	30-130	12/06/2019 1359
Benzo(g,h,i)perylene	40	17		1	44	30-130	12/06/2019 1359
Benzo(k)fluoranthene	40	19		1	46	30-130	12/06/2019 1359
bis (2-Chloro-1-methylethyl) ether	40	21		1	54	30-130	12/06/2019 1359
bis(2-Chloroethoxy)methane	40	21		1	54	30-130	12/06/2019 1359
bis(2-Chloroethyl)ether	40	20		1	51	30-130	12/06/2019 1359
bis(2-Ethylhexyl)phthalate	40	18		1	44	30-130	12/06/2019 1359
Butyl benzyl phthalate	40	21		1	52	30-130	12/06/2019 1359
Caprolactam	40	22		1	56	30-130	12/06/2019 1359
Carbazole	40	17		1	42	30-130	12/06/2019 1359
Chrysene	40	19		1	48	30-130	12/06/2019 1359
Dibenzo(a,h)anthracene	40	18		1	45	30-130	12/06/2019 1359

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37759-002
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	18		1	46	30-118	12/06/2019 1359
Diethylphthalate	40	19		1	47	40-125	12/06/2019 1359
Dimethyl phthalate	40	19		1	48	40-127	12/06/2019 1359
Di-n-butyl phthalate	40	19		1	47	40-127	12/06/2019 1359
Di-n-octylphthalate	40	18		1	45	30-130	12/06/2019 1359
Fluoranthene	40	18		1	46	40-128	12/06/2019 1359
Fluorene	40	20		1	49	30-124	12/06/2019 1359
Hexachlorobenzene	40	16		1	39	30-125	12/06/2019 1359
Hexachlorobutadiene	40	16		1	40	24-110	12/06/2019 1359
Hexachlorocyclopentadiene	200	68		1	34	22-122	12/06/2019 1359
Hexachloroethane	40	23		1	58	30-130	12/06/2019 1359
Indeno(1,2,3-c,d)pyrene	40	17		1	42	30-130	12/06/2019 1359
Isophorone	40	23		1	58	30-130	12/06/2019 1359
Naphthalene	40	21		1	53	30-130	12/06/2019 1359
Nitrobenzene	40	23		1	58	30-130	12/06/2019 1359
N-Nitrosodi-n-propylamine	40	23		1	58	30-130	12/06/2019 1359
N-Nitrosodiphenylamine (Diphenylamine)	40	17		1	43	30-123	12/06/2019 1359
Pentachlorophenol	80	39		1	49	30-130	12/06/2019 1359
Phenanthrene	40	18		1	46	40-123	12/06/2019 1359
Phenol	40	21		1	52	30-130	12/06/2019 1359
Pyrene	40	20		1	51	40-126	12/06/2019 1359

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		45	37-129
2-Fluorophenol		47	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5		52	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		39	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number

Client	Report to Contact	Telephone No. / E-mail	Quote No.
Tetra Tech	Andre Baker and Brendan Martin	andre.baker@contech.com, brendan.martin@tetratech.com	
Address: 1 S. Wacker Drive Suite 3700	Sampler's Signature: x Brendan Martin	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Chicago / State: IL / Zip Code: 60606	Printed Name: Brendan Martin		
Project Name: Joliet Chemical Fire PRP Cleanup Site			
Project Number: 103X9031200690002AJ001	P.O No.: SHLY-1		

UL03010

UL03011

NMS

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G-Grab C-Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	0035 Kit		TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D									
MP61-20-Water-RW-120219	120219	1036 ~~1038~~		X			1			3				X	X									
MP61-21-Water-RW-120219	120219	0951		X			1			3				X	X									
MP61-22-Water-RW-120219	120219	1114		X			1			3				X	X									
MP61-24-Water-RW-120219	120219	1327		X			1			3				X	X									
MP61-25-Water-RW-120219	120219	1244		X			1			3				X	X									
MP61-FB-120219	120219	1400		X			1			3				X	X									Field Blank
MP61-TB-120219	120219	—		X						2				X										Trip Blank

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal
☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks)
☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements

	Date	Time		Date	Time
1. Relinquished by: Brendan Martin Brendan Martin	120219	1500	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: Fed EX	12/03/19	0935	4. Laboratory Received by: L Hite	12/02/19	0935

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack
Receipt Temp. 1.5 °C

Document Number: ME002OW-01

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: LKH / 12-03-2019 Lot #: UL03010/UL03010

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other:

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.5 / 1.5 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 12-03-2019

Comments:

SEMIVOLATILE

QC SUMMARY

FORM 2
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03011

Project No.: 103X9031006

AnalyticalMethod: 8270D-TCL Matrix: Water

CLIENT SAMPLE ID	DMC1	DMC2	DMC3	DMC4	DMC5	DMC6			TOT OUT
MPGI-20-Water-RW-12	41	35	51	50	55	36			0
MPGI-21-Water-RW-12	41	31	51	45	52	39			0
MPG1-22-Water-RW-12	63	43	74	58	84	54			0
MPGI-24-Water-RW-12	63	40	75	67	87	53			0
MPGI-25-Water-RW-12	39	44	52	54	50	36			0
MPGI-FB-120219	77	59	89	85	106	46			0
SBLK59	41	32	51	41	55	38			0
SLCS59	45	47	56	52	52	39			0

	QC LIMITS
DMC1 = 2-Fluorobiphenyl	37-129
DMC2 = 2-Fluorophenol	24-127
DMC3 = Nitrobenzene-d5	38-127
DMC4 = Phenol-d5	28-128
DMC5 = Terphenyl-d14	10-148
DMC6 = 2,4,6-Tribromophenol	35-144

* Values outside of contract required QC limits
D DMC diluted out

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03011

Project No.: 103X9031006

Analytical Method: 8270D-TCL Matrix: Water

Client Sample ID: SLCS59 Lab Sample ID: UQ37759-002

Instrument ID: Agilent__MSD11

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
1,1'-Biphenyl	40	19	47	30-130
2,4,5-Trichlorophenol	40	17	41	30-123
2,4,6-Trichlorophenol	40	19	48	30-130
2,4-Dichlorophenol	40	20	51	30-121
2,4-Dimethylphenol	40	21	53	20-125
2,4-Dinitrophenol	80	39	49	11-126
2,4-Dinitrotoluene	40	19	47	30-130
2,6-Dinitrotoluene	40	18	44	30-130
2-Chloronaphthalene	40	18	45	30-130
2-Chlorophenol	40	20	49	30-130
2-Methylnaphthalene	40	21	51	40-132
2-Methylphenol	40	20	51	30-130
2-Nitroaniline	40	21	52	30-130
2-Nitrophenol	40	21	52	30-130
3+4-Methylphenol	40	21	53	30-130
3,3'-Dichlorobenzidine	40	13	32	10-126
3-Nitroaniline	40	17	42	30-130
4,6-Dinitro-2-methylphenol	40	22	55	30-130
4-Bromophenyl phenyl ether	40	17	42	30-124
4-Chloro-3-methyl phenol	40	22	55	30-123
4-Chloroaniline	40	18	45	12-157
4-Chlorophenyl phenyl ether	40	18	45	30-121
4-Nitroaniline	40	25	62	30-135
4-Nitrophenol	80	44	56	30-130
Acenaphthene	40	20	51	30-122
Acenaphthylene	40	20	49	30-130
Acetophenone	40	20	50	30-130
Anthracene	40	20	49	30-123
Atrazine	40	18	45	30-130
Benzaldehyde	40	14	34	20-115
Benzo(a)anthracene	40	19	48	40-125
Benzo(a)pyrene	40	17	43	40-128
Benzo(b)fluoranthene	40	19	47	30-130
Benzo(g,h,i)perylene	40	17	44	30-130
Benzo(k)fluoranthene	40	19	46	30-130
bis (2-Chloro-1-	40	21	54	30-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03011

Project No.: 103X9031006

Analytical Method: 8270D-TCL Matrix: Water

Client Sample ID: SLCS59 Lab Sample ID: UQ37759-002

Instrument ID: Agilent__MSD11

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
bis(2-Chloroethoxy)methane	40	21	54	30-130
bis(2-Chloroethyl)ether	40	20	51	30-130
bis(2-Ethylhexyl)phthalate	40	18	44	30-130
Butyl benzyl phthalate	40	21	52	30-130
Caprolactam	40	22	56	30-130
Carbazole	40	17	42	30-130
Chrysene	40	19	48	30-130
Di-n-butyl phthalate	40	19	47	40-127
Di-n-octylphthalate	40	18	45	30-130
Dibenzo(a,h)anthracene	40	18	45	30-130
Dibenzofuran	40	18	46	30-118
Diethylphthalate	40	19	47	40-125
Dimethyl phthalate	40	19	48	40-127
Fluoranthene	40	18	46	40-128
Fluorene	40	20	49	30-124
Hexachlorobenzene	40	16	39	30-125
Hexachlorobutadiene	40	16	40	24-110
Hexachlorocyclopentadiene	200	68	34	22-122
Hexachloroethane	40	23	58	30-130
Indeno(1,2,3-c,d)pyrene	40	17	42	30-130
Isophorone	40	23	58	30-130
N-Nitrosodi-n-propylamine	40	23	58	30-130
N-Nitrosodiphenylamine	40	17	43	30-123
Naphthalene	40	21	53	30-130
Nitrobenzene	40	23	58	30-130
Pentachlorophenol	80	39	49	30-130
Phenanthrene	40	18	46	40-123
Phenol	40	21	52	30-130
Pyrene	40	20	51	40-126

* Values outside of QC Limits

CLIENT SAMPLE ID

SBLK59

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL03011

Project No.: 103X9031006 Lab Sample ID: UQ37759-001

Analytical Method: 8270D-TCL Matrix: Water

Instrument ID: Agilent MSD11 Lab File ID: 111206C05

Extraction Type: 3520C Date Extracted: 12/03/2019

GC Column(1): ZEBRON ZB-SV ID: 0.25 (mm) Date Analyzed: 12/06/2019

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 13:34

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPGI-20-Water-RW-12	UL03011-001	111206C07	12/06/2019
MPGI-21-Water-RW-12	UL03011-002	111206C08	12/06/2019
MPG1-22-Water-RW-12	UL03011-003	111206C15	12/06/2019
MPGI-24-Water-RW-12	UL03011-004	111206C18	12/06/2019
MPGI-25-Water-RW-12	UL03011-005	111206C11	12/06/2019
MPGI-FB-120219	UL03011-006	111206C12	12/06/2019
SLCS59	UQ37759-002	111206C06	12/06/2019

Report Date: 06-Dec-2019 17:12:30 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

MS Tune Report

Data File: \\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d

Injection Date:	05-Dec-2019 11:42:30	Inst. ID:	msd11.i
Method:	8270D-tun.m	Tune Type:	DFTPP
Client ID:	DFTPPBA	Lab ID:	SVMS 4186
Sample Info:	11120519B.b, SVMS 4186		
Injection Vol.		Dil. Factor:	1.0
Operator:	JCG		
Column:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	76.4
68	Less than 2.00% of mass 69	0.0 (0.0)
69	Present	51.4
70	Less than 2.00% of mass 69	0.4 (0.8)
127	10.00 - 80.00% of mass 198	56.1
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	7.1
275	10.00 - 60.00% of mass 198	24.1
365	Greater than 1.00% of mass 198	5.7
441	0.01 - 24.00% of mass 442	12.6 (17.0)
442	Greater than 50.00% of mass 198	73.9
443	15.00 - 24.00% of mass 442	13.5 (18.3)

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
DFTPP	111205B01.d	SVMS 4186	DFTPPBA	05-Dec-2019 11:42:30	00:00:00
Client	111205B02.d	SVMS 4162		05-Dec-2019 12:00:30	00:18:00
Client	111205B03.d	IBLK		05-Dec-2019 12:27:30	00:45:00
Ical	111205B04.d	SVMS 4157	1STD0.2BB	05-Dec-2019 12:53:30	01:11:00
Ical	111205B05.d	SVMS 4158	1STD001BB	05-Dec-2019 13:18:30	01:36:00
Ical	111205B06.d	SVMS 4159	1STD002BB	05-Dec-2019 13:43:30	02:01:00
Ical	111205B07.d	SVMS 4167	1STD005BB	05-Dec-2019 14:08:30	02:26:00
Ical	111205B08.d	SVMS 4281	1STD010BB	05-Dec-2019 14:33:30	02:51:00
Ical	111205B09.d	SVMS 4162	1STD015BB	05-Dec-2019 14:58:30	03:16:00
Ical	111205B10.d	SVMS 4168	1STD020BB	05-Dec-2019 15:23:30	03:41:00
Ical	111205B11.d	SVMS 4164	1STD025BB	05-Dec-2019 15:49:30	04:07:00
Ical	111205B12.d	SVMS 4165	1STD030BB	05-Dec-2019 16:14:30	04:32:00
LCS	111205B13.d	SVMS 4221	1STDICV	05-Dec-2019 16:39:30	04:57:00
Ical	111205B14.d	SVMS 4212	3STD001BC	05-Dec-2019 17:04:30	05:22:00
Ical	111205B15.d	SVMS 4213	3STD002BC	05-Dec-2019 17:29:30	05:47:00
Ical	111205B16.d	SVMS 4214	3STD005BC	05-Dec-2019 17:54:30	06:12:00
Ical	111205B17.d	SVMS 4215	3STD010BC	05-Dec-2019 18:19:30	06:37:00
Ical	111205B18.d	SVMS 4216	3STD015BC	05-Dec-2019 18:44:30	07:02:00
Ical	111205B19.d	SVMS 4217	3STD020BC	05-Dec-2019 19:10:30	07:28:00
Ical	111205B20.d	SVMS 4218	3STD025BC	05-Dec-2019 19:35:30	07:53:00

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
LCS	111205B21.d	SVMS 4220	3STDICV	05-Dec-2019 20:00:30	08:18:00
BLANK	111205B22.d	UQ37717-001	SBLK17	05-Dec-2019 20:25:30	08:43:00
LCS	111205B23.d	UQ37717-002	SLCS17	05-Dec-2019 20:50:30	09:08:00
Client	111205B24.d	UL03011-001	MPG1-20-Water-RW-12	05-Dec-2019 21:15:30	09:33:00
Client	111205B25.d	UL03011-002	MPG1-21-Water-RW-12	05-Dec-2019 21:41:30	09:59:00
Client	111205B26.d	UL03011-003	MPG1-22-Water-RW-12	05-Dec-2019 22:06:30	10:24:00
Client	111205B27.d	UL03011-004	MPG1-24-Water-RW-12	05-Dec-2019 22:31:30	10:49:00
Client	111205B28.d	UL03011-005	MPG1-25-Water-RW-12	05-Dec-2019 22:56:30	11:14:00
Client	111205B29.d	UL03011-006	MPG1-FB-120219	05-Dec-2019 23:21:30	11:39:00
Client	111205B30.d	UK22009-003	Oak-mitsui Effluent	05-Dec-2019 23:46:30	12:04:00
Client	111205B31.d	IBLK		06-Dec-2019 00:11:30	12:29:00
Client	111205B32.d	IBLK		06-Dec-2019 00:36:30	12:54:00
Client	111205B33.d	IBLK		06-Dec-2019 01:01:30	13:19:00

Report Date: 07-Dec-2019 14:43:24 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d		
Injection Date:	06-Dec-2019 12:23:30	Inst. ID:	msd11.i
Method:	8270D-tun.m	Tune Type:	DFTPP
Client ID:	DFTPPBD	Lab ID:	SVMS 4186
Sample Info:	11120619C.b, SVMS 4186		
Injection Vol.		Dil. Factor:	1.0
Operator:	JCG		
Column:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	76.1
68	Less than 2.00% of mass 69	0.0 (0.0)
69	Present	43.7
70	Less than 2.00% of mass 69	0.3 (0.8)
127	10.00 - 80.00% of mass 198	52.3
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	6.6
275	10.00 - 60.00% of mass 198	31.1
365	Greater than 1.00% of mass 198	7.3
441	0.01 - 24.00% of mass 442	8.7 (17.4)
442	Greater than 50.00% of mass 198	50.1
443	15.00 - 24.00% of mass 442	9.3 (18.5)

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
DFTPP	111206C02.d	SVMS 4186	DFTPPBD	06-Dec-2019 12:23:30	00:00:00
Ccv	111206C03.d	SVMS 4281	1STD010BE	06-Dec-2019 12:42:30	00:19:00
Ccv	111206C04.d	SVMS 4215	3STD010BF	06-Dec-2019 13:07:30	00:44:00
BLANK	111206C05.d	UQ37759-001	SBLK59	06-Dec-2019 13:34:30	01:11:00
LCS	111206C06.d	UQ37759-002	SLCS59	06-Dec-2019 13:59:30	01:36:00
Client	111206C07.d	UL03011-001	MPGI-20-Water-RW-12	06-Dec-2019 14:24:30	02:01:00
Client	111206C08.d	UL03011-002	MPGI-21-Water-RW-12	06-Dec-2019 14:50:30	02:27:00
Client	111206C09.d	UL03011-003	MPG1-22-Water-RW-12	06-Dec-2019 15:15:30	02:52:00
Client	111206C10.d	UL03011-004	MPGI-24-Water-RW-12	06-Dec-2019 15:40:30	03:17:00
Client	111206C11.d	UL03011-005	MPGI-25-Water-RW-12	06-Dec-2019 16:05:30	03:42:00
Client	111206C12.d	UL03011-006	MPGI-FB-120219	06-Dec-2019 16:30:30	04:07:00
Client	111206C13.d	UL03011-003	MPG1-22-Water-RW-12	06-Dec-2019 16:59:30	04:36:00
Client	111206C14.d	UL03011-004	MPGI-24-Water-RW-12	06-Dec-2019 17:25:30	05:02:00
Client	111206C15.d	UL03011-003	MPG1-22-Water-RW-12	06-Dec-2019 17:50:30	05:27:00
Client	111206C16.d	UQ37996-001		06-Dec-2019 18:16:30	05:53:00
Client	111206C17.d	UQ37996-002		06-Dec-2019 18:41:30	06:18:00
Client	111206C18.d	UL03011-004	MPGI-24-Water-RW-12	06-Dec-2019 19:06:30	06:43:00
Client	111206C19.d	UL04029-001		06-Dec-2019 19:31:30	07:08:00
Client	111206C20.d	UL04029-002		06-Dec-2019 19:57:30	07:34:00
Client	111206C21.d	UL04029-003		06-Dec-2019 20:22:30	07:59:00

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
Client	111206C22.d	UL04029-004		06-Dec-2019 20:47:30	08:24:00
Client	111206C23.d	UL04029-005		06-Dec-2019 21:13:30	08:50:00
Client	111206C24.d	UL04029-006		06-Dec-2019 21:38:30	09:15:00
Client	111206C25.d	UL04029-007		06-Dec-2019 22:03:30	09:40:00
LCS	111206C26.d	UQ37784-002	SLCS84	06-Dec-2019 22:28:30	10:05:00
Client	111206C27.d	IBLK		06-Dec-2019 22:53:30	10:30:00
Client	111206C28.d	IBLK		06-Dec-2019 23:18:30	10:55:00
Client	111206C29.d	IBLK		06-Dec-2019 23:44:30	11:21:00

Report Date: 06-Dec-2019 17:12:31 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\HH\chem\msd11.i\11120519B.b

Instrument: msd11.m Method: 8270DLVI-11.m

Column: ZebronZB-SV (0.25 mm) Detector: MS Scan

Initial Calibration Samples

Standard File: /chem/msd11.i/11120519B.b/111205B08.d.d

Injection Date: 05-Dec-2019 14:33:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: IcalIS, Level: 5

IS-1: * 16 1,4-Dichlorobenzene-d4

IS-2: * 41 Naphthalene-d8

IS-3: * 67 Acenaphthene-d10

IS-4: * 102 Phenanthrene-d10

IS-5: * 128 Chrysene-d12

IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	218011	5.76	913016	6.78	443039	8.25	690381	9.51	549256	12.27	581928	14.43
Upper Limit	436022	6.26	1826032	7.28	886078	8.75	1380762	10.01	1098512	12.77	1163856	14.93
Lower Limit	109006	5.26	456508	6.28	221520	7.75	345191	9.01	274628	11.77	290964	13.93
SVMS 4157	254731	5.76	1069815	6.78	533234	8.25	808028	9.51	610264	12.27	639704	14.43
SVMS 4158	201524	5.76	908281	6.78	455110	8.25	683279	9.51	560947	12.27	559004	14.43
SVMS 4159	198672	5.76	922523	6.78	456683	8.25	692039	9.51	556364	12.27	560142	14.43
SVMS 4167	214449	5.76	884534	6.78	441631	8.25	677284	9.51	593398	12.27	607293	14.43
SVMS 4281	218011	5.76	913016	6.78	443039	8.25	690381	9.51	549256	12.27	581928	14.43
SVMS 4162	220251	5.76	890519	6.78	441908	8.25	676947	9.51	557850	12.27	528108	14.43
SVMS 4168	230598	5.76	875143	6.78	426643	8.25	675888	9.51	584286	12.27	545364	14.43
SVMS 4164	239364	5.76	878240	6.78	438159	8.25	658355	9.51	585541	12.28	538056	14.43
SVMS 4165	233739	5.76	857563	6.78	414423	8.25	637957	9.51	600750	12.28	530819	14.43
SVMS 4212	165380	5.76	692108	6.78	360966	8.25	533862	9.51	424657	12.27	437306	14.43
SVMS 4213	148149	5.76	655523	6.78	330497	8.25	510235	9.51	414120	12.27	429556	14.43
SVMS 4214	147614	5.76	698566	6.78	365972	8.25	545290	9.51	449127	12.27	467974	14.43
SVMS 4215	156375	5.76	714938	6.78	371578	8.25	586677	9.51	441682	12.27	462355	14.43
SVMS 4216	134502	5.76	668531	6.78	348979	8.25	546785	9.51	422235	12.27	424424	14.43
SVMS 4217	145356	5.76	715606	6.78	376379	8.25	563070	9.51	460112	12.27	460235	14.43
SVMS 4218	136665	5.76	618760	6.78	330378	8.25	497607	9.51	397056	12.27	394733	14.43

AREA UPPER LIMIT = + 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

AREA LOWER LIMIT = -100% of internal standard area.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Report Date: 07-Dec-2019 14:43:24 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\hh\chem\msd11.i\11120619C.b

Instrument: msd11.m Method: 8270DLVI-11.m

Column: ZebronZB-SV (0.25 mm) Detector: MS Scan

CCV Samples

Standard File: /chem/msd11.i/11120519B.b/111205B08.d.d

Injection Date: 05-Dec-2019 14:33:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: Ical, Level: 5

IS-1: * 16 1,4-Dichlorobenzene-d4 IS-4: * 102 Phenanthrene-d10

IS-2: * 41 Naphthalene-d8 IS-5: * 128 Chrysene-d12

IS-3: * 67 Acenaphthene-d10 IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	218011	5.74	913016	6.77	443039	8.23	690381	9.49	549256	12.25	581928	14.40
Upper Limit	436022	6.24	1826032	7.27	886078	8.73	1380762	9.99	1098512	12.75	1163856	14.90
Lower Limit	109006	5.24	456508	6.27	221520	7.73	345191	8.99	274628	11.75	290964	13.90
SVMS 4281	144880	5.74	589070	6.77	293781	8.23	469839	9.49	367726	12.25	370992	14.40
SVMS 4215	117597	5.74	550954	6.77	287175	8.23	434851	9.49	309683	12.24	313480	14.40

AREA UPPER LIMIT = + 50% of internal standard area. AREA LOWER LIMIT = -100% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT. RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd11.i/11120619C.b/111206C03.d.d

Injection Date: 06-Dec-2019 12:42:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: CCVIS

IS-1: * 16 1,4-Dichlorobenzene-d4 IS-4: * 102 Phenanthrene-d10

IS-2: * 41 Naphthalene-d8 IS-5: * 128 Chrysene-d12

IS-3: * 67 Acenaphthene-d10 IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	144880	5.74	589070	6.77	293781	8.23	469839	9.49	367726	12.25	370992	14.40
Upper Limit	289760	6.24	1178140	7.27	587562	8.73	939678	9.99	735452	12.75	741984	14.90
Lower Limit	72440	5.24	294535	6.27	146891	7.73	234920	8.99	183863	11.75	185496	13.90
UQ37759-001	98958	5.73	712588	6.77	386707	8.23	559228	9.49	417107	12.25	411768	14.40
UQ37759-002	178699	5.74	734903	6.77	412577	8.24	664488	9.50	491292	12.25	475297	14.41
UL03011-001	119094	5.74	730929	6.77	402921	8.23	589634	9.50	443965	12.24	421539	14.40
UL03011-002	128221	5.73	710473	6.77	385684	8.23	561681	9.49	430156	12.25	412483	14.40
UL03011-003	87446	5.73	685077	6.77	376684	8.23	579251	9.49	426546	12.25	389131	14.40
UL03011-004	96074	5.73	662327	6.77	366574	8.23	531191	9.50	396390	12.24	380471	14.41
UL03011-005	126061	5.74	643429	6.77	353533	8.23	534559	9.49	395813	12.24	386610	14.40
UL03011-006	77617	5.74	379976	6.77	184494	8.23	271577	9.49	185645	12.24	192888	14.39
UL03011-003	*63292	5.73	353555	6.76	173934	8.23	257739	9.50	*175608	12.24	*175332	14.39
UL03011-004	*60660	5.73	366505	6.76	180259	8.23	266263	9.49	*178875	12.24	*177244	14.39
UL03011-003	77981	5.73	399387	6.76	205602	8.23	296067	9.50	213096	12.24	204802	14.39
UQ37996-001	*52816	5.73	360435	6.76	187116	8.23	256253	9.49	187643	12.24	*177082	14.39
UQ37996-002	87262	5.74	377057	6.77	195804	8.23	290064	9.50	227920	12.24	211654	14.39
UL03011-004	76466	5.74	437346	6.76	224585	8.23	325668	9.50	227605	12.24	223348	14.39
UL04029-001	73712	5.73	367931	6.76	188887	8.23	269097	9.50	191480	12.24	189383	14.39
UL04029-002	*49733	5.73	356053	6.76	176916	8.23	257784	9.49	187540	12.24	186181	14.39
UL04029-003	*55355	5.74	359566	6.76	181386	8.23	246990	9.50	185665	12.24	*180661	14.39
UL04029-004	*52227	5.73	349047	6.76	175348	8.23	242885	9.50	187594	12.24	185866	14.39
UL04029-005	*64326	5.73	352421	6.76	185668	8.23	252434	9.49	188482	12.24	*185204	14.39
UL04029-006	*72388	5.73	382694	6.76	203853	8.23	311740	9.50	228015	12.24	228815	14.39

Report Date: 07-Dec-2019 14:43:24 AIM Revision: 1.0 27-Jun-2017 12:05:20

IS-1: * 16 1,4-Dichlorobenzene-d4
IS-2: * 41 Naphthalene-d8
IS-3: * 67 Acenaphthene-d10
IS-4: * 102 Phenanthrene-d10
IS-5: * 128 Chrysene-d12
IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
UL04029-007	*61145	5.74	380174	6.76	191341	8.23	288501	9.50	212115	12.24	203763	14.39
UQ37784-002	97855	5.75	453472	6.77	239811	8.23	373922	9.50	314289	12.24	303292	14.39
IBLK	221023	5.74	*1524749	6.77	*820929	8.23	*1111280	9.50	*792229	12.25	713860	14.41
IBLK	191049	5.74	*1352078	6.77	*728429	8.24	*1010048	9.49	706248	12.25	669864	14.40
IBLK	192619	5.74	*1316163	6.77	*682080	8.23	*1000100	9.50	705245	12.25	651949	14.41

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = -100% of internal standard area.
RT UPPER LIMIT = + 0.5 minutes of internal standard RT.
RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

RAW SAMPLE DATA

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-001
Description: MPGI-20-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1424	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-001
Description: MPGI-20-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1424	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		50	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		36	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C07.d		
Lab Sample ID:	UL03011-001	Client Sample ID:	MPGI-20-Water-RW-12
Injection Date:	06-Dec-2019 14:24:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UL03011-001		
Misc. Info:	37759		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	Client	ALS Bottle:	3
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	06-Dec-2019 17:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	119094	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	730929	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	402921	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	589634	20.000	80.000	
* 128 Chrysene-d12	240.0	12.244	12.249	-0.005	443965	20.000	80.000	
* 136 Perylene-d12	264.0	14.400	14.405	-0.005	421539	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	28877	3.4682	13.873	e
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.409	5.414	-0.005	50598	5.0030	20.012	
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	77451	5.0965	20.386	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	109715	4.0888	16.355	e
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	6314	3.9392	15.757	eR
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	102954	5.4781	21.912	
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

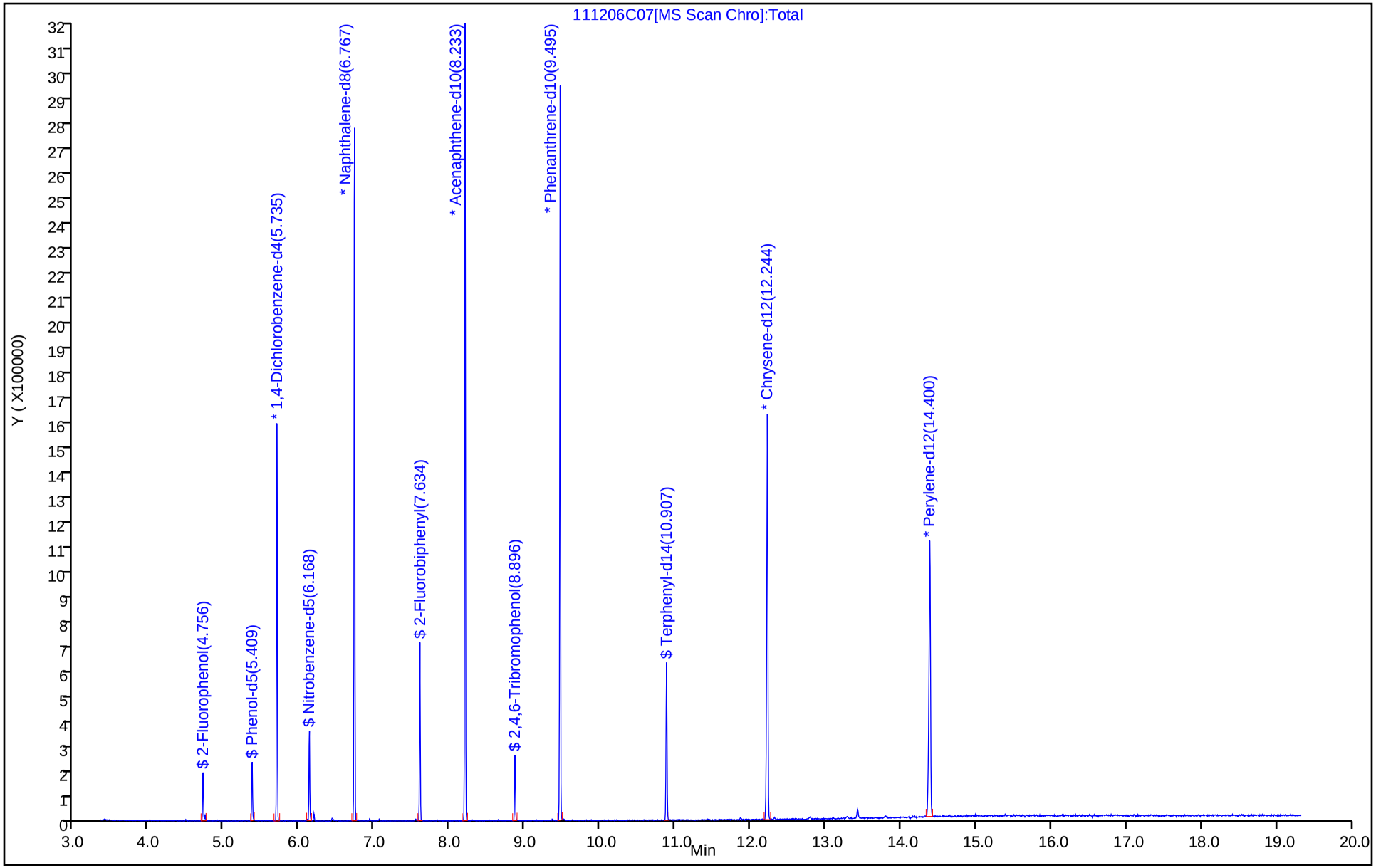
R - Spike/Surrogte Fails %Recovery Test

Review Flags

Report Date: 07-Dec-2019 14:42:46 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C07.d				
Injection Date:	06-Dec-2019 14:24:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-20-Water-RW-12	Lab ID:	UL03011-001		
Sample Info:	11120619C.b, UL03011-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-002
Description: MPGI-21-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1450	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-002
Description: MPGI-21-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1450	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		31	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		45	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		39	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 07-Dec-2019 14:42:46 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C08.d
Lab Sample ID: UL03011-002 Client Sample ID: MPGI-21-Water-RW-12
Injection Date: 06-Dec-2019 14:50:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120619C.b, UL03011-002
Misc. Info: 37759
Method: \\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m
Method Date: 06-Dec-2019 17:09:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: Client ALS Bottle: 4
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: jcg Review Date: 06-Dec-2019 17:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	128221	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	710473	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	385684	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	561681	20.000	80.000	
* 128 Chrysene-d12	240.0	12.249	12.249	0.000	430156	20.000	80.000	
* 136 Perylene-d12	264.0	14.405	14.405	0.000	412483	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	28109	3.1356	12.543	e
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.409	5.414	-0.005	48467	4.4512	17.805	e
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	75109	5.0847	20.339	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	104093	4.0526	16.210	e
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	6604	4.2304	16.921	e
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	94391	5.1837	20.735	
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

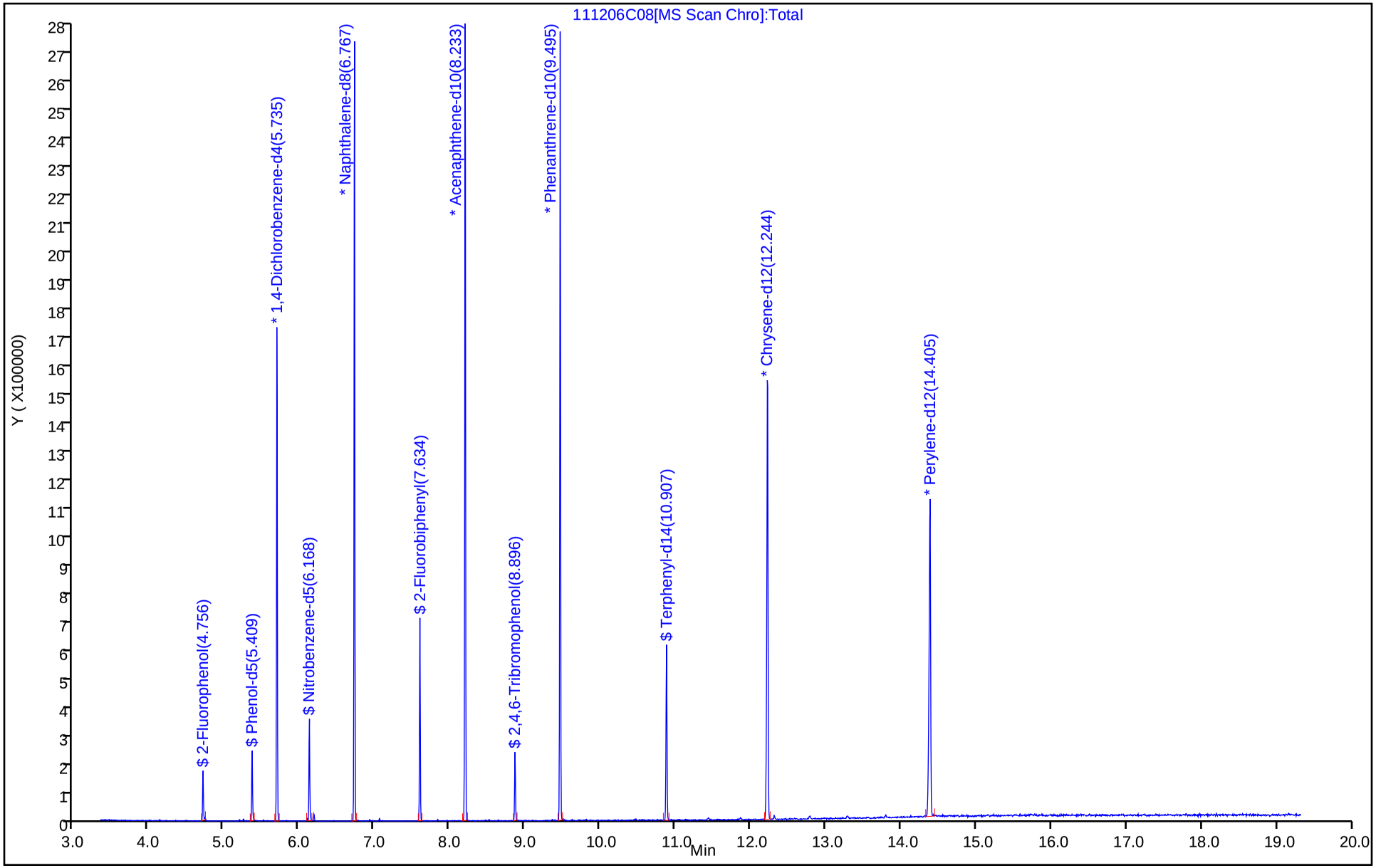
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 07-Dec-2019 14:42:46 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C08.d				
Injection Date:	06-Dec-2019 14:50:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-21-Water-RW-12	Lab ID:	UL03011-002		
Sample Info:	11120619C.b, UL03011-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-003
Description: MPGI-22-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1750	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-003
Description: MPG1-22-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1750	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		43	24-127
Nitrobenzene-d5		74	38-127
Phenol-d5		58	28-128
Terphenyl-d14		84	10-148
2,4,6-Tribromophenol		54	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C15.d		
Lab Sample ID:	UL03011-003	Client Sample ID:	MPG1-22-Water-RW-12
Injection Date:	06-Dec-2019 17:50:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UL03011-003		
Misc. Info:	37759		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	Client	ALS Bottle:	8
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	06-Dec-2019 18:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	77981	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.762	6.767	-0.005	399387	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	205602	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	296067	20.000	80.000	
* 128 Chrysene-d12	240.0	12.244	12.249	-0.005	213096	20.000	80.000	
* 136 Perylene-d12	264.0	14.394	14.405	-0.011	204802	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	23207	4.2567	17.027	e
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.011	38092	5.7522	23.009	
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	61796	7.4419	29.768	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	86413	6.3110	25.244	
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	4753	5.4227	21.691	
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	75556	8.3759	33.503	
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

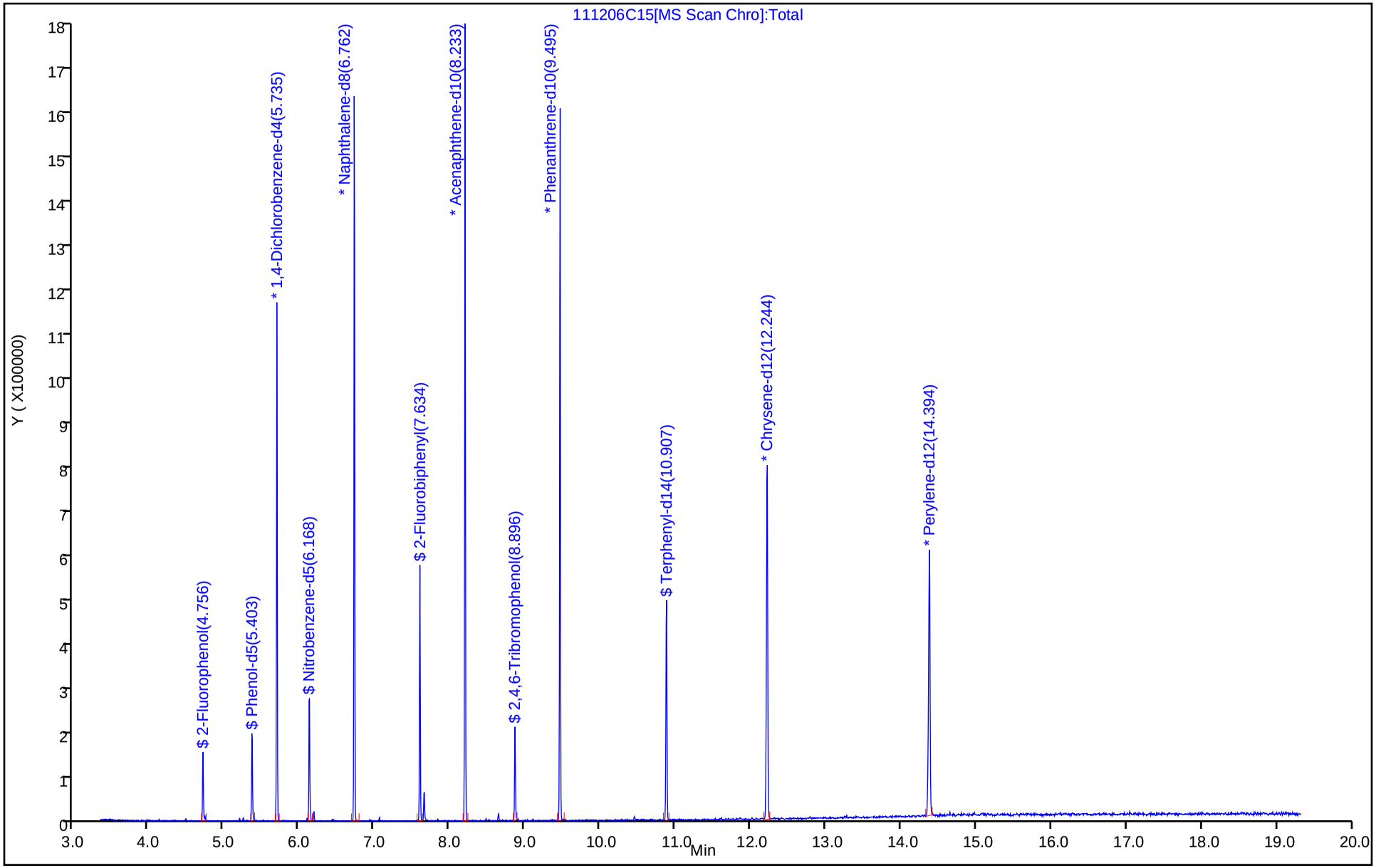
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 07-Dec-2019 14:42:48 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C15.d				
Injection Date:	06-Dec-2019 17:50:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPG1-22-Water-RW-12	Lab ID:	UL03011-003		
Sample Info:	11120619C.b, UL03011-003				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-004
Description: MPGI-24-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1906	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-004
Description: MPGI-24-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1906	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		40	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		67	28-128
Terphenyl-d14		87	10-148
2,4,6-Tribromophenol		53	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C18.d		
Lab Sample ID:	UL03011-004	Client Sample ID:	MPGI-24-Water-RW-12
Injection Date:	06-Dec-2019 19:06:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UL03011-004		
Misc. Info:	37759		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	Client	ALS Bottle:	18
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	06-Dec-2019 19:27:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	76466	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.762	6.767	-0.005	437346	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	224585	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	325668	20.000	80.000	
* 128 Chrysene-d12	240.0	12.239	12.249	-0.010	227605	20.000	80.000	
* 136 Perylene-d12	264.0	14.394	14.405	-0.011	223348	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	21131	3.9527	15.811	e
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.011	43576	6.7107	26.843	
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	68241	7.5048	30.019	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	93917	6.2793	25.117	
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	5078	5.2947	21.179	
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	83625	8.6794	34.718	
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

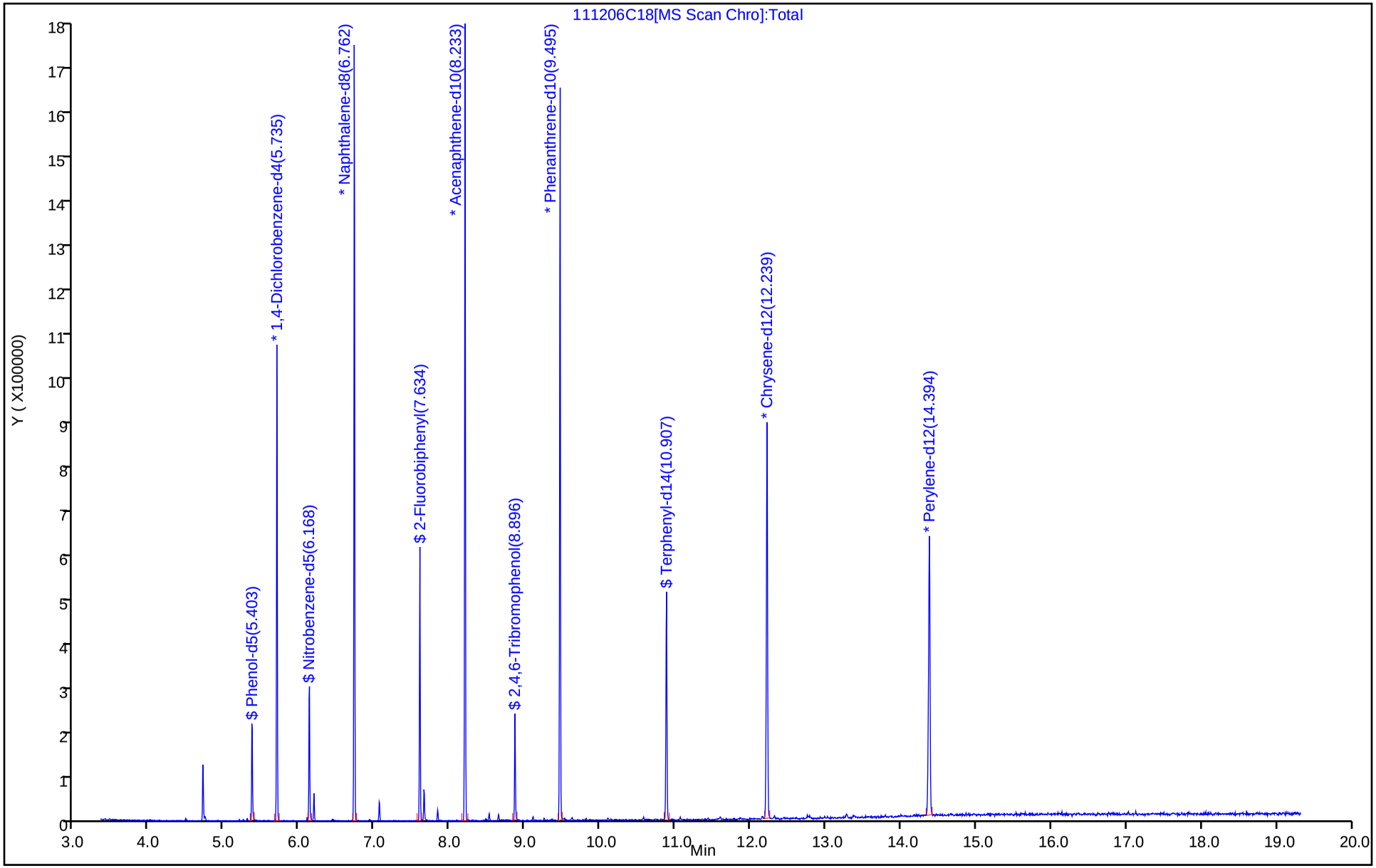
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 07-Dec-2019 14:42:50 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C18.d				
Injection Date:	06-Dec-2019 19:06:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-24-Water-RW-12	Lab ID:	UL03011-004		
Sample Info:	11120619C.b, UL03011-004				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-005
Description: MPGI-25-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1605	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-005
Description: MPGI-25-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1605	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		39	37-129
2-Fluorophenol		44	24-127
Nitrobenzene-d5		52	38-127
Phenol-d5		54	28-128
Terphenyl-d14		50	10-148
2,4,6-Tribromophenol		36	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C11.d		
Lab Sample ID:	UL03011-005	Client Sample ID:	MPGI-25-Water-RW-12
Injection Date:	06-Dec-2019 16:05:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UL03011-005		
Misc. Info:	37759		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	Client	ALS Bottle:	7
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	06-Dec-2019 17:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	126061	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	643429	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	353533	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	534559	20.000	80.000	
* 128 Chrysene-d12	240.0	12.244	12.249	-0.005	395813	20.000	80.000	
* 136 Perylene-d12	264.0	14.400	14.405	-0.005	386610	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	39148	4.4419	17.768	e
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.409	5.414	-0.005	58024	5.4202	21.681	
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	69886	5.2241	20.896	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	91700	3.8948	15.579	e
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.885	8.896	-0.011	5122	3.6265	14.506	QeR
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	84519	5.0443	20.177	Q
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

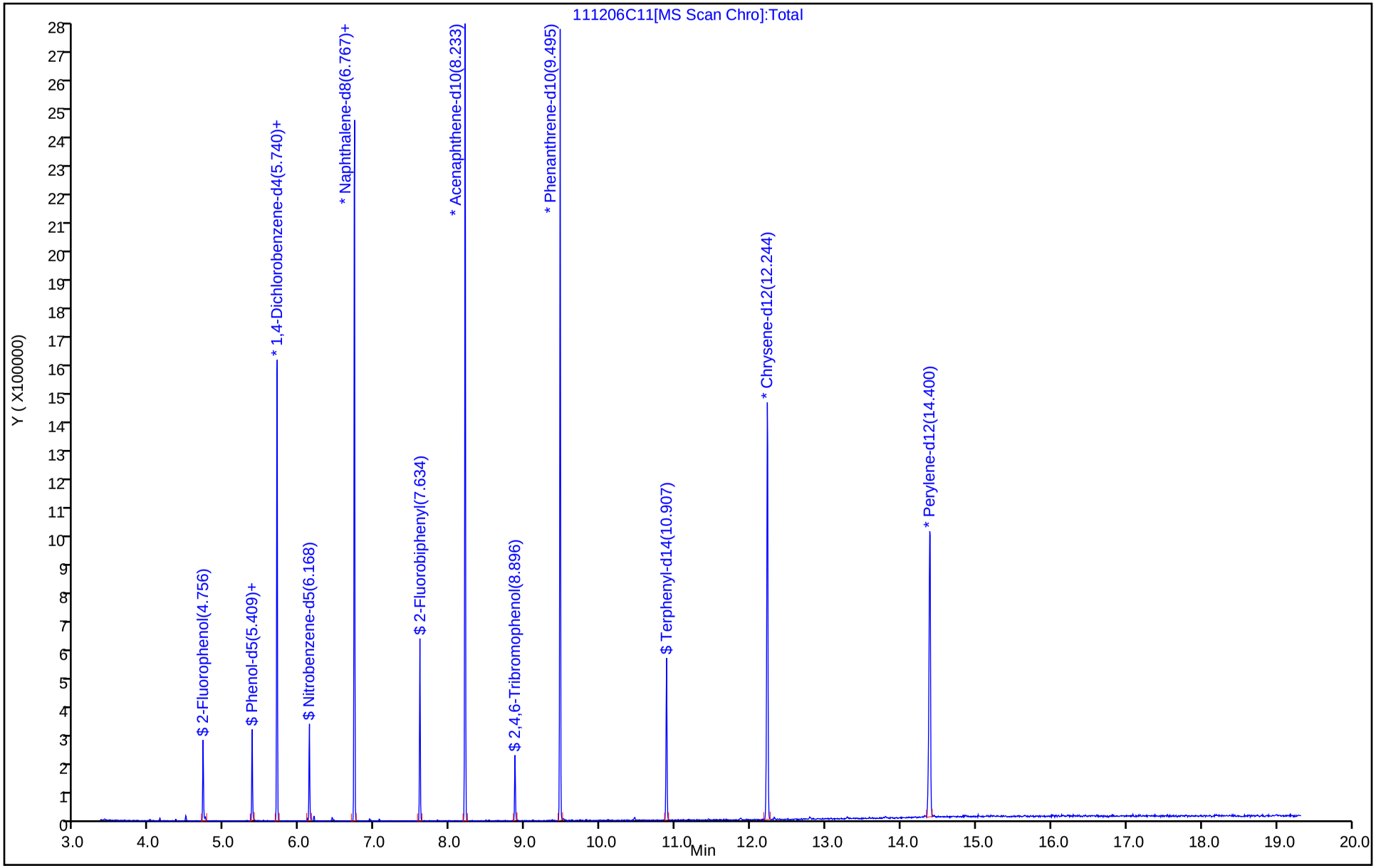
R - Spike/Surrogte Fails %Recovery Test

Review Flags

Report Date: 07-Dec-2019 14:42:47 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C11.d				
Injection Date:	06-Dec-2019 16:05:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-25-Water-RW-12	Lab ID:	UL03011-005		
Sample Info:	11120619C.b, UL03011-005				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-006
Description: MPGI-FB-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1630	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-006
Description: MPGI-FB-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1630	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		77	37-129
2-Fluorophenol		59	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		85	28-128
Terphenyl-d14		106	10-148
2,4,6-Tribromophenol		46	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C12.d		
Lab Sample ID:	UL03011-006	Client Sample ID:	MPGI-FB-120219
Injection Date:	06-Dec-2019 16:30:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UL03011-006		
Misc. Info:	37759		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	Client	ALS Bottle:	8
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	06-Dec-2019 17:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	77617	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	379976	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	184494	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	271577	20.000	80.000	
* 128 Chrysene-d12	240.0	12.244	12.249	-0.005	185645	20.000	80.000	
* 136 Perylene-d12	264.0	14.394	14.405	-0.011	192888	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	31853	5.8699	23.480	
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.409	5.414	-0.005	56317	8.5442	34.177	
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	70137	8.8779	35.512	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	94656	7.7039	30.816	
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	3841	4.8925	19.570	Qe
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	83229	10.591	42.363	
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

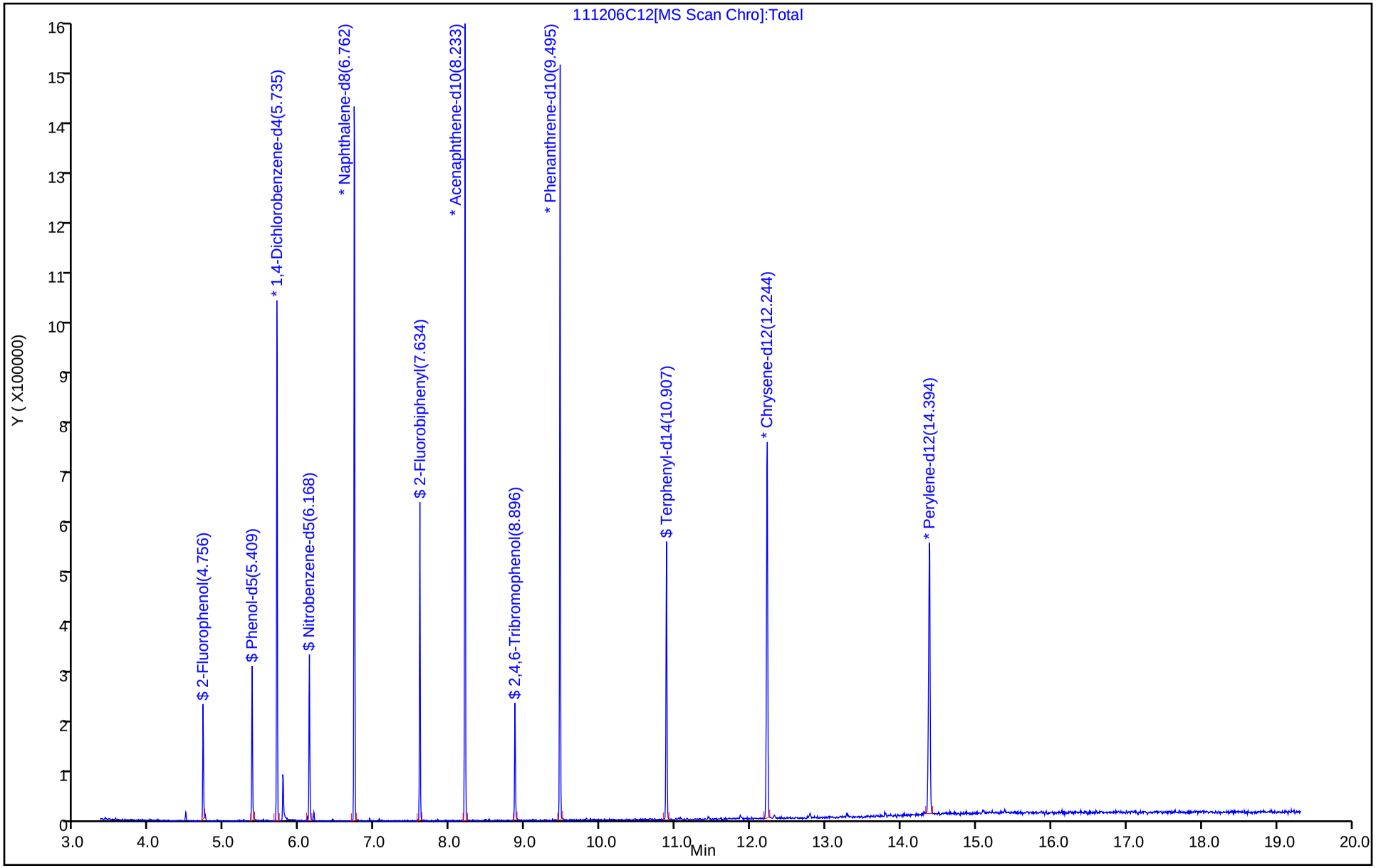
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

Report Date: 07-Dec-2019 14:42:47 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C12.d				
Injection Date:	06-Dec-2019 16:30:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-FB-120219	Lab ID:	UL03011-006		
Sample Info:	11120619C.b, UL03011-006				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



CALIBRATION DATA

Report Date: 06-Dec-2019 17:12:31 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services
Form 6

Batch: \\Organics\HH\chem\msd11.i\11120519B.b
Method: 8270DLVI-11.M Instrument: msd11
Cal Start Date: 05-Dec-2019 12:53:30 Cal End Date: 05-Dec-2019 19:35:30
Last Modified: 06-Dec-2019 17:12:30
No.Compounds: 178 Integrator: falcon

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
S 214 Total PAHs	51.0617										51.0617		Avg	0.0		
193 1,4-Dioxane		0.218832	0.239088	0.193780	0.159423	0.180340	0.152469	0.146535			0.184352		Avg	19.0		
		18.7	29.7	5.1	-13.5	-2.2	-17.3	-20.5								
2 N-Nitrosodimethylamine		1.234195	1.087320	1.196014	1.190004	1.230899	1.224928	1.260500			1.203409		Avg	4.7		
		2.6	-9.6	-0.6	-1.1	2.3	1.8	4.7								
1 pyridine		0.471209	0.565757	0.623104	0.529368	0.598227	0.564229	0.602904			0.564971		Avg	9.1		
		-16.6	0.1	10.3	-6.3	5.9	-0.1	6.7								
$ 6 2-Fluorophenol	1.230317	1.270221	1.465783	1.401751	1.481989	1.476449	1.392367	1.467268			1.398268		Avg	7.0		
	-12	-9.2	4.8	0.2	6	5.6	-0.4	4.9								
199 Benzaldhyde		1.214536	1.008849	1.221320	1.180278	1.283788	1.186157	1.201244			1.185167		Avg	7.2		
		2.5	-14.9	3.1	-0.4	8.3	0.1	1.4								
$ 9 Phenol-d5	1.548300	1.624422	1.675123	1.578706	1.787268	1.831904	1.737921	1.803646			1.698411		Avg	6.3		
	-8.8	-4.4	-1.4	-7	5.2	7.9	2.3	6.2								
10 Phenol		1.668288	1.938773	1.811135	1.966717	2.020428	1.951474	2.010294			1.909587		Avg	6.6		
		-12.6	1.5	-5.2	3	5.8	2.2	5.3								
11 Aniline		0.322443	0.445861	0.351039	0.061483	0.158480	0.102078	0.078936			0.217189		Avg	*70.7		C
		*48.5	*105.3	*61.6	*-71.7	-27	*-53	*-63.7								
12 bis(2-Chloroethyl)ethe		0.941526	1.057925	0.983824	0.985170	1.002317	0.935411	0.933627			0.977114		Avg	4.6		
		-3.6	8.3	0.7	0.8	2.6	-4.3	-4.5								
201 n-Decane		0.698378	0.698589	0.704447	0.768769	0.823606	0.820254	0.849819			0.766266		Avg	8.6		
		-8.9	-8.8	-8.1	0.3	7.5	7	10.9								
13 2-Chlorophenol		1.420575	1.512392	1.344842	1.526813	1.546526	1.477138	1.534162			1.480350		Avg	5.0		
		-4	2.2	-9.2	3.1	4.5	-0.2	3.6								
14 1,3-Dichlorobenzene		1.323813	1.301140	1.232069	1.371114	1.442518	1.462827	1.530563			1.380578		Avg	7.5		
		-4.1	-5.8	-10.8	-0.7	4.5	6	10.9								
17 1,4-Dichlorobenzene		1.381672	1.489490	1.353702	1.531547	1.617022	1.623822	1.713247			1.530071		Avg	8.6		
		-9.7	-2.7	-11.5	0.1	5.7	6.1	12								
18 Benzyl alcohol		1.025486	1.240839	1.167177	1.360665	1.287652	1.228675	1.236042			1.220934		Avg	8.6		
		-16	1.6	-4.4	11.4	5.5	0.6	1.2								
19 1,2-Dichlorobenzene		1.322721	1.283724	1.274858	1.389710	1.468755	1.423993	1.477786			1.377364		Avg	6.1		
		-4	-6.8	-7.4	0.9	6.6	3.4	7.3								

Report Date: 06-Dec-2019 17:12:31 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
20 o-Cresol		1.252159	1.261879	1.263648	1.287907	1.382992	1.364947	1.417075			1.318658		Avg	5.1		
		-5	-4.3	-4.2	-2.3	4.9	3.5	7.5								
21 bis(2Chloro1methylethy		0.776781	0.908029	0.772156	0.852856	0.844921	0.831061	0.849037			0.833549		Avg	5.6		
		-6.8	8.9	-7.4	2.3	1.4	-0.3	1.9								
23 m+p-Cresol		1.340585	1.494473	1.360491	1.395709	1.462489	1.407814	1.460236			1.417400		Avg	4.0		
		-5.4	5.4	-4	-1.5	3.2	-0.7	3								
26 n-Nitroso-di-n-propyla		1.113714	1.173542	1.150409	1.174886	1.198402	1.174941	1.196009			1.168843		Avg	2.5		
		-4.7	0.4	-1.6	0.5	2.5	0.5	2.3								
24 Acetophenone		2.012068	2.057864	1.884551	2.047071	2.064638	1.973009	2.000896			2.005728		Avg	3.1		
		0.3	2.6	-6	2.1	2.9	-1.6	-0.2								
28 Hexachloroethane		0.652032	0.564146	0.651941	0.644179	0.681992	0.673935	0.694464			0.651812		Avg	6.6		
		0	-13.4	0	-1.2	4.6	3.4	6.5								
$ 29 Nitrobenzene-d5	0.366232	0.328224	0.380381	0.410114	0.438290	0.452550	0.469145	0.481658			0.415824		Avg	13.0		
	-11.9	-21.1	-8.5	-1.4	5.4	8.8	12.8	15.8								
30 Nitrobenzene		0.408046	0.377346	0.431156	0.439591	0.445664	0.454664	0.472993			0.432780		Avg	7.3		
		-5.7	-12.8	-0.4	1.6	3	5.1	9.3								
32 Isophorone		0.526929	0.582685	0.610930	0.619615	0.657317	0.668330	0.723436			0.627034		Avg	10.1		
		-16	-7.1	-2.6	-1.2	4.8	6.6	15.4								
34 2,4-Dimethylphenol		0.266592	0.234617	0.245259	0.248245	0.297355	0.329225				0.270216		Avg	13.5		
		-1.3	-13.2	-9.2	-8.1	10	21.8									
33 2-Nitrophenol		0.135597	0.133937	0.166628	0.175874	0.198606	0.214636				0.170880		Avg	19.1		
		-20.6	-21.6	-2.5	2.9	16.2	25.6									
35 bis(2-Chloroethoxy)met		0.336416	0.343005	0.349933	0.376655	0.396111	0.402858	0.422466			0.375349		Avg	8.8		
		-10.4	-8.6	-6.8	0.3	5.5	7.3	12.6								
36 Benzoic acid		0.127461	0.145649	0.193756	0.236362	0.250281	0.256288	0.262514		0.068288	0.262217		WLn	10.6	0.996	
		16.9	-10.3	-12.5	-3	0	1.2	2.8								
38 2,4-Dichlorophenol		0.192187	0.200667	0.224249	0.236758	0.251793	0.259257	0.276321			0.234462		Avg	13.2		
		-18	-14.4	-4.4	1	7.4	10.6	17.9								
40 1,2,4-Trichlorobenzene		0.242656	0.222770	0.235265	0.259422	0.281069	0.289862	0.310121			0.263024		Avg	12.1		
		-7.7	-15.3	-10.6	-1.4	6.9	10.2	17.9								
43 Naphthalene	0.962970	0.905381	0.871816	0.921023	0.989621	1.060629	1.094015	1.159387			0.995605		Avg	10.1		
	-3.3	-9.1	-12.4	-7.5	-0.6	6.5	9.9	16.5								
44 4-Chloroaniline		0.264352	0.279090	0.303164	0.340088	0.369511	0.373328	0.394889			0.332060		Avg	15.2		
		-20.4	-16	-8.7	2.4	11.3	12.4	18.9								
45 2,6-Dichlorophenol		0.199916	0.212678	0.208883	0.225023	0.247360	0.247497	0.274269			0.230804		Avg	11.5		
		-13.4	-7.9	-9.5	-2.5	7.2	7.2	18.8								
47 Hexachlorobutadiene		0.143700	0.155920	0.161875	0.177094	0.197220	0.205829	0.225729			0.181052		Avg	16.4		
		-20.6	-13.9	-10.6	-2.2	8.9	13.7	24.7								
196 Caprolactam		0.062736	0.071882	0.074627	0.087224	0.091562	0.087952	0.094294			0.081468		Avg	14.4		
		-23	-11.8	-8.4	7.1	12.4	8	15.7								
49 4-Chloro-3-methylpheno		0.279231	0.278703	0.280356	0.305885	0.332708	0.334316	0.360619			0.310260		Avg	10.6		
		-10	-10.2	-9.6	-1.4	7.2	7.8	16.2								

Report Date: 06-Dec-2019 17:12:31 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
51 2-Methylnaphthalene	0.579820	0.573369	0.572452	0.579012	0.624392	0.682940	0.703879	0.770084			0.635743		Avg	11.8		
	-8.8	-9.8	-10	-8.9	-1.8	7.4	10.7	21.1								
204 1-Methylnaphthalene	0.546169	0.513211	0.545287	0.542564	0.595315	0.632621	0.674232	0.726169			0.596946		Avg	12.5		
	-8.5	-14	-8.7	-9.1	-0.3	6	12.9	21.6								
52 1,2,4,5-Tetrachloroben		0.405133	0.428744	0.442098	0.533019	0.607167					0.483232		Avg	17.5		
		-16.2	-11.3	-8.5	10.3	25.6										
54 2,4,6-Trichlorophenol		0.266617	0.281508	0.306111	0.333916	0.348597	0.360165	0.381690			0.325515		Avg	13.0		
		-18.1	-13.5	-6	2.6	7.1	10.6	17.3								
55 2,4,5-Trichlorophenol		0.217530	0.268414	0.308013	0.342832	0.346190	0.354760	0.385922		0.025164	0.371366		WLn	6.2	0.997	
		8.9	-2.6	-7	-2.7	-3.4	-2	5.9								
$ 56 2-Fluorobiphenyl	1.376319	1.067742	1.143222	1.187063	1.314178	1.417764	1.537349	1.611857			1.331937		Avg	14.4		
	3.3	-19.8	-14.2	-10.9	-1.3	6.4	15.4	21								
184 Biphenyl		1.161653	1.260305	1.267203	1.423911	1.516530	1.596890	1.683243			1.415676		Avg	13.7		
		-17.9	-11	-10.5	0.6	7.1	12.8	18.9								
58 2-Chloronaphthalene		0.930764	0.943039	0.947289	1.057523	1.097679	1.183001	1.270459			1.061394		Avg	12.4		
		-12.3	-11.2	-10.8	-0.4	3.4	11.5	19.7								
60 2-Nitroaniline		0.253265	0.286568	0.272065	0.303925	0.336758	0.328225	0.348396			0.304172		Avg	11.6		
		-16.7	-5.8	-10.6	-0.1	10.7	7.9	14.5								
62 Dimethylphthalate		1.058338	1.125244	1.166241	1.227319	1.260374	1.332993	1.359180			1.218527		Avg	9.0		
		-13.1	-7.7	-4.3	0.7	3.4	9.4	11.5								
65 2,6-Dinitrotoluene		0.235767	0.226831	0.239974	0.276052	0.277482	0.285398	0.300620			0.263161		Avg	10.8		
		-10.4	-13.8	-8.8	4.9	5.4	8.5	14.2								
64 Acenaphthylene	1.440268	1.310848	1.382403	1.441285	1.599945	1.707954	1.795269	1.885237			1.570401		Avg	13.3		
	-8.3	-16.5	-12	-8.2	1.9	8.8	14.3	20								
66 3-Nitroaniline		0.222625	0.198489	0.215131	0.243577	0.255813	0.254764	0.264979			0.236483		Avg	10.4		
		-5.9	-16.1	-9	3	8.2	7.7	12.1								
68 Acenaphthene	0.991872	0.934368	0.978512	1.046829	1.230659	1.366975					1.091536		Avg	15.6		
	-9.1	-14.4	-10.4	-4.1	12.7	25.2										
70 4-Nitrophenol			0.185413	0.229305	0.321468	0.339452	0.345711	0.397105		0.131871	0.385865		WLn	11.2	0.990	
			14	-14.2	-3.5	-3.2	-3.8	8.2								
73 2,4-Dinitrotoluene		0.253653	0.269771	0.313619	0.324423	0.343821	0.358536	0.360273			0.317728		Avg	13.2		
		-20.2	-15.1	-1.3	2.1	8.2	12.8	13.4								
71 Dibenzofuran	1.369943	1.197425	1.258028	1.288460	1.447791	1.471685	1.571508	1.658386			1.407903		Avg	11.3		
	-2.7	-14.9	-10.6	-8.5	2.8	4.5	11.6	17.8								
76 2,3,4,6-Tetrachlorophe		0.192833	0.175154	0.204225	0.234566	0.248175	0.267029				0.220330		Avg	16.0		
		-12.5	-20.5	-7.3	6.5	12.6	21.2									
78 Diethylphthalate		1.212498	1.099603	1.270101	1.380723	1.448120	1.572404	1.633345			1.373828		Avg	14.1		
		-11.7	-20	-7.6	0.5	5.4	14.5	18.9								
80 4-Chlorophenylphenylet		0.480323	0.457144	0.479686	0.533998	0.549900	0.577607	0.642870			0.531647		Avg	12.3		
		-9.7	-14	-9.8	0.4	3.4	8.6	20.9								
79 Fluorene	1.145838	0.974973	1.038138	1.097985	1.185097	1.226976	1.335212	1.400998			1.175652		Avg	12.2		
	-2.5	-17.1	-11.7	-6.6	0.8	4.4	13.6	19.2								

Report Date: 06-Dec-2019 17:12:31 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
83 4-Nitroaniline		0.168492	0.209533	0.209109	0.226337	0.253624	0.256165	0.256274			0.225648		Avg	14.5		
		-25.3	-7.1	-7.3	0.3	12.4	13.5	13.6								
84 4,6-Dinitro-2-methylph				0.088075	0.113494	0.120514	0.124093	0.132265		0.094914	0.140034		WLn	1.8	0.999	
				0.9	0	-1.3	-1.9	2								
86 n-Nitrosodiphenylamine		0.502459	0.437707	0.493908	0.500364	0.547889	0.551204	0.592327			0.517980		Avg	9.7		
		-3	-15.5	-4.6	-3.4	5.8	6.4	14.4								
87 Azobenzene		1.076895	1.061197	1.169861	1.228974	1.242805	1.269348	1.390833			1.205702		Avg	9.5		
		-10.7	-12	-3	1.9	3.1	5.3	15.4								
$ 88 2,4,6-Tribromophenol			0.037209	0.058817	0.064280	0.066786	0.069279			0.048368	0.072066		WLn	1.1	1.000	
			0	1	-1.1	-0.9	1									
94 4-Bromophenylphenyleth		0.133328	0.141784	0.159307	0.171468	0.188355	0.189810				0.164009		Avg	14.4		
		-18.7	-13.6	-2.9	4.5	14.8	15.7									
96 Hexachlorobenzene		0.137543	0.133490	0.151098	0.159741	0.172945	0.186016				0.156805		Avg	13.0		
		-12.3	-14.9	-3.6	1.9	10.3	18.6									
200 Atrazine		0.180346	0.165767	0.175576	0.180989	0.204022	0.211752	0.231537			0.192855		Avg	12.2		
		-6.5	-14	-9	-6.2	5.8	9.8	20.1								
202 Octadecane		0.335324	0.348376	0.375665	0.399829	0.433730	0.448527	0.516186			0.408234		Avg	15.5		
		-17.9	-14.7	-8	-2.1	6.2	9.9	26.4								
103 Phenanthrene	1.007267	0.930162	0.864662	0.950231	1.047874	1.122820	1.181887	1.301169			1.050759		Avg	13.8		
	-4.1	-11.5	-17.7	-9.6	-0.3	6.9	12.5	23.8								
104 Anthracene	0.843288	0.757787	0.821225	0.871445	0.911975	1.008569	1.057594				0.895983		Avg	11.8		
	-5.9	-15.4	-8.3	-2.7	1.8	12.6	18									
106 Carbazole		0.749445	0.715205	0.821428	0.900257	0.906868	0.948274	1.055977			0.871065		Avg	13.6		
		-14	-17.9	-5.7	3.4	4.1	8.9	21.2								
109 Di-n-butylphthalate		1.011798	1.077165	1.277833	1.386348	1.490167	1.550958	1.741866			1.362305		Avg	19.1		
		-25.7	-20.9	-6.2	1.8	9.4	13.8	27.9								
114 Fluoranthene	0.888459	0.878148	0.810879	0.926542	1.027227	1.064528	1.145105				0.962984		Avg	12.3		
	-7.7	-8.8	-15.8	-3.8	6.7	10.5	18.9									
116 Pyrene	1.183422	1.011789	1.069713	1.104432	1.282003	1.307195	1.327862	1.404079			1.211312		Avg	11.5		
	-2.3	-16.5	-11.7	-8.8	5.8	7.9	9.6	15.9								
$ 117 Terphenyl-d14	0.881258	0.670402	0.752529	0.756160	0.876808	0.900414	0.904172	1.031312			0.846632		Avg	13.4		
	4.1	-20.8	-11.1	-10.7	3.6	6.4	6.8	21.8								
122 Butylbenzylphthalate		0.459259	0.552157	0.581195	0.708657	0.731246	0.726523	0.785683		0.025662	0.761928		WLn	8.4	0.996	
		11.6	-1.9	-13.5	-1.9	-0.6	-2.1	5.2								
130 bis(2-Ethylhexyl)phtha		0.611609	0.715880	0.797758	0.967359	0.980985	1.026773	1.102295		0.028348	1.060014		WLn	9.7	0.995	
		14.4	-4.1	-13.4	-3.1	-3.7	-0.3	6.3								
125 3,3'-Dichlorobenzidine		0.280556	0.268787	0.252454	0.304577	0.362657	0.372607	0.399738			0.320197		Avg	18.0		
		-12.4	-16.1	-21.2	-4.9	13.3	16.4	24.8								
127 Benzo(a)Anthracene	1.503284	1.062061	1.024186	1.056775	1.146085	1.130254	1.138976	1.172967			1.154323		Avg	13.0		
	30.2	-8	-11.3	-8.5	-0.7	-2.1	-1.3	1.6								
129 Chrysene	1.110995	0.926719	0.953153	0.977509	1.103220	1.106003	1.119198	1.215765			1.064070		Avg	9.4		
	4.4	-12.9	-10.4	-8.1	3.7	3.9	5.2	14.3								

Report Date: 06-Dec-2019 17:12:31 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
131 Di-n-octylphthalate		1.042175	1.244363	1.364099	1.578116	1.833150	1.922142			0.029721	1.868057		WLn	12.3	0.990	
		15.2	-3.7	-15.1	-9.6	2.1	5.9									
132 Benzo(b)fluoranthene	0.981235	0.823250	0.875224	0.884930	1.034437	1.147376	1.157091	1.265827			1.021171		Avg	15.5		
	-3.9	-19.4	-14.3	-13.3	1.3	12.4	13.3	24								
134 Benzo(k)fluoranthene	1.118017	0.973517	0.927086	0.972368	1.078810	1.192173	1.247031	1.344013			1.106627		Avg	13.3		
	1	-12	-16.2	-12.1	-2.5	7.7	12.7	21.5								
135 Benzo(a)pyrene	1.031883	0.751623	0.828683	0.830551	0.876981	1.033450	1.003548	1.126699			0.935427		Avg	14.0		
	10.3	-19.6	-11.4	-11.2	-6.2	10.5	7.3	20.4								
138 Indeno(1,2,3-c,d)pyren	1.376262	1.149831	1.197232	1.257528	1.391303	1.575663	1.589172	1.769590			1.413322		Avg	15.3		
	-2.6	-18.6	-15.3	-11	-1.6	11.5	12.4	25.2								
139 Dibenzo(a,h)anthracene	1.172886	1.011513	1.012243	1.096439	1.230238	1.407944	1.482241				1.201929		Avg	15.4		
	-2.4	-15.8	-15.8	-8.8	2.4	17.1	23.3									
140 Benzo(g,h,i)perylene	1.093943	1.004036	0.997747	0.991976	1.019779	1.102509	1.092918	1.149638			1.056568		Avg	5.7		
	3.5	-5	-5.6	-6.1	-3.5	4.3	3.4	8.8								

QC Flag Legend

C - Fails Curve Fit Error Test

Shealy Environmental Services
Initial Calibration RT Report

Batch: \\Organics\HH\chem\msd11.i\11120519B.b
Method: 8270DLVI-11.M Instrument: msd11
Cal Start Date: 05-Dec-2019 12:53:30 Cal End Date: 05-Dec-2019 19:35:30
Last Modified: 06-Dec-2019 17:12:30
No.Compounds: 178 Integrator: falcon

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Avg. RRT	%Rsd RT	Flags
S 214 Total PAHs										1.000	0.000	
193 1,4-Dioxane		3.670	3.676	3.670	3.676	3.676	3.676	3.681		3.675	0.100	
2 N-Nitrosodimethylamine		3.868	3.874	3.868	3.873	3.873	3.874	3.879		3.873	0.094	
1 pyridine		3.927	3.932	3.922	3.927	3.927	3.932	3.932		3.929	0.103	
$ 6 2-Fluorophenol	4.793	4.788	4.788	4.788	4.788	4.788	4.788	4.788		4.789	0.039	
199 Benzaldhyde		5.425	5.425	5.425	5.425	5.425	5.425	5.425		5.425	0.001	
$ 9 Phenol-d5	5.435	5.430	5.430	5.430	5.430	5.430	5.435	5.435		5.432	0.051	
10 Phenol		5.441	5.441	5.441	5.441	5.441	5.446	5.446		5.442	0.048	
11 Aniline		5.494	5.500	5.494	5.499	5.499	5.500	5.499		5.498	0.047	
12 bis(2-Chloroethyl)ethe		5.510	5.510	5.516	5.516	5.516	5.516	5.521		5.515	0.066	
201 n-Decane		5.575	5.574	5.574	5.574	5.574	5.575	5.574		5.574	0.001	
13 2-Chlorophenol		5.601	5.601	5.601	5.601	5.601	5.601	5.601		5.601	0.001	
14 1,3-Dichlorobenzene		5.719	5.714	5.719	5.719	5.719	5.719	5.719		5.718	0.035	
17 1,4-Dichlorobenzene		5.767	5.767	5.772	5.772	5.772	5.772	5.772		5.771	0.044	
18 Benzyl alcohol		5.837	5.837	5.836	5.836	5.836	5.842	5.842		5.838	0.045	
19 1,2-Dichlorobenzene		5.895	5.895	5.895	5.895	5.895	5.895	5.895		5.895	0.001	
20 o-Cresol		5.906	5.906	5.906	5.906	5.906	5.911	5.911		5.908	0.044	
21 bis(2Chloro1methylethy		5.928	5.922	5.922	5.922	5.922	5.928	5.927		5.924	0.049	
23 m+p-Cresol		6.024	6.024	6.024	6.024	6.024	6.024	6.029		6.024	0.033	
26 n-Nitroso-di-n-propyla		6.029	6.029	6.029	6.034	6.034	6.034	6.040		6.033	0.066	
24 Acetophenone		6.051	6.050	6.050	6.050	6.050	6.056	6.056		6.052	0.043	
28 Hexachloroethane		6.163	6.163	6.163	6.168	6.168	6.168	6.168		6.166	0.046	
$ 29 Nitrobenzene-d5	6.189	6.184	6.184	6.184	6.184	6.184	6.190	6.189		6.186	0.045	
30 Nitrobenzene		6.200	6.200	6.200	6.200	6.200	6.206	6.206		6.202	0.042	
32 Isophorone		6.377	6.377	6.377	6.377	6.377	6.382	6.382		6.378	0.041	
34 2,4-Dimethylphenol		6.452	6.452	6.452	6.452	6.452	6.452			6.452	0.001	
33 2-Nitrophenol		6.457	6.452	6.457	6.457	6.457	6.457			6.456	0.034	
35 bis(2-Chloroethoxy)met		6.521	6.521	6.521	6.521	6.521	6.527	6.526		6.523	0.040	
36 Benzoic acid		6.489	6.500	6.510	6.532	6.532	6.553	6.564		6.526	0.421	
38 2,4-Dichlorophenol		6.655	6.655	6.649	6.649	6.649	6.655	6.655		6.653	0.044	
40 1,2,4-Trichlorobenzene		6.725	6.724	6.724	6.724	6.724	6.724	6.724		6.724	0.001	
43 Naphthalene	6.799	6.799	6.799	6.799	6.799	6.799	6.799	6.805		6.800	0.028	
44 4-Chloroaniline		6.826	6.821	6.821	6.815	6.821	6.815	6.821		6.820	0.054	
45 2,6-Dichlorophenol		6.831	6.831	6.831	6.831	6.831	6.831	6.831		6.831	0.001	
47 Hexachlorobutadiene		6.874	6.874	6.874	6.874	6.874	6.874	6.879		6.875	0.029	
196 Caprolactam		7.088	7.088	7.088	7.094	7.093	7.099	7.104		7.093	0.087	
49 4-Chloro-3-methylpheno		7.206	7.200	7.200	7.195	7.195	7.200	7.200		7.200	0.052	
51 2-Methylnaphthalene	7.366	7.361	7.361	7.361	7.366	7.366	7.366	7.366		7.364	0.037	
204 1-Methylnaphthalene	7.452	7.447	7.452	7.452	7.452	7.452	7.452	7.452		7.451	0.025	
52 1,2,4,5-Tetrachloroben		7.500	7.500	7.500	7.505	7.505				7.502	0.038	
54 2,4,6-Trichlorophenol		7.591	7.591	7.591	7.591	7.591	7.591	7.591		7.591	0.001	
55 2,4,5-Trichlorophenol		7.639	7.639	7.634	7.634	7.634	7.634	7.634		7.635	0.035	
$ 56 2-Fluorobiphenyl	7.650	7.650	7.650	7.650	7.650	7.650	7.650	7.655		7.650	0.025	
184 Biphenyl		7.741	7.741	7.741	7.741	7.741	7.746	7.746		7.742	0.034	
58 2-Chloronaphthalene		7.778	7.778	7.778	7.778	7.778	7.783	7.783		7.780	0.034	
60 2-Nitroaniline		7.853	7.853	7.848	7.848	7.848	7.853	7.853		7.851	0.036	
62 Dimethylphthalate		7.965	7.965	7.965	7.965	7.965	7.971	7.971		7.967	0.033	
65 2,6-Dinitrotoluene		8.035	8.029	8.035	8.035	8.035	8.035	8.040		8.035	0.038	

Report Date: 06-Dec-2019 17:12:32 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Avg. RRT	%Rsd RT	Flags
64 Acenaphthylene	8.136	8.137	8.131	8.136	8.136	8.136	8.137	8.136		8.136	0.023	
66 3-Nitroaniline		8.201	8.201	8.195	8.190	8.195	8.195	8.195		8.196	0.044	
68 Acenaphthene	8.275	8.276	8.275	8.275	8.275	8.275				8.275	0.001	
70 4-Nitrophenol			8.329	8.318	8.318	8.318	8.318	8.324		8.321	0.054	
73 2,4-Dinitrotoluene		8.377	8.377	8.377	8.377	8.377	8.383	8.382		8.379	0.031	
71 Dibenzofuran	8.420	8.420	8.420	8.420	8.420	8.420	8.420	8.420		8.420	0.001	
76 2,3,4,6-Tetrachlorophe		8.516	8.516	8.516	8.516	8.516	8.516			8.516	0.001	
78 Diethylphthalate		8.543	8.543	8.543	8.548	8.548	8.548	8.554		8.547	0.047	
80 4-Chlorophenylphenylet		8.677	8.677	8.682	8.677	8.677	8.682	8.682		8.679	0.033	
79 Fluorene	8.709	8.709	8.709	8.709	8.709	8.709	8.714	8.714		8.710	0.029	
83 4-Nitroaniline		8.725	8.719	8.714	8.709	8.714	8.714	8.714		8.716	0.058	
84 4,6-Dinitro-2-methylph				8.725	8.725	8.725	8.730	8.730		8.727	0.034	
86 n-Nitrosodiphenylamine		8.773	8.773	8.773	8.773	8.773	8.778	8.778		8.774	0.030	
87 Azobenzene		8.816	8.816	8.816	8.816	8.816	8.816	8.821		8.816	0.023	
$ 88 2,4,6-Tribromophenol			8.912	8.912	8.912	8.912	8.917			8.913	0.027	
94 4-Bromophenylphenyleth		9.094	9.094	9.099	9.099	9.099	9.099			9.097	0.030	
96 Hexachlorobenzene		9.180	9.179	9.179	9.179	9.179	9.179			9.179	0.001	
200 Atrazine		9.195	9.190	9.190	9.196	9.195	9.195	9.196		9.194	0.028	
202 Octadecane		9.297	9.297	9.297	9.297	9.297	9.303	9.302		9.299	0.028	
103 Phenanthrene	9.527	9.527	9.527	9.532	9.532	9.532	9.533	9.532		9.530	0.029	
104 Anthracene	9.575	9.575	9.575	9.575	9.575	9.575	9.575			9.575	0.001	
106 Carbazole		9.698	9.698	9.693	9.693	9.693	9.698	9.698		9.696	0.030	
109 Di-n-butylphthalate		9.907	9.907	9.907	9.912	9.912	9.912	9.912		9.910	0.029	
114 Fluoranthene	10.597	10.592	10.591	10.591	10.591	10.591	10.592			10.592	0.019	
116 Pyrene	10.837	10.832	10.832	10.832	10.832	10.832	10.832	10.837		10.833	0.023	
$ 117 Terphenyl-d14	10.934	10.929	10.928	10.928	10.928	10.928	10.928	10.928		10.929	0.017	
122 Butylbenzylphthalate		11.426	11.426	11.426	11.426	11.426	11.431	11.431		11.427	0.023	
130 bis(2-Ethylhexyl)phtha		12.127	12.121	12.126	12.126	12.126	12.127	12.126		12.126	0.017	
125 3,3'-Dichlorobenzidine		12.175	12.175	12.169	12.169	12.169	12.169	12.169		12.171	0.021	
127 Benzo(a)Anthracene	12.255	12.255	12.255	12.249	12.255	12.255	12.255	12.255		12.254	0.016	
129 Chrysene	12.303	12.303	12.303	12.303	12.308	12.308	12.308	12.314		12.306	0.032	
131 Di-n-octylphthalate		13.057	13.057	13.057	13.062	13.062	13.063			13.060	0.022	
132 Benzo(b)fluoranthene	13.827	13.827	13.827	13.822	13.827	13.827	13.833	13.838		13.829	0.034	
134 Benzo(k)fluoranthene	13.865	13.865	13.865	13.870	13.870	13.870	13.876	13.881		13.870	0.041	
135 Benzo(a)pyrene	14.335	14.330	14.336	14.341	14.341	14.341	14.346	14.351		14.340	0.046	
138 Indeno(1,2,3-c,d)pyren	16.352	16.331	16.325	16.336	16.341	16.341	16.357	16.368		16.344	0.087	
139 Dibenzo(a,h)anthracene	16.352	16.341	16.341	16.336	16.347	16.347	16.363			16.347	0.054	
140 Benzo(g,h,i)perylene	16.924	16.903	16.898	16.897	16.908	16.908	16.924	16.930		16.912	0.075	

Shealy Environmental Services
Form 6 Response

Batch: \\Organics\HH\chem\msd11.i\11120519B.b
Method: 8270DLVI-11.M Instrument: msd11
Cal Start Date: 05-Dec-2019 12:53:30 Cal End Date: 05-Dec-2019 19:35:30
Last Modified: 06-Dec-2019 17:12:30
No.Compounds: 178 Integrator: falcon

Internal Standards

* 16 1,4-Dichlorobenzene-d4
* 41 Naphthalene-d8
* 67 Acenaphthene-d10
* 102 Phenanthrene-d10
* 128 Chrysene-d12
* 136 Perylene-d12

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
S 214 Total PAHs	0.20000									#16
	130070									
193 1,4-Dioxane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		2205	4750	10389	17378	29790	35159	43844		
2 N-Nitrosodimethylamine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		12436	21602	64121	129717	203330	282466	377148		
1 pyridine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		4748	11240	33406	57704	98820	130110	180392		
$ 6 2-Fluorophenol	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
	3134	12799	29121	75151	161545	243892	321077	439014		
199 Benzaldhyde		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		10043	14946	45071	92283	129504	172415	205210		
$ 9 Phenol-d5	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
	3944	16368	33280	84638	194822	302609	400761	539660		
10 Phenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		16810	38518	97099	214383	333751	450006	601490		
11 Aniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		3249	8858	18820	6702	26179	23539	23618		
12 bis(2-Chloroethyl)ethe		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		9487	21018	52745	107389	165571	215704	279346		
201 n-Decane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		7037	13879	37767	83800	136050	189149	254270		
13 2-Chlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		14314	30047	72100	166431	255468	340625	459029		
14 1,3-Dichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		13339	25850	66054	149459	238287	337325	457952		
17 1,4-Dichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		13922	29592	72575	166947	267113	374450	512612		
18 Benzyl alcohol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		10333	24652	62575	148320	212705	283330	369830		
19 1,2-Dichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		13328	25504	68348	151486	242621	328370	442161		
20 o-Cresol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		12617	25070	67747	140389	228454	314754	423996		
21 bis(2Chloro1methylethy		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		7827	18040	41397	92966	139571	191641	254036		
23 m+p-Cresol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		13508	29691	72939	152140	241586	324639	436910		

Report Date: 06-Dec-2019 17:12:32 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
26 n-Nitroso-di-n-propyla		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		11222	23315	61676	128069	197962	270939	357852		
24 Acetophenone		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		20274	40884	101035	223142	341054	454972	598678		
28 Hexachloroethane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#16
		6570	11208	34952	70219	112657	155408	207787		
$ 29 Nitrobenzene-d5	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
	3918	14906	35091	90690	200083	302253	410569	528764		
30 Nitrobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		18531	34811	95343	200677	297654	397896	519252		
32 Isophorone		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		23930	53754	135097	282859	439015	584884	794188		
34 2,4-Dimethylphenol		1.0000	2.0000	5.0000	10.000	15.000	20.000			#41
		12107	21644	54235	113326	198600	288119			
33 2-Nitrophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000			#41
		6158	12356	36847	80288	132647	187837			
35 bis(2-Chloroethoxy)met		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		15278	31643	77382	171946	264558	352558	463783		
36 Benzoic acid		2.0000	4.0000	10.000	20.000	30.000	40.000	50.000		#41
		11577	26873	85692	215802	334320	448578	576375		
38 2,4-Dichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		8728	18512	49589	108082	168170	226887	303345		
40 1,2,4-Trichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		11020	20551	52025	118428	187723	253671	340451		
43 Naphthalene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
	10302	41117	80427	203669	451770	708383	957420	1272775		
44 4-Chloroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		9148	18295	52945	121571	185272	267156	305427		
45 2,6-Dichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		9079	19620	46191	102725	165209	216595	301093		
47 Hexachlorobutadiene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		6526	14384	35796	80845	131721	180130	247805		
196 Caprolactam		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		2171	4712	13033	31180	45909	62939	72932		
49 4-Chloro-3-methylpheno		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
		12681	25711	61996	139639	222212	292574	395888		
51 2-Methylnaphthalene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
	6203	26039	52810	128039	285040	456128	615995	845398		
204 1-Methylnaphthalene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#41
	5843	23307	50304	119979	271766	422521	590049	797188		
52 1,2,4,5-Tetrachloroben		1.0000	2.0000	5.0000	10.000	15.000				#67
		9219	19580	48811	118074	201234				
54 2,4,6-Trichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		6067	12856	33797	73969	115536	153662	209051		
55 2,4,5-Trichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		4950	12258	34007	75944	114738	151356	211369		
$ 56 2-Fluorobiphenyl	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
	7339	24297	52209	131061	291116	469891	655899	882812		
184 Biphenyl		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		26434	57556	139909	315424	502625	681302	921910		
58 2-Chloronaphthalene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		21180	43067	104588	234262	363805	504719	695829		
60 2-Nitroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		4571	9471	24892	56466	88141	123537	143878		
62 Dimethylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		24083	51388	128762	271875	417727	568712	744421		

Report Date: 06-Dec-2019 17:12:32 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
65 2,6-Dinitrotoluene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		5365	10359	26495	61151	91966	121763	164649		
64 Acenaphthylene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
	7680	29829	63132	159129	354419	566069	765939	1032542		
66 3-Nitroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		4018	6560	19683	45254	66955	95888	109429		
68 Acenaphthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000				#67
	5289	21262	44687	115578	272615	453058				
70 4-Nitrophenol			4.0000	10.000	20.000	30.000	40.000	50.000		#67
			16935	50634	142423	225010	294990	434988		
73 2,4-Dinitrotoluene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		5772	12320	34626	71866	113953	152967	197321		
71 Dibenzofuran	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
	7305	27248	57452	142256	320714	487762	670473	908296		
76 2,3,4,6-Tetrachlorophe		1.0000	2.0000	5.0000	10.000	15.000	20.000			#67
		4388	7999	22548	51961	82253	113926			
78 Diethylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		27591	50217	140229	305857	479952	670855	894581		
80 4-Chlorophenylphenylet		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		10930	20877	52961	118291	182254	246432	352099		
79 Fluorene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
	6110	22186	47410	121226	262522	406658	569659	767325		
83 4-Nitroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#67
		3041	6925	19132	42051	66382	96415	105834		
84 4,6-Dinitro-2-methylph				5.0000	10.000	15.000	20.000	25.000		#102
				14913	39177	61186	83873	108847		
86 n-Nitrosodiphenylamine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		17166	30291	83629	172721	278169	372552	487452		
87 Azobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		36791	73439	198082	424230	630985	857937	1144577		
$ 88 2,4,6-Tribromophenol			2.0000	5.0000	10.000	15.000	20.000			#102
			2575	9959	22189	33908	46825			
94 4-Bromophenylphenyleth		1.0000	2.0000	5.0000	10.000	15.000	20.000			#102
		4555	9812	26974	59189	95630	128290			
96 Hexachlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000			#102
		4699	9238	25584	55141	87806	125726			
200 Atrazine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		4814	8458	23935	53091	83667	119231	144018		
202 Octadecane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		11456	24109	63608	138017	220209	303154	424792		
103 Phenanthrene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
	8139	31778	59838	160894	361716	570067	798823	1070789		
104 Anthracene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000			#102
	6814	25889	56832	147554	314805	512061	714815			
106 Carbazole		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		25604	49495	139085	310760	460426	640927	869010		
109 Di-n-butylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		34567	74544	216364	478554	756573	1048274	1433458		
114 Fluoranthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000			#102
	7179	30001	56116	156883	354589	540472	773963			
116 Pyrene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
	7222	28378	59515	163842	352074	546914	775851	1027682		
$ 117 Terphenyl-d14	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
	5378	18803	41868	112176	240796	376722	528295	754844		
122 Butylbenzylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
		12881	30720	86220	194617	305944	424497	575062		

Report Date: 06-Dec-2019 17:12:32 AIM Revision: 1.0 27-Jun-2017 12:05:20
Method Path: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
130 bis(2-Ethylhexyl)phtha		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
		17154	39829	118347	265664	410432	599929	806799		
125 3,3'-Dichlorobenzidine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
		5957	11131	28346	67263	114845	171441	198398		
127 Benzo(a)Anthracene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
	9174	29788	56982	156772	314747	472884	665488	858525		
129 Chrysene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#128
	6780	25992	53030	145013	302975	462738	653932	889850		
131 Di-n-octylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000			#136
		29129	69702	207102	459175	726076	1048267			
132 Benzo(b)fluoranthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#136
	6277	23010	49025	134353	300984	454454	631036	851357		
134 Benzo(k)fluoranthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#136
	7152	27210	51930	147628	313895	472197	680086	903943		
135 Benzo(a)pyrene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#136
	6601	21008	46418	126097	255170	409330	547299	757784		
138 Indeno(1,2,3-c,d)pyren	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#136
	8804	32138	67062	190922	404819	624090	866677	1190173		
139 Dibenzo(a,h)anthracene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000			#136
	7503	28272	56700	166465	357955	557660	808361			
140 Benzo(g,h,i)perylene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#136
	6998	28063	55888	150605	296719	436683	596038	773212		

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\HH\chem\msd11.i\11120519B.b		
Method:	8270DLVI-11.M	Instrument:	msd11
Cal Start Date:	05-Dec-2019 12:53:30	Cal End Date:	05-Dec-2019 19:35:30
Last Modified:	06-Dec-2019 17:12:30		
No.Compounds:	178	Integrator:	falcon
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

No. Cal Levels: 9 No. Cal Levels: 16

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	SVMS 4157	05-Dec-2019 12:53:30	11120519B.b	111205B04.d	PAH+.sub	43617233	49610696
2	2	SVMS 4158	05-Dec-2019 13:18:30	11120519B.b	111205B05.d	1STD.sub	43617233	49613576
3	3	SVMS 4159	05-Dec-2019 13:43:30	11120519B.b	111205B06.d	1STD.sub	43617233	49616470
4	4	SVMS 4167	05-Dec-2019 14:08:30	11120519B.b	111205B07.d	1STD.sub	43617233	49620873
5	5	SVMS 4281	05-Dec-2019 14:33:30	11120519B.b	111205B08.d	1STD.sub	43617233	49623852
6	6	SVMS 4162	05-Dec-2019 14:58:30	11120519B.b	111205B09.d	1STD.sub	43617233	49626824
7	7	SVMS 4168	05-Dec-2019 15:23:30	11120519B.b	111205B10.d	1STD.sub	43617233	49629830
8	8	SVMS 4164	05-Dec-2019 15:49:30	11120519B.b	111205B11.d	1STD.sub	43617233	49632809
9	9	SVMS 4165	05-Dec-2019 16:14:30	11120519B.b	111205B12.d	1STD.sub	43617233	49635825
10	2	SVMS 4212	05-Dec-2019 17:04:30	11120519B.b	111205B14.d	3STD.sub	43617233	49641866
11	3	SVMS 4213	05-Dec-2019 17:29:30	11120519B.b	111205B15.d	3STD.sub	43617233	49644891
12	4	SVMS 4214	05-Dec-2019 17:54:30	11120519B.b	111205B16.d	3STD.sub	43617233	49647938
13	5	SVMS 4215	05-Dec-2019 18:19:30	11120519B.b	111205B17.d	3STD.sub	43617233	49649786
14	6	SVMS 4216	05-Dec-2019 18:44:30	11120519B.b	111205B18.d	3STD.sub	43617233	49651594
15	7	SVMS 4217	05-Dec-2019 19:10:30	11120519B.b	111205B19.d	3STD.sub	43617233	49653477
16	8	SVMS 4218	05-Dec-2019 19:35:30	11120519B.b	111205B20.d	3STD.sub	43617233	49653789

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B04.d
Lab Sample ID: SVMS 4157 Client Sample ID:
Injection Date: 05-Dec-2019 12:53:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4157
Misc. Info: 1STD0.2
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 13:53:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 13:18:30 Calib File: 111205B05.d
Sample Type: Ical, Level: 1 ALS Bottle: 1
Cpnd Sublist: PAH+.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 13:53:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
S 214 Total PAHs	100.0	1.000		0.000		0.20000	0.20000	Q
$ 6 2-Fluorophenol	112.0	4.793	4.793	0.000	3134	0.20000	0.20000	
$ 9 Phenol-d5	99.0	5.435	5.435	0.000	3944	0.20000	0.20000	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	254731	20.000	20.000	
$ 29 Nitrobenzene-d5	82.0	6.189	6.189	0.000	3918	0.20000	0.20000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	1069815	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	10302	0.20000	0.20000	
51 2-Methylnaphthalene	142.0	7.366	7.366	0.000	6203	0.20000	0.20000	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	5843	0.20000	0.20000	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	7339	0.20000	0.20000	
64 Acenaphthylene	152.0	8.136	8.136	0.000	7680	0.20000	0.20000	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	533234	20.000	20.000	
68 Acenaphthene	153.0	8.275	8.275	0.000	5289	0.20000	0.20000	
71 Dibenzofuran	168.0	8.419	8.419	0.000	7305	0.20000	0.20000	
79 Fluorene	166.0	8.708	8.708	0.000	6110	0.20000	0.20000	
$ 88 2,4,6-Tribromophenol	330.0		8.917		ND			
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	808028	20.000	20.000	
103 Phenanthrene	178.0	9.526	9.526	0.000	8139	0.20000	0.20000	
104 Anthracene	178.0	9.575	9.575	0.000	6814	0.20000	0.20000	
114 Fluoranthene	202.0	10.596	10.596	0.000	7179	0.20000	0.20000	
116 Pyrene	202.0	10.837	10.837	0.000	7222	0.20000	0.20000	
$ 117 Terphenyl-d14	244.0	10.933	10.933	0.000	5378	0.20000	0.20000	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	9174	0.20000	0.20000	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	610264	20.000	20.000	
129 Chrysene	228.0	12.302	12.302	0.000	6780	0.20000	0.20000	
132 Benzo(b)fluoranthene	252.0	13.827	13.827	0.000	6277	0.20000	0.20000	
134 Benzo(k)fluoranthene	252.0	13.864	13.864	0.000	7152	0.20000	0.20000	
135 Benzo(a)pyrene	252.0	14.335	14.335	0.000	6601	0.20000	0.20000	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	639704	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.351	16.351	0.000	8804	0.20000	0.20000	
139 Dibenzo(a,h)anthracene	278.0	16.351	16.351	0.000	7503	0.20000	0.20000	
140 Benzo(g,h,i)perylene	276.0	16.924	16.924	0.000	6998	0.20000	0.20000	

Compound Type Legend

S - Summary
$ - Surrogate
* - ISTD

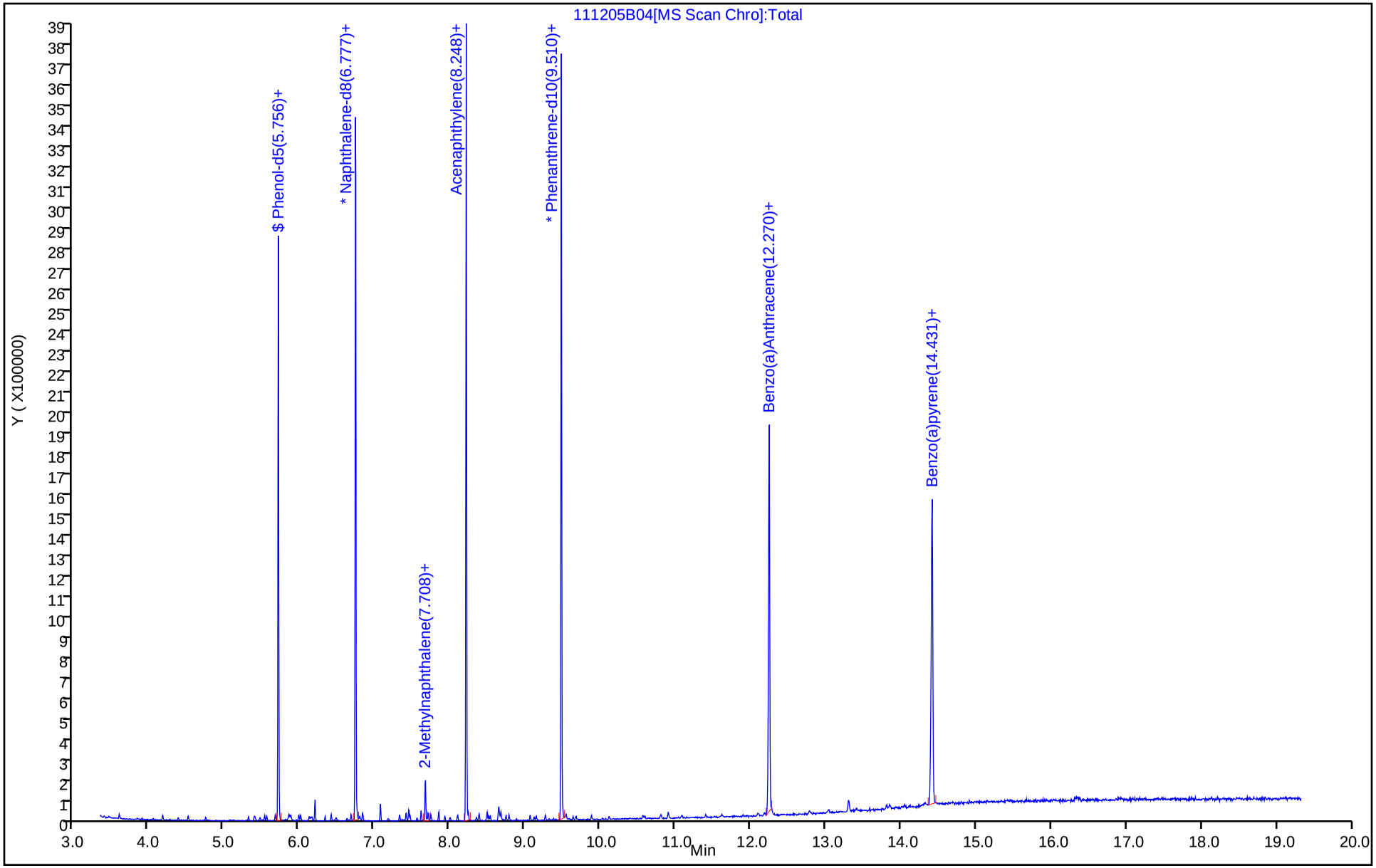
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B04.d				
Injection Date:	05-Dec-2019 12:53:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4157		
Sample Info:	11120519B.b, SVMS 4157				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d
Lab Sample ID: SVMS 4158 Client Sample ID:
Injection Date: 05-Dec-2019 13:18:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4158
Misc. Info: 1STD001
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 13:53:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 13:18:30 Calib File: 111205B05.d
Sample Type: Ical, Level: 2 ALS Bottle: 2
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 13:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.670	3.670	0.000	2205	1.0000	1.0000	M
2 N-Nitrosodimethylamine	42.0	3.868	3.868	0.000	12436	1.0000	1.0000	
1 pyridine	79.0	3.927	3.927	0.000	4748	1.0000	1.0000	M
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	12799	1.0000	1.0160	
$ 9 Phenol-d5	99.0	5.430	5.430	0.000	16368	1.0000	1.0240	
10 Phenol	94.0	5.440	5.440	0.000	16810	1.0000	1.0000	
11 Aniline	66.0	5.494	5.494	0.000	3249	1.0000	1.0000	
12 bis(2-Chloroethyl)ether	63.0	5.510	5.510	0.000	9487	1.0000	1.0000	
201 n-Decane	57.0	5.574	5.574	0.000	7037	1.0000	1.0000	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	14314	1.0000	1.0000	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	13339	1.0000	1.0000	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	201524	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.767	5.767	0.000	13922	1.0000	1.0000	
18 Benzyl alcohol	79.0	5.836	5.836	0.000	10333	1.0000	1.0000	M
20 o-Cresol	108.0	5.906	5.906	0.000	12617	1.0000	1.0000	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	13328	1.0000	1.0000	
21 bis(2Chloro1methylethyl)ether	45.0	5.927	5.927	0.000	7827	1.0000	1.0000	
23 m+p-Cresol	107.0	6.023	6.023	0.000	13508	1.0000	1.0000	
26 n-Nitroso-di-n-propylamine	70.0	6.029	6.029	0.000	11222	1.0000	1.0000	
24 Acetophenone	105.0	6.050	6.050	0.000	20274	1.0000	1.0000	
28 Hexachloroethane	117.0	6.162	6.162	0.000	6570	1.0000	1.0000	
$ 29 Nitrobenzene-d5	82.0	6.184	6.184	0.000	14906	1.0000	0.94527	
30 Nitrobenzene	77.0	6.200	6.200	0.000	18531	1.0000	1.0000	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.376	6.376	0.000	23930	1.0000	1.0000	
34 2,4-Dimethylphenol	107.0	6.451	6.451	0.000	12107	1.0000	1.0000	
33 2-Nitrophenol	139.0	6.457	6.457	0.000	6158	1.0000	1.0000	
36 Benzoic acid	105.0	6.489	6.489	0.000	11577	2.0000	2.0000	
35 bis(2-Chloroethoxy)methane	93.0	6.521	6.521	0.000	15278	1.0000	1.0000	
38 2,4-Dichlorophenol	162.0	6.654	6.654	0.000	8728	1.0000	1.0000	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	11020	1.0000	1.0000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	908281	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	41117	1.0000	0.96918	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	9079	1.0000	1.0000	
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	6526	1.0000	1.0000	
49 4-Chloro-3-methylphenol	107.0	7.205	7.205	0.000	12681	1.0000	1.0000	
51 2-Methylnaphthalene	142.0	7.360	7.360	0.000	26039	1.0000	0.9944	
204 1-Methylnaphthalene	142.0	7.446	7.446	0.000	23307	1.0000	0.96889	
53 Hexachlorocyclopentadiene	237.0	7.484	7.484	0.000	26275	5.0000	5.0000	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.500	7.500	0.000	9219	1.0000	1.0000	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	6067	1.0000	1.0000	
55 2,4,5-Trichlorophenol	196.0	7.639	7.639	0.000	4950	1.0000	1.0000	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	24297	1.0000	0.87374	
184 Biphenyl	154.0	7.740	7.740	0.000	26434	1.0000	1.0000	
58 2-Chloronaphthalene	162.0	7.778	7.778	0.000	21180	1.0000	1.0000	
62 Dimethylphthalate	163.0	7.965	7.965	0.000	24083	1.0000	1.0000	
65 2,6-Dinitrotoluene	165.0	8.034	8.034	0.000	5365	1.0000	1.0000	
64 Acenaphthylene	152.0	8.136	8.136	0.000	29829	1.0000	0.95296	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	455110	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.291	8.291	0.000	3347	2.0000	2.0000	
68 Acenaphthene	153.0	8.275	8.275	0.000	21262	1.0000	0.97015	
70 4-Nitrophenol	109.0	8.334	8.334	0.000	9141	2.0000	2.0000	M
73 2,4-Dinitrotoluene	165.0	8.377	8.377	0.000	5772	1.0000	1.0000	M
71 Dibenzofuran	168.0	8.420	8.420	0.000	27248	1.0000	0.93280	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	4388	1.0000	1.0000	
78 Diethylphthalate	149.0	8.543	8.543	0.000	27591	1.0000	1.0000	
80 4-Chlorophenylphenylether	204.0	8.676	8.676	0.000	10930	1.0000	1.0000	
79 Fluorene	166.0	8.708	8.708	0.000	22186	1.0000	0.91943	
84 4,6-Dinitro-2-methylphenol	198.0	8.730	8.730	0.000	2197	1.0000	1.0000	
86 n-Nitrosodiphenylamine	169.0	8.773	8.773	0.000	17166	1.0000	1.0000	
87 Azobenzene	77.0	8.815	8.815	0.000	36791	1.0000	1.0000	
$ 88 2,4,6-Tribromophenol	330.0	8.917	8.917	0.000	1714	1.0000	1.0000	
94 4-Bromophenylphenylether	248.0	9.093	9.093	0.000	4555	1.0000	1.0000	
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	4699	1.0000	1.0000	
202 Octadecane	57.0	9.297	9.297	0.000	11456	1.0000	1.0000	
99 Pentachlorophenol	266.0	9.345	9.345	0.000	3924	2.0000	2.0000	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	683279	20.000	20.000	
103 Phenanthrene	178.0	9.527	9.527	0.000	31778	1.0000	0.96020	
104 Anthracene	178.0	9.575	9.575	0.000	25889	1.0000	0.94660	
106 Carbazole	167.0	9.698	9.698	0.000	25604	1.0000	1.0000	
109 Di-n-butylphthalate	149.0	9.906	9.906	0.000	34567	1.0000	1.0000	
114 Fluoranthene	202.0	10.591	10.591	0.000	30001	1.0000	0.9942	
116 Pyrene	202.0	10.832	10.832	0.000	28378	1.0000	0.92181	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	18803	1.0000	0.86411	
122 Butylbenzylphthalate	149.0	11.425	11.425	0.000	12881	1.0000	1.0000	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	17154	1.0000	1.0000	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	29788	1.0000	0.82801	
* 128 Chrysene-d12	240.0	12.271	12.271	0.000	560947	20.000	20.000	
129 Chrysene	228.0	12.303	12.303	0.000	25992	1.0000	0.90957	
131 Di-n-octylphthalate	149.0	13.057	13.057	0.000	29129	1.0000	1.0000	
132 Benzo(b)fluoranthene	252.0	13.827	13.827	0.000	23010	1.0000	0.91245	
134 Benzo(k)fluoranthene	252.0	13.864	13.864	0.000	27210	1.0000	0.93091	
135 Benzo(a)pyrene	252.0	14.330	14.330	0.000	21008	1.0000	0.84286	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	559004	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.330	16.330	0.000	32138	1.0000	0.91036	
139 Dibenzo(a,h)anthracene	278.0	16.341	16.341	0.000	28272	1.0000	0.92612	
140 Benzo(g,h,i)perylene	276.0	16.902	16.902	0.000	28063	1.0000	0.95715	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

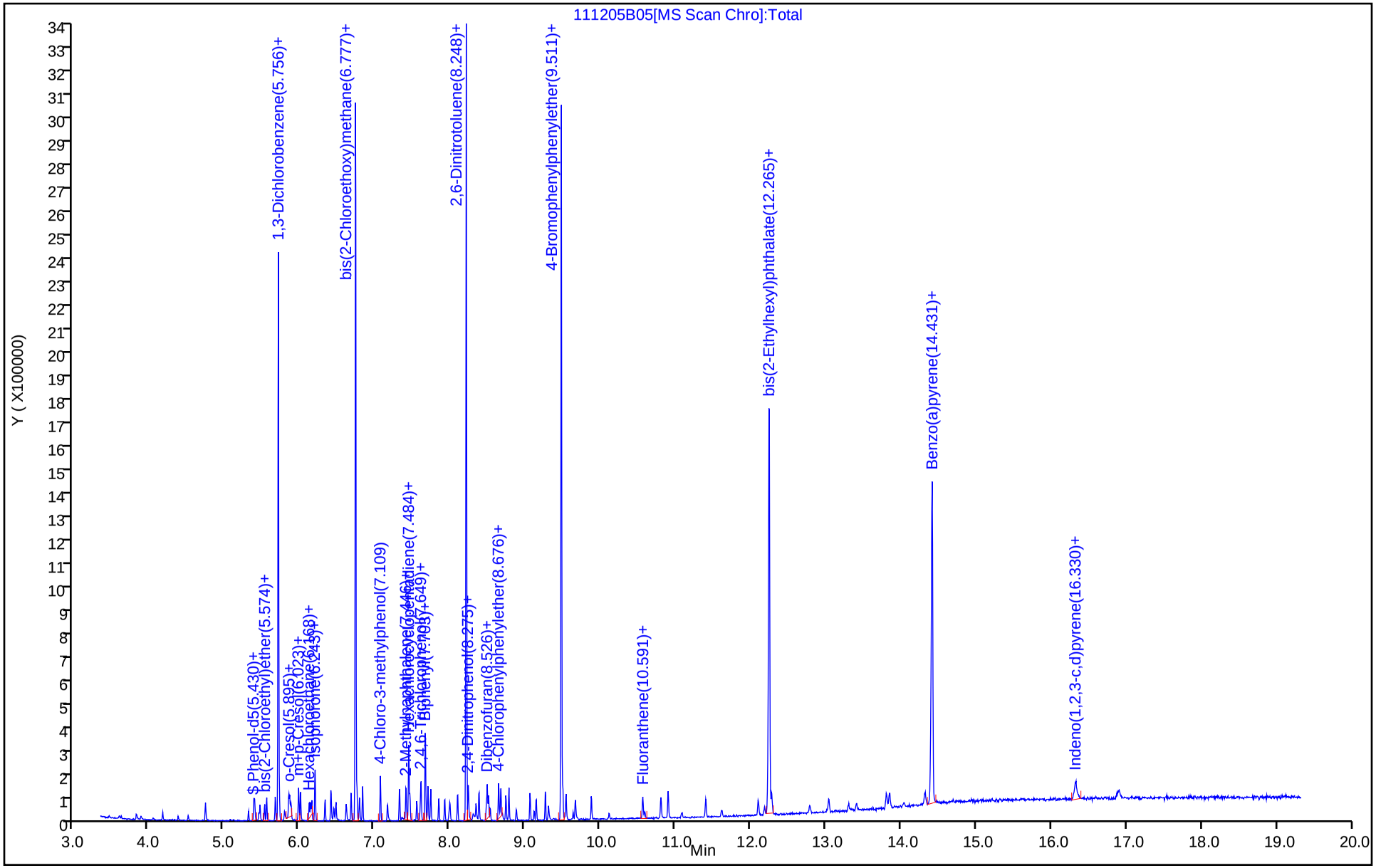
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d				
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4158		
Sample Info:	11120519B.b, SVMS 4158				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

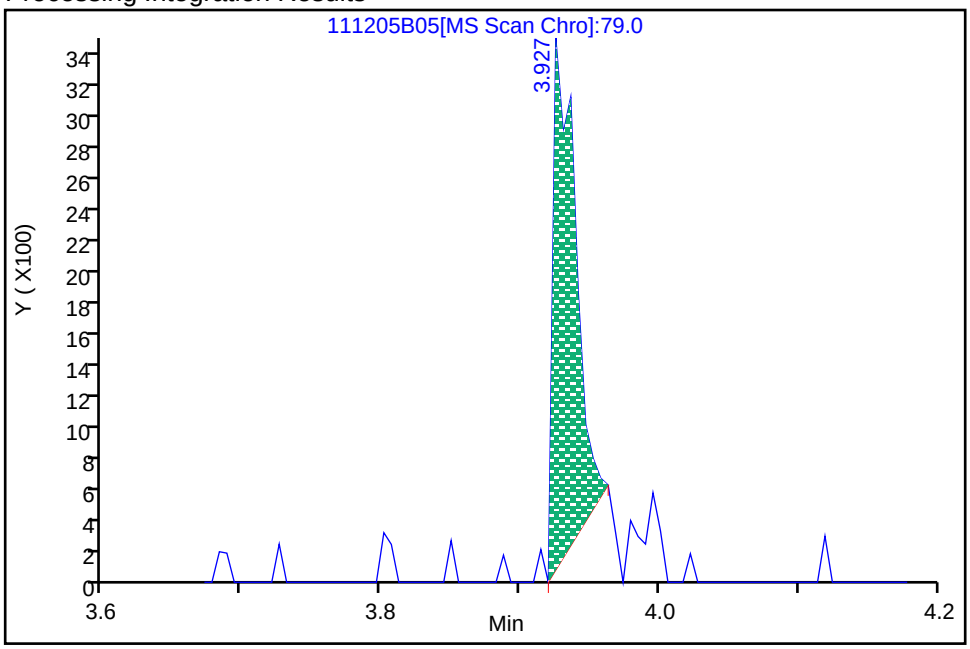
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

1 pyridine, CAS: 110-86-1

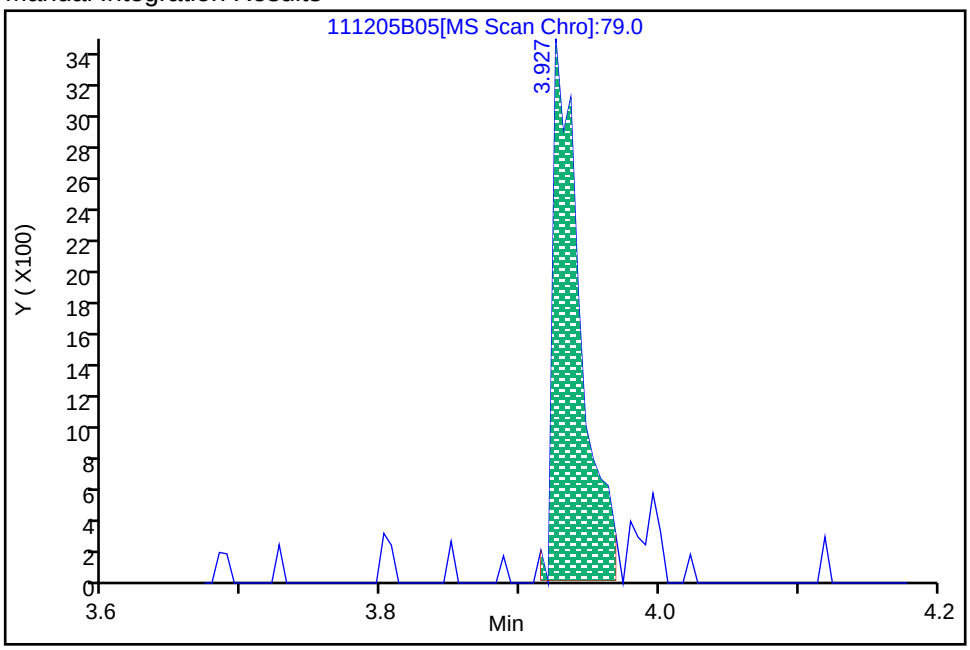
Processing Integration Results

RT: 3.927
Area: 3737
Amount: 0.51509
Amount Units: ng
Conc:



Manual Integration Results

RT: 3.927
Area: 4748
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

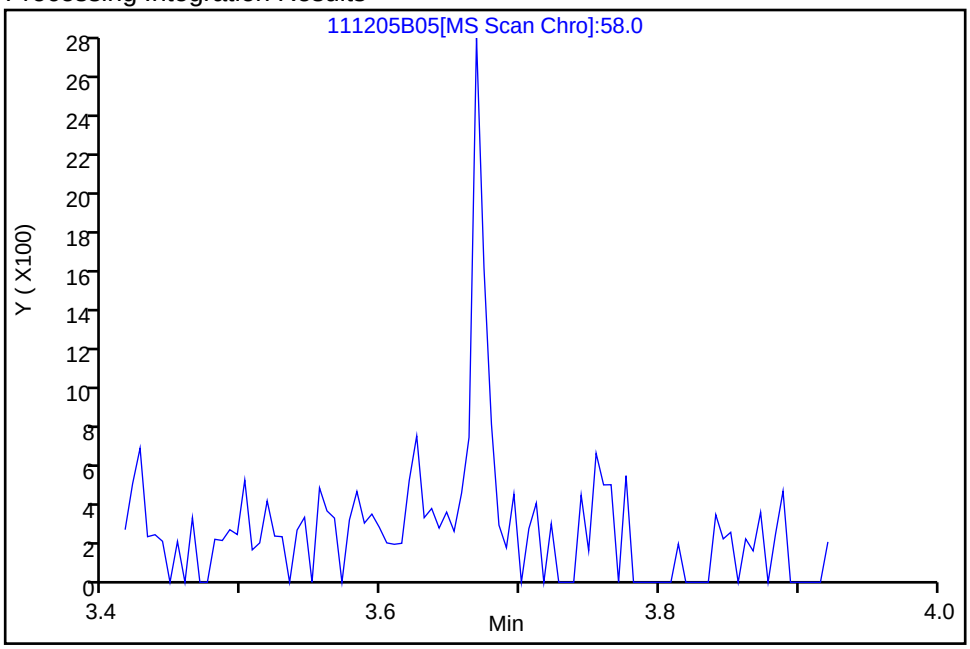
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

193 1,4-Dioxane, CAS: 123-91-1

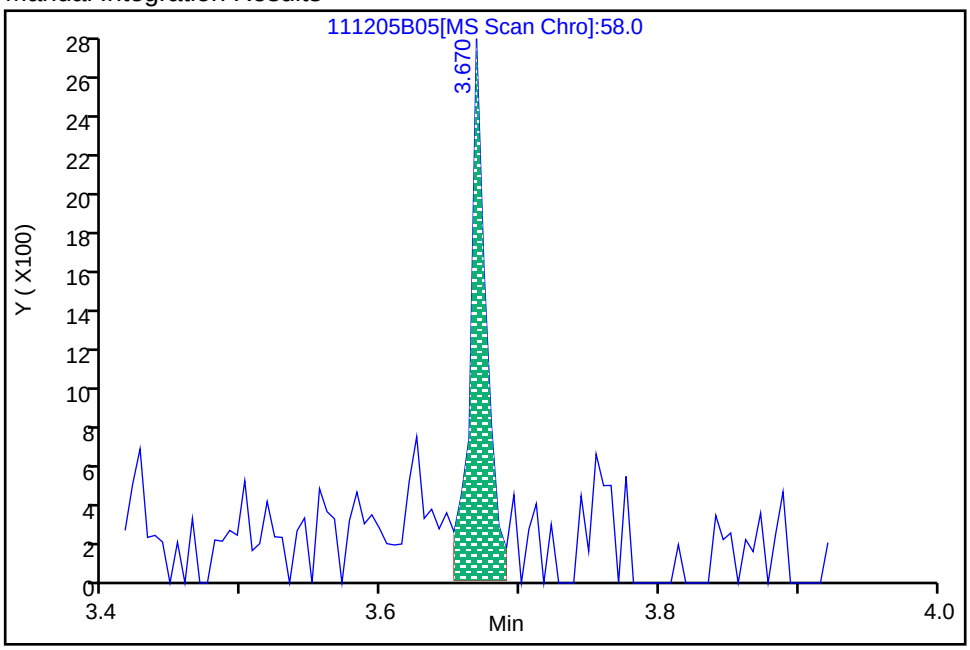
Processing Integration Results

Not Detected
Expected RT: 3.670
RT Window: 3.324-4.015



Manual Integration Results

RT: 3.670
Area: 2205
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

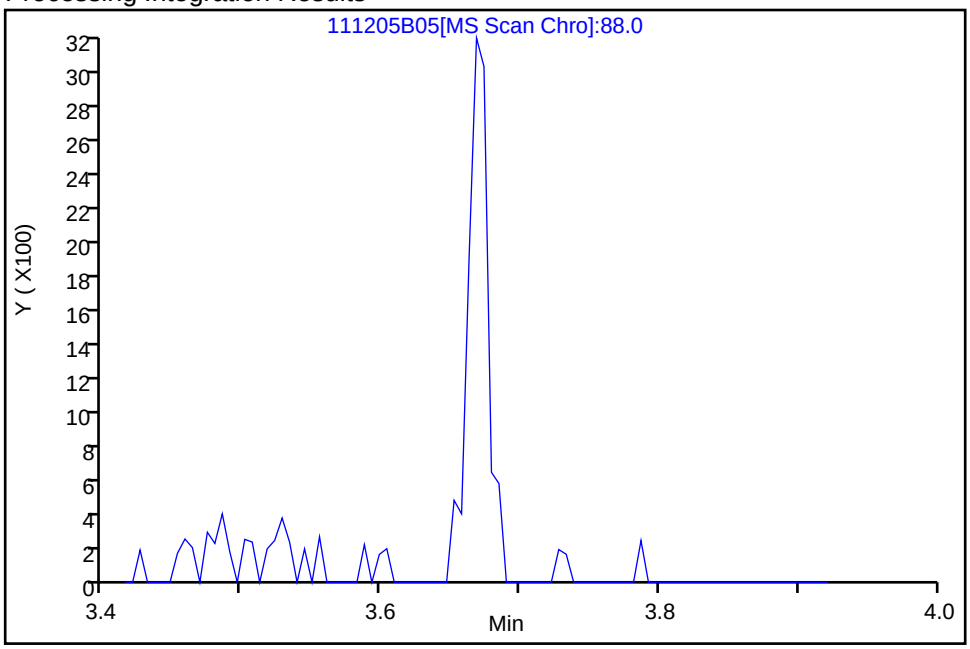
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

193 1,4-Dioxane, CAS: 123-91-1

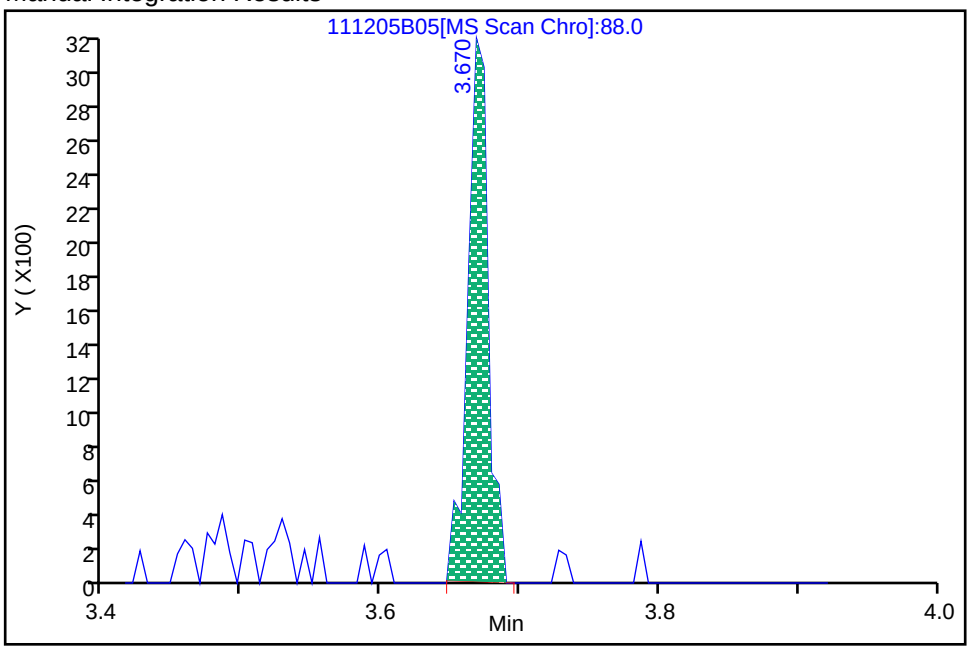
Not Detected
Expected RT: 3.670
RT Window: 3.324-4.015

Processing Integration Results



Manual Integration Results

RT: 3.670
Area: 3169
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

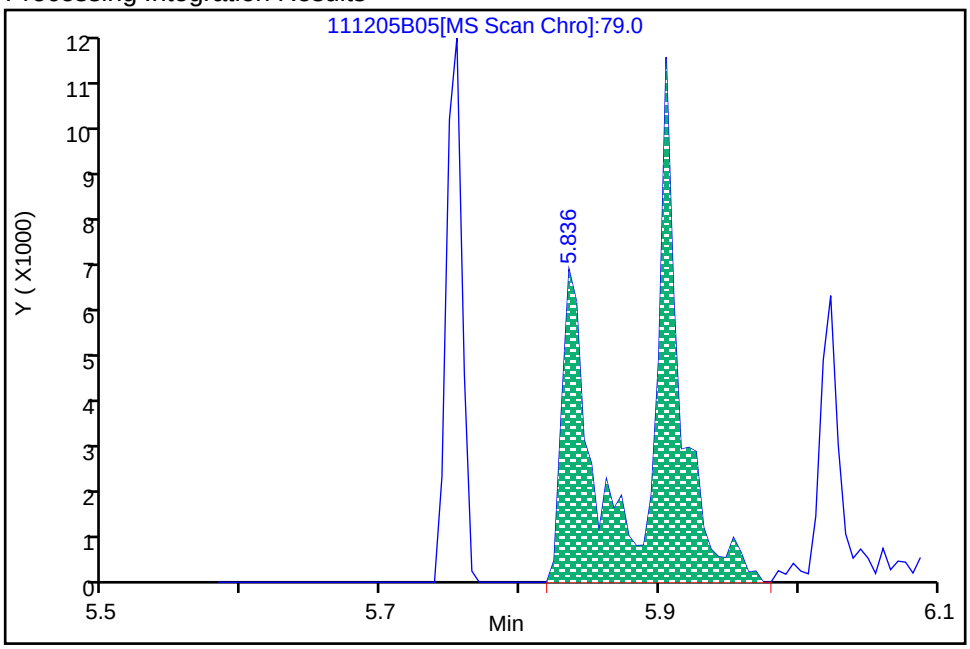
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

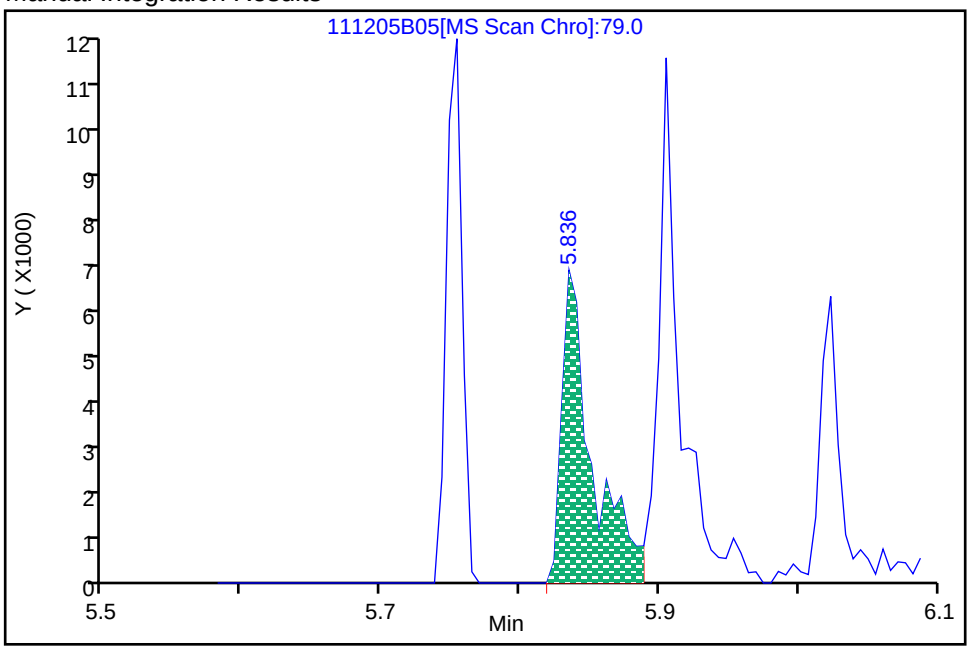
Processing Integration Results

RT: 5.836
Area: 22560
Amount: 1.9243
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 10333
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

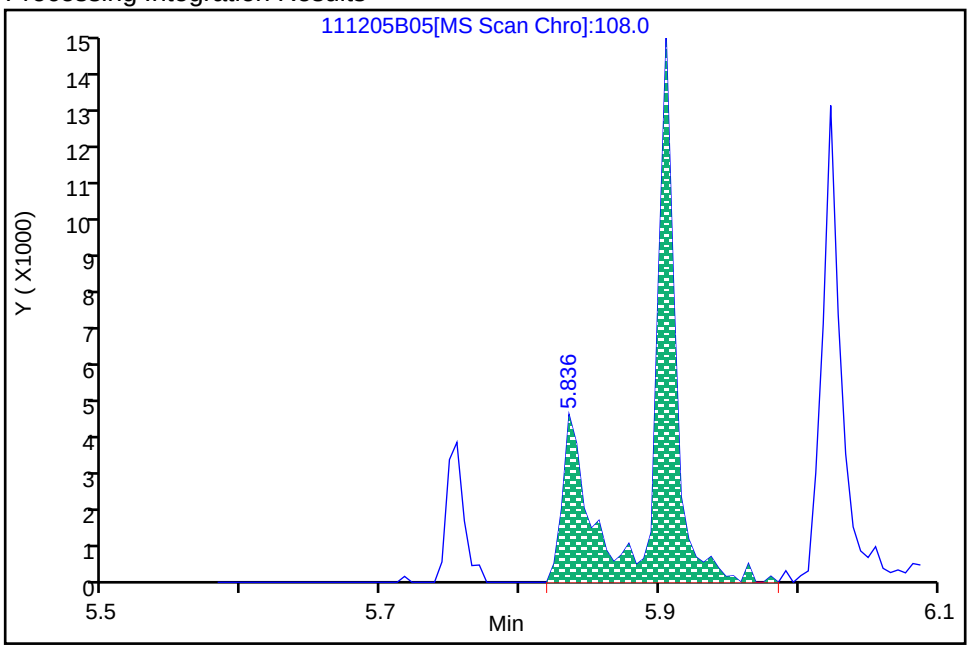
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

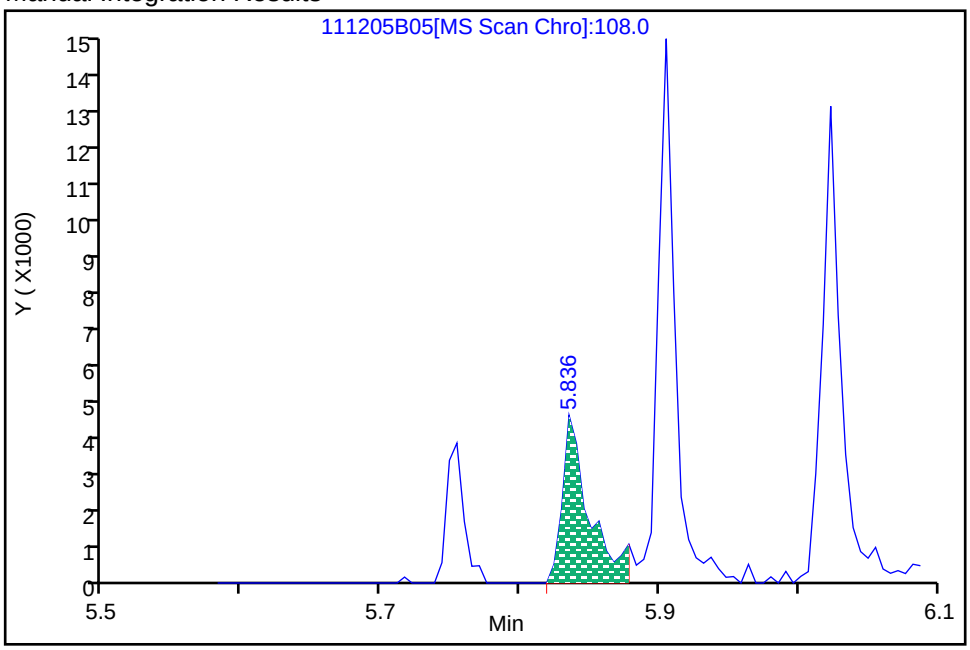
Processing Integration Results

RT: 5.836
Area: 19037
Amount: 1.9243
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 6128
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

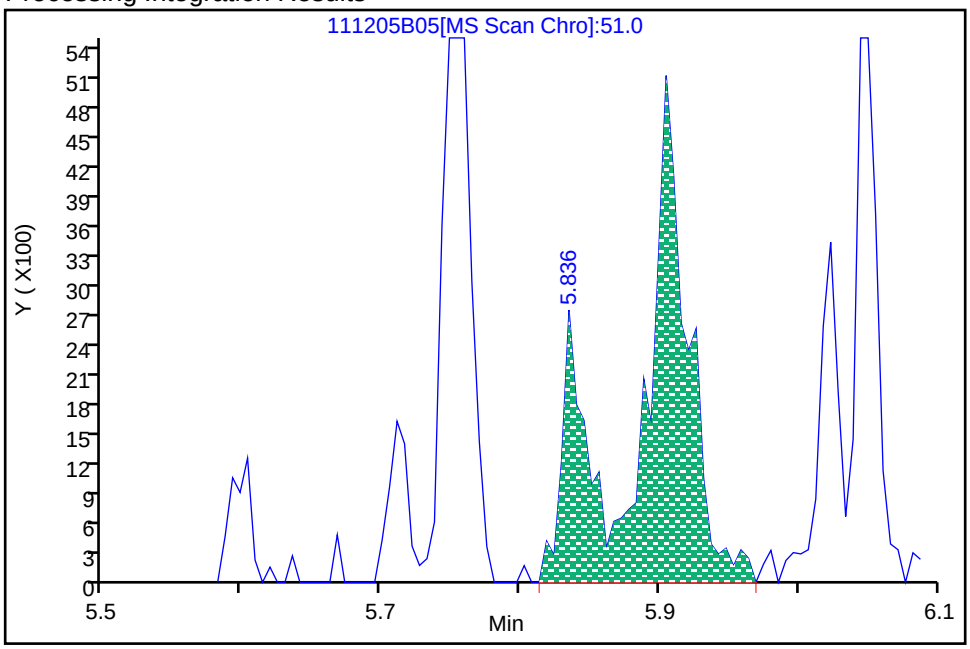
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

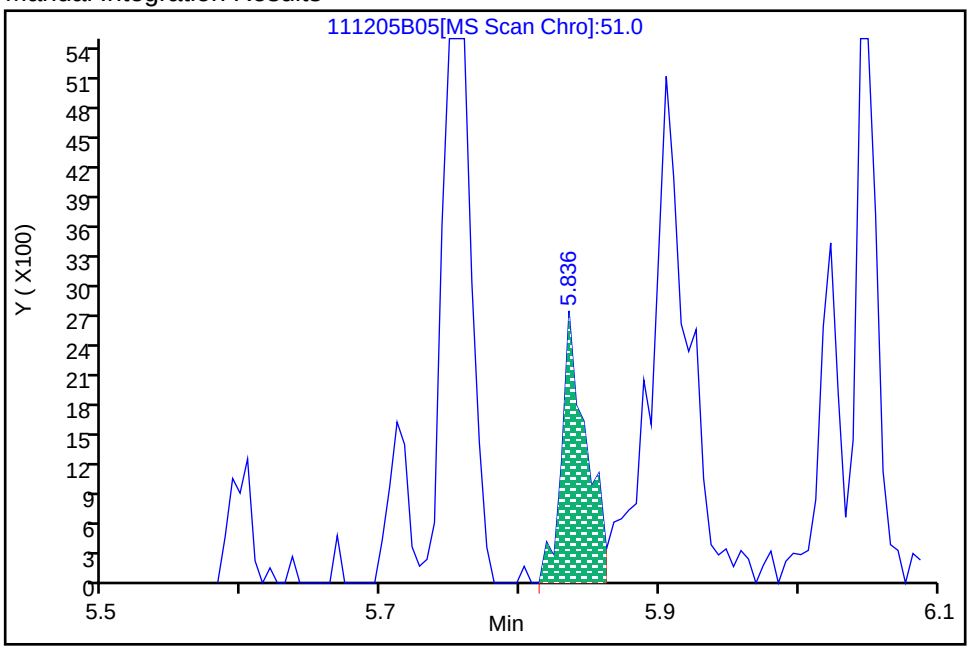
Processing Integration Results

RT: 5.836
Area: 12626
Amount: 1.9243
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 3334
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Split Peak

Shealy Environmental Services

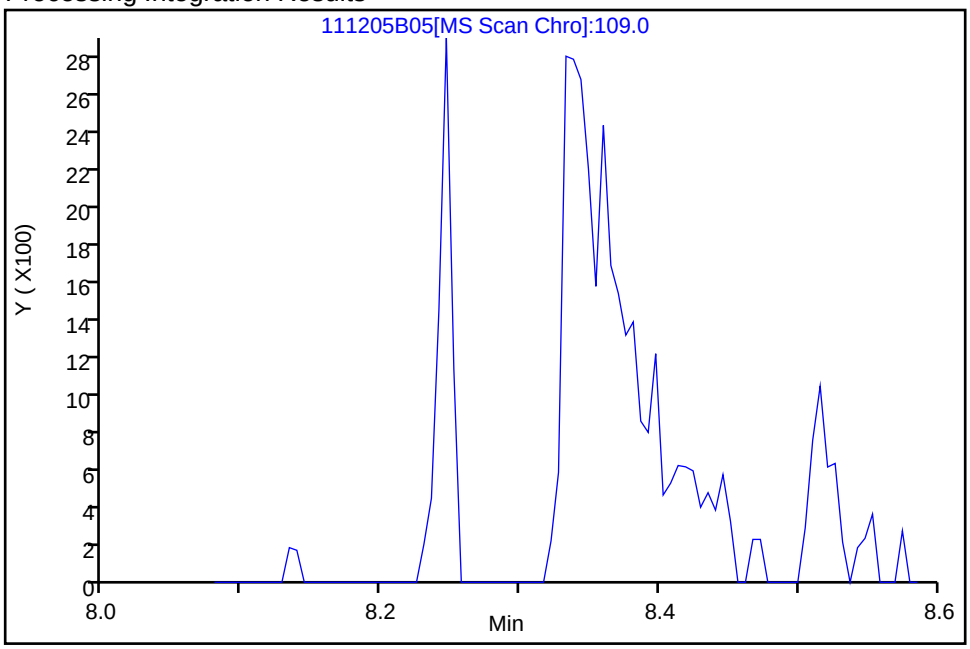
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

70 4-Nitrophenol, CAS: 100-02-7

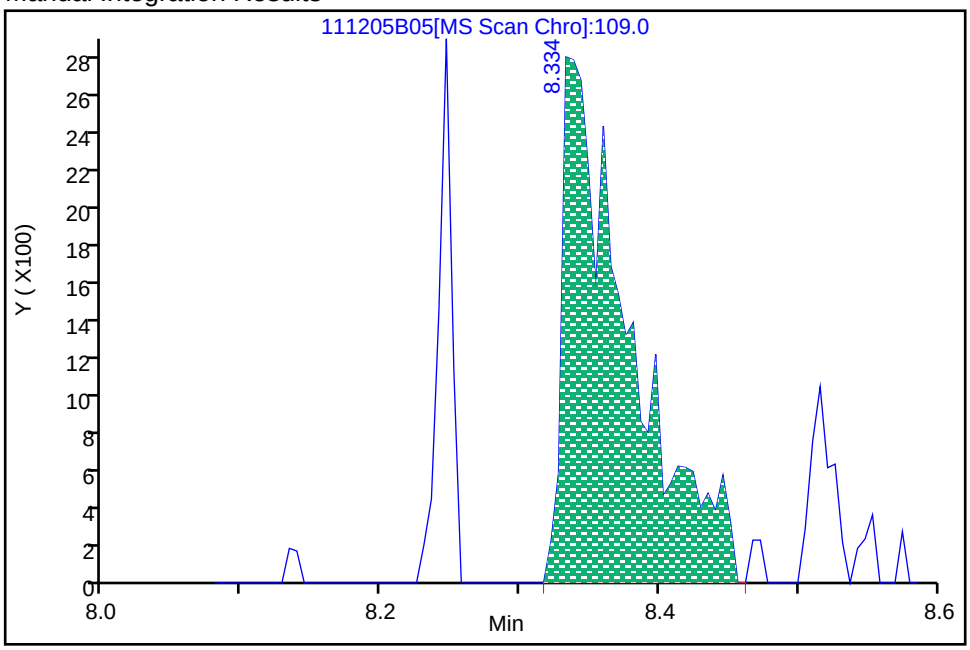
Not Detected
Expected RT: 8.334
RT Window: 7.839-8.829

Processing Integration Results



Manual Integration Results

RT: 8.334
Area: 9141
Amount: 2.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

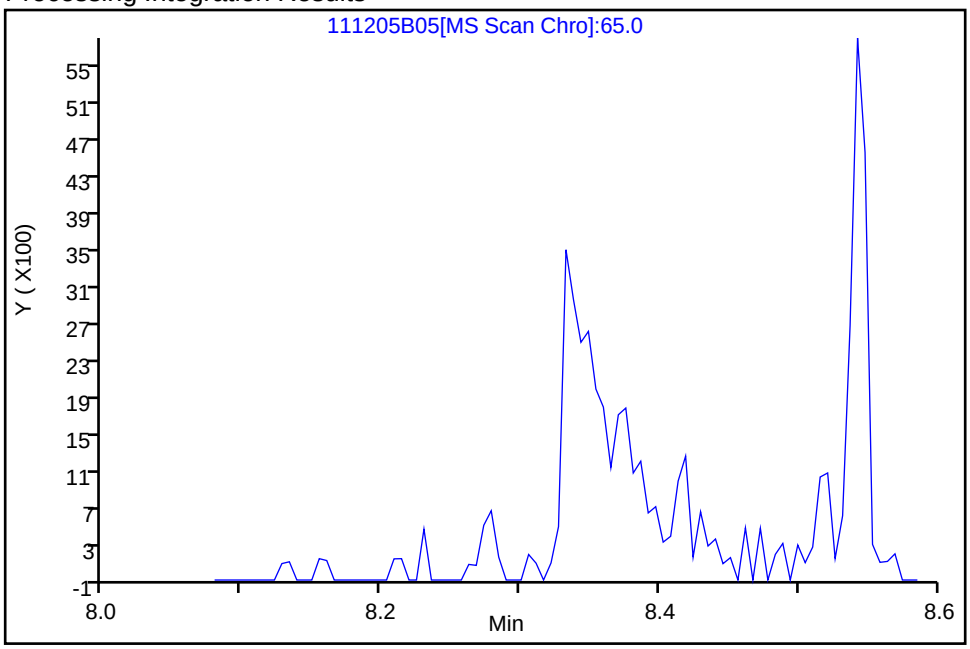
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

70 4-Nitrophenol, CAS: 100-02-7

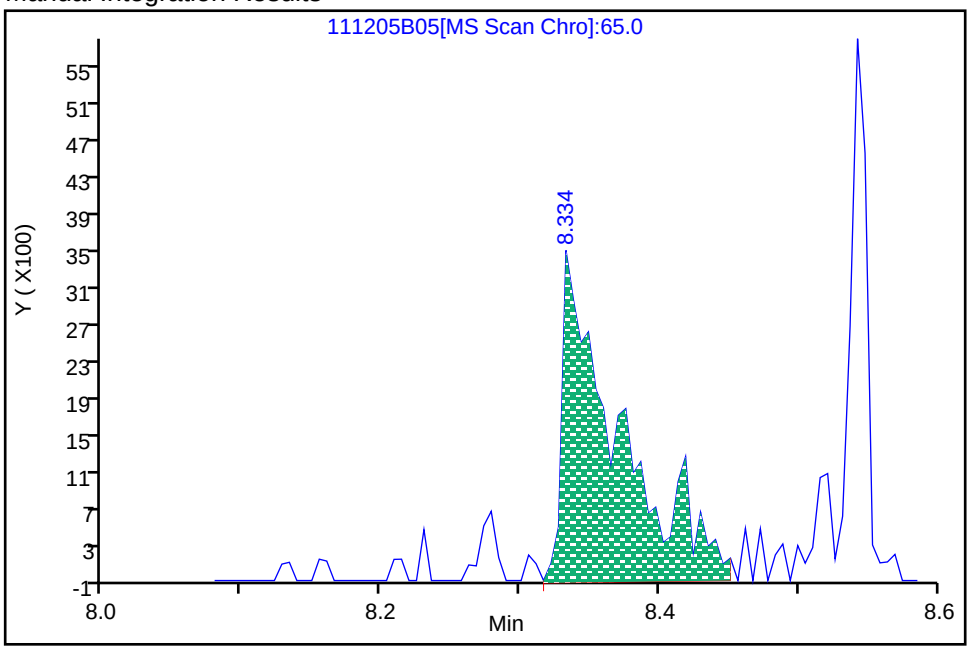
Not Detected
Expected RT: 8.334
RT Window: 7.839-8.829

Processing Integration Results



Manual Integration Results

RT: 8.334
Area: 9810
Amount: 2.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

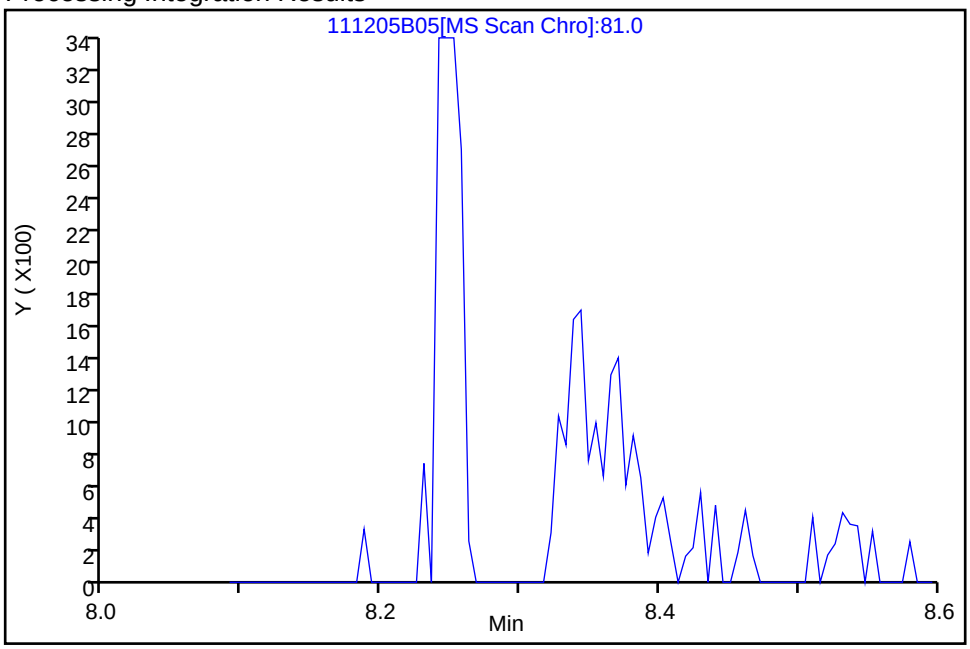
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

70 4-Nitrophenol, CAS: 100-02-7

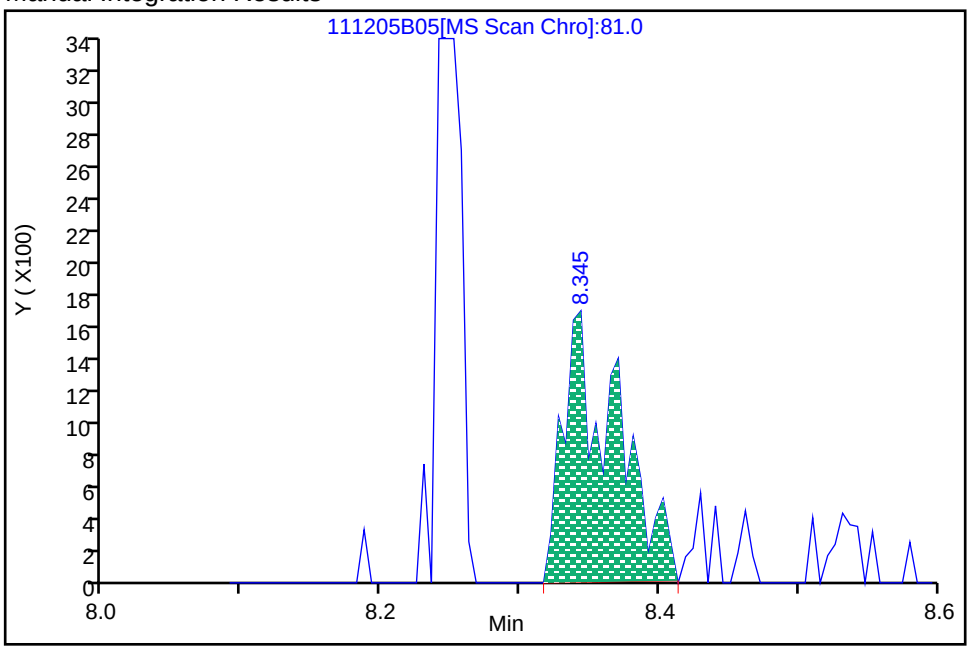
Not Detected
Expected RT: 8.345
RT Window: 7.850-8.840

Processing Integration Results



Manual Integration Results

RT: 8.345
Area: 4442
Amount: 2.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

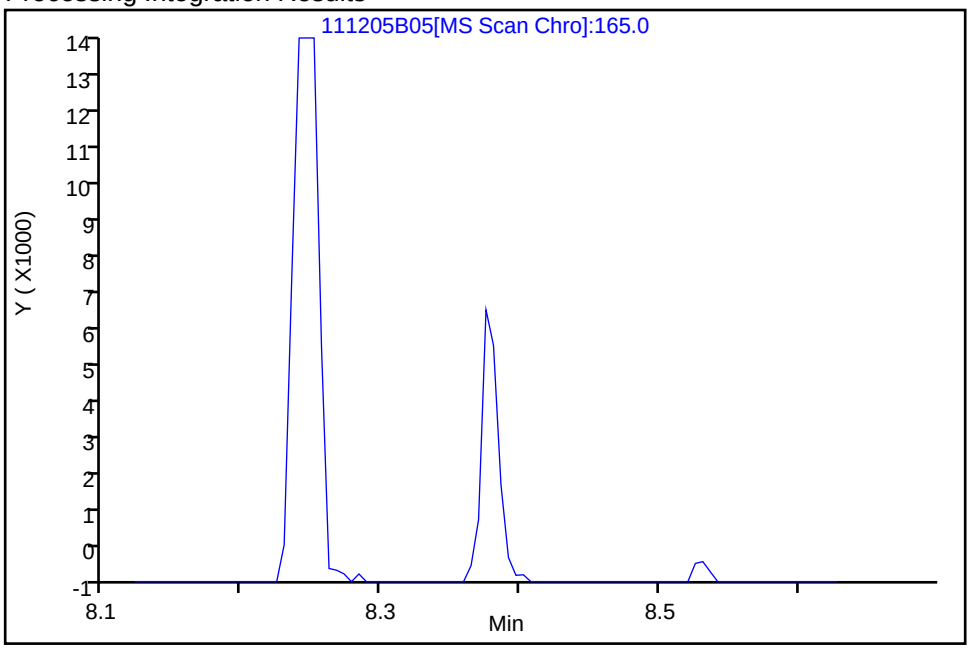
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

73 2,4-Dinitrotoluene, CAS: 121-14-2

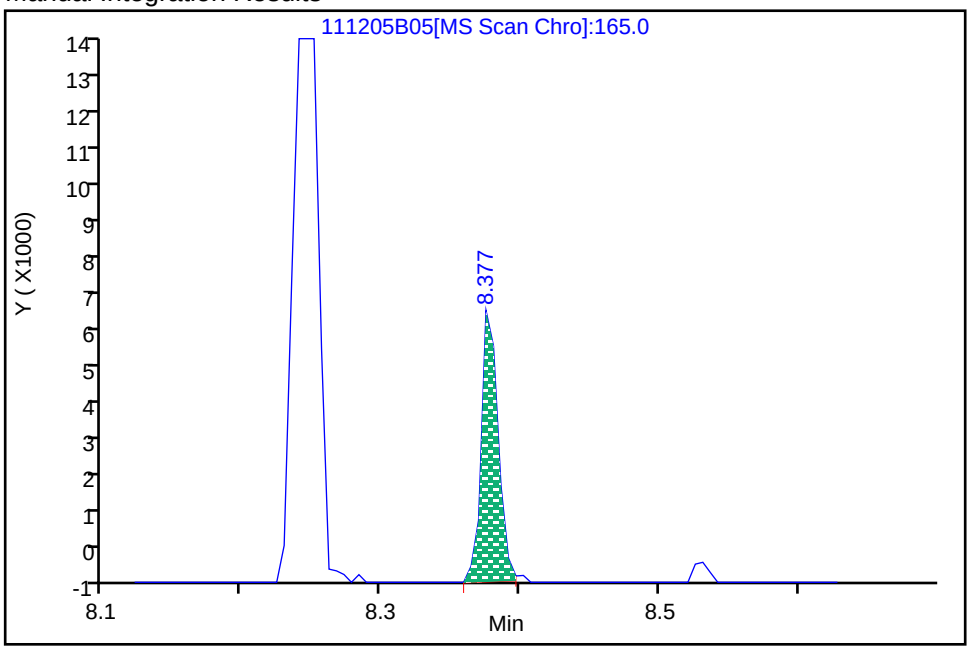
Not Detected
Expected RT: 8.377
RT Window: 7.882-8.872

Processing Integration Results



Manual Integration Results

RT: 8.377
Area: 5772
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:52:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 13:53:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

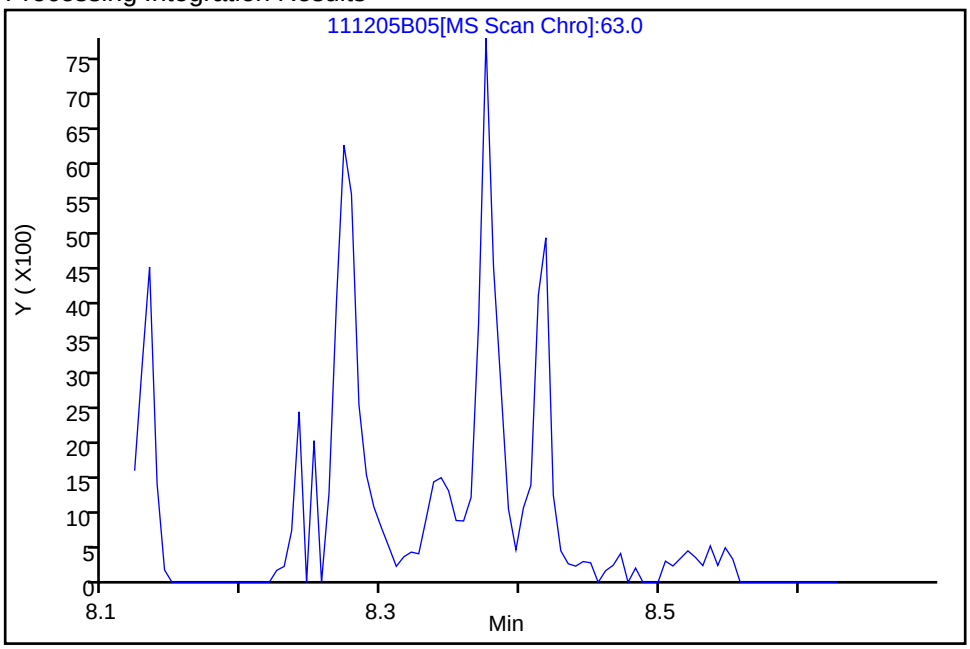
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B05.d		
Injection Date:	05-Dec-2019 13:18:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4158
Sample Info:	11120519B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

73 2,4-Dinitrotoluene, CAS: 121-14-2

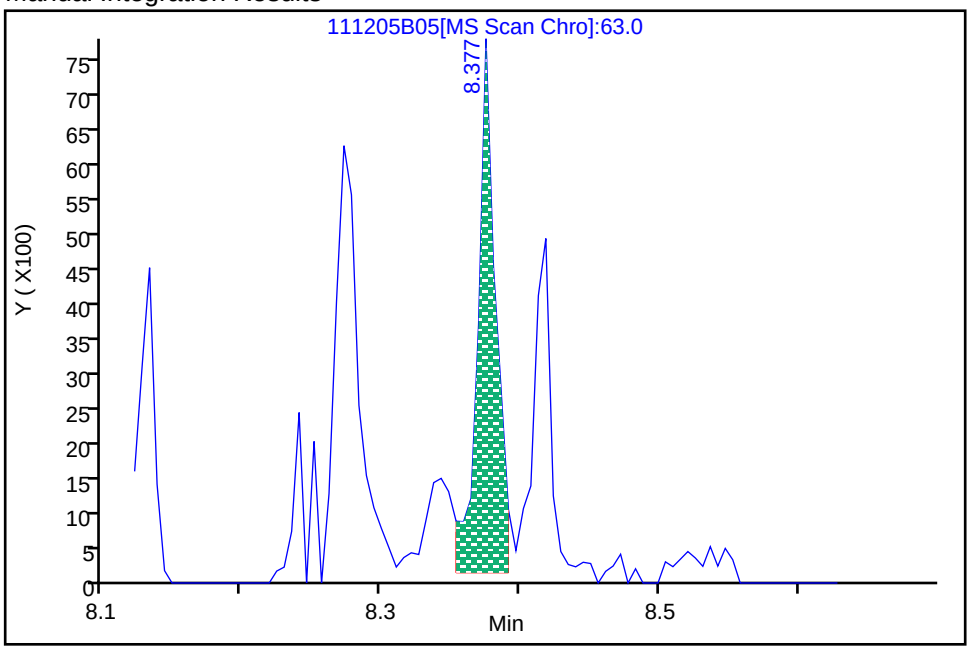
Not Detected
Expected RT: 8.377
RT Window: 7.882-8.872

Processing Integration Results



Manual Integration Results

RT: 8.377
Area: 6938
Amount: 1.0000
Amount Units: ng



Data Editor: scd, 05-Dec-2019 13:53:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d
Lab Sample ID: SVMS 4159 Client Sample ID:
Injection Date: 05-Dec-2019 13:43:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4159
Misc. Info: 1STD002
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 14:51:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 14:08:30 Calib File: 111205B07.d
Sample Type: Ical, Level: 3 ALS Bottle: 3
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 14:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.675	3.675	0.000	4750	2.0000	2.0885	
2 N-Nitrosodimethylamine	42.0	3.873	3.873	0.000	21602	2.0000	1.8735	
1 pyridine	79.0	3.932	3.932	0.000	11240	2.0000	2.1824	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	29121	2.0000	2.2173	
$ 9 Phenol-d5	99.0	5.430	5.430	0.000	33280	2.0000	2.0732	
10 Phenol	94.0	5.440	5.440	0.000	38518	2.0000	2.1500	
11 Aniline	66.0	5.499	5.499	0.000	8858	2.0000	2.3213	
12 bis(2-Chloroethyl)ether	63.0	5.510	5.510	0.000	21018	2.0000	2.1164	
201 n-Decane	57.0	5.574	5.574	0.000	13879	2.0000	2.0003	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	30047	2.0000	2.0626	
14 1,3-Dichlorobenzene	146.0	5.713	5.713	0.000	25850	2.0000	1.9827	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	198672	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.766	5.766	0.000	29592	2.0000	2.0751	
18 Benzyl alcohol	79.0	5.836	5.836	0.000	24652	2.0000	2.1900	M
20 o-Cresol	108.0	5.906	5.906	0.000	25070	2.0000	2.0077	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	25504	2.0000	1.9701	
21 bis(2Chloro1methylethyl)ether	45.0	5.922	5.922	0.000	18040	2.0000	2.1558	
23 m+p-Cresol	107.0	6.023	6.023	0.000	29691	2.0000	2.1086	
26 n-Nitroso-di-n-propylamine	70.0	6.029	6.029	0.000	23315	2.0000	2.0523	M
24 Acetophenone	105.0	6.050	6.050	0.000	40884	2.0000	2.0225	
28 Hexachloroethane	117.0	6.162	6.162	0.000	11208	2.0000	1.8555	
$ 29 Nitrobenzene-d5	82.0	6.184	6.184	0.000	35091	2.0000	2.1234	
30 Nitrobenzene	77.0	6.200	6.200	0.000	34811	2.0000	1.9218	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.376	6.376	0.000	53754	2.0000	2.1005	
34 2,4-Dimethylphenol	107.0	6.451	6.451	0.000	21644	2.0000	1.8724	
33 2-Nitrophenol	139.0	6.451	6.451	0.000	12356	2.0000	1.9877	
36 Benzoic acid	105.0	6.499	6.499	0.000	26873	4.0000	4.2664	
35 bis(2-Chloroethoxy)methane	93.0	6.521	6.521	0.000	31643	2.0000	2.0194	
38 2,4-Dichlorophenol	162.0	6.654	6.654	0.000	18512	2.0000	2.0432	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	20551	2.0000	1.9145	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	922523	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	80427	2.0000	1.9090	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	19620	2.0000	2.0619	
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	14384	2.0000	2.0816	
49 4-Chloro-3-methylphenol	107.0	7.200	7.200	0.000	25711	2.0000	1.9981	
51 2-Methylnaphthalene	142.0	7.360	7.360	0.000	52810	2.0000	1.9904	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	50304	2.0000	2.0389	
53 Hexachlorocyclopentadiene	237.0	7.483	7.483	0.000	62452	10.000	10.844	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.499	7.499	0.000	19580	2.0000	2.0566	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	12856	2.0000	2.0543	
55 2,4,5-Trichlorophenol	196.0	7.639	7.639	0.000	12258	2.0000	2.2094	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	52209	2.0000	1.9121	
184 Biphenyl	154.0	7.740	7.740	0.000	57556	2.0000	2.0815	
58 2-Chloronaphthalene	162.0	7.778	7.778	0.000	43067	2.0000	2.0131	
62 Dimethylphthalate	163.0	7.965	7.965	0.000	51388	2.0000	2.0613	
65 2,6-Dinitrotoluene	165.0	8.029	8.029	0.000	10359	2.0000	1.9614	
64 Acenaphthylene	152.0	8.131	8.131	0.000	63132	2.0000	2.0066	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	456683	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.280	8.280	0.000	7660	4.0000	4.2623	
68 Acenaphthene	153.0	8.275	8.275	0.000	44687	2.0000	2.0212	
70 4-Nitrophenol	109.0	8.328	8.328	0.000	16935	4.0000	3.8401	
73 2,4-Dinitrotoluene	165.0	8.377	8.377	0.000	12320	2.0000	2.0616	
71 Dibenzofuran	168.0	8.419	8.419	0.000	57452	2.0000	1.9732	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	7999	2.0000	1.9039	
78 Diethylphthalate	149.0	8.542	8.542	0.000	50217	2.0000	1.9023	
80 4-Chlorophenylphenylether	204.0	8.676	8.676	0.000	20877	2.0000	1.9505	
79 Fluorene	166.0	8.708	8.708	0.000	47410	2.0000	1.9718	
84 4,6-Dinitro-2-methylphenol	198.0	8.730	8.730	0.000	5546	2.0000	2.2192	
86 n-Nitrosodiphenylamine	169.0	8.772	8.772	0.000	30291	2.0000	1.8623	
87 Azobenzene	77.0	8.815	8.815	0.000	73439	2.0000	1.9853	
$ 88 2,4,6-Tribromophenol	330.0	8.911	8.911	0.000	2575	2.0000	1.7033	
94 4-Bromophenylphenylether	248.0	9.093	9.093	0.000	9812	2.0000	2.0615	
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	9238	2.0000	1.9701	
202 Octadecane	57.0	9.297	9.297	0.000	24109	2.0000	2.0382	
99 Pentachlorophenol	266.0	9.339	9.339	0.000	8644	4.0000	4.1676	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	692039	20.000	20.000	
103 Phenanthrene	178.0	9.527	9.527	0.000	59838	2.0000	1.8515	
104 Anthracene	178.0	9.575	9.575	0.000	56832	2.0000	2.0342	
106 Carbazole	167.0	9.698	9.698	0.000	49495	2.0000	1.9532	
109 Di-n-butylphthalate	149.0	9.906	9.906	0.000	74544	2.0000	2.0626	
114 Fluoranthene	202.0	10.591	10.591	0.000	56116	2.0000	1.8876	
116 Pyrene	202.0	10.832	10.832	0.000	59515	2.0000	1.9658	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	41868	2.0000	1.9596	
122 Butylbenzylphthalate	149.0	11.425	11.425	0.000	30720	2.0000	2.1837	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.121	12.121	0.000	39829	2.0000	2.1571	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	56982	2.0000	1.7120	
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	556364	20.000	20.000	
129 Chrysene	228.0	12.303	12.303	0.000	53030	2.0000	1.9121	
131 Di-n-octylphthalate	149.0	13.057	13.057	0.000	69702	2.0000	2.1769	
132 Benzo(b)fluoranthene	252.0	13.827	13.827	0.000	49025	2.0000	1.9597	
134 Benzo(k)fluoranthene	252.0	13.864	13.864	0.000	51930	2.0000	1.8427	
135 Benzo(a)pyrene	252.0	14.335	14.335	0.000	46418	2.0000	1.9034	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	560142	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.325	16.325	0.000	67062	2.0000	1.9293	
139 Dibenzo(a,h)anthracene	278.0	16.341	16.341	0.000	56700	2.0000	1.8999	
140 Benzo(g,h,i)perylene	276.0	16.897	16.897	0.000	55888	2.0000	1.9338	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

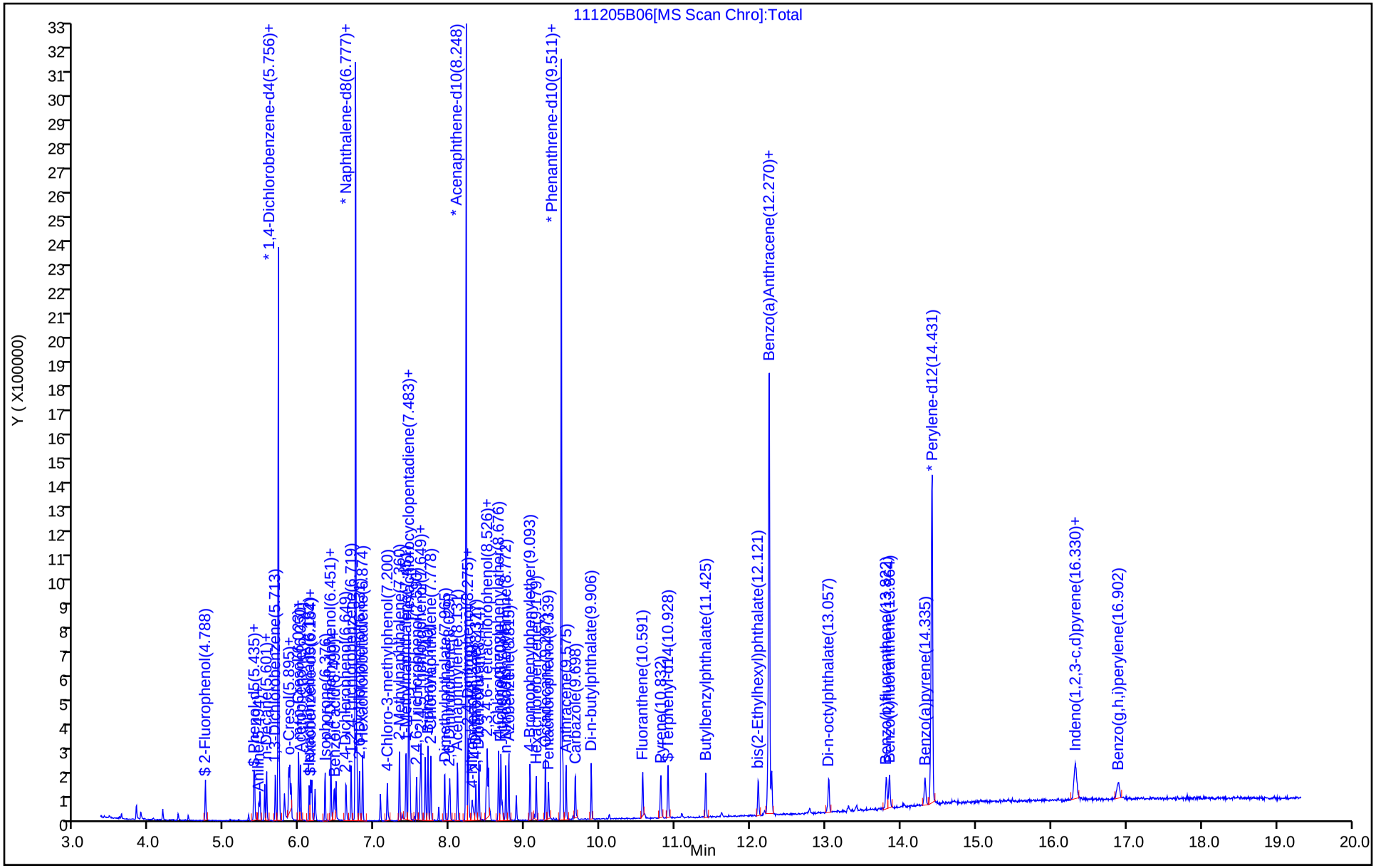
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d				
Injection Date:	05-Dec-2019 13:43:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4159		
Sample Info:	11120519B.b, SVMS 4159				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

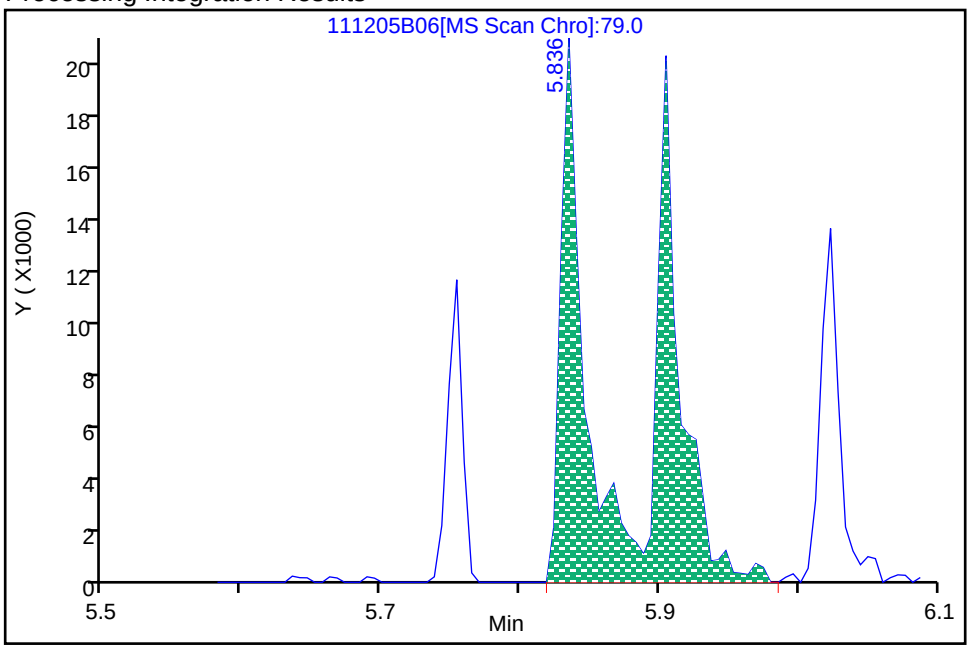
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d		
Injection Date:	05-Dec-2019 13:43:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4159
Sample Info:	11120519B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

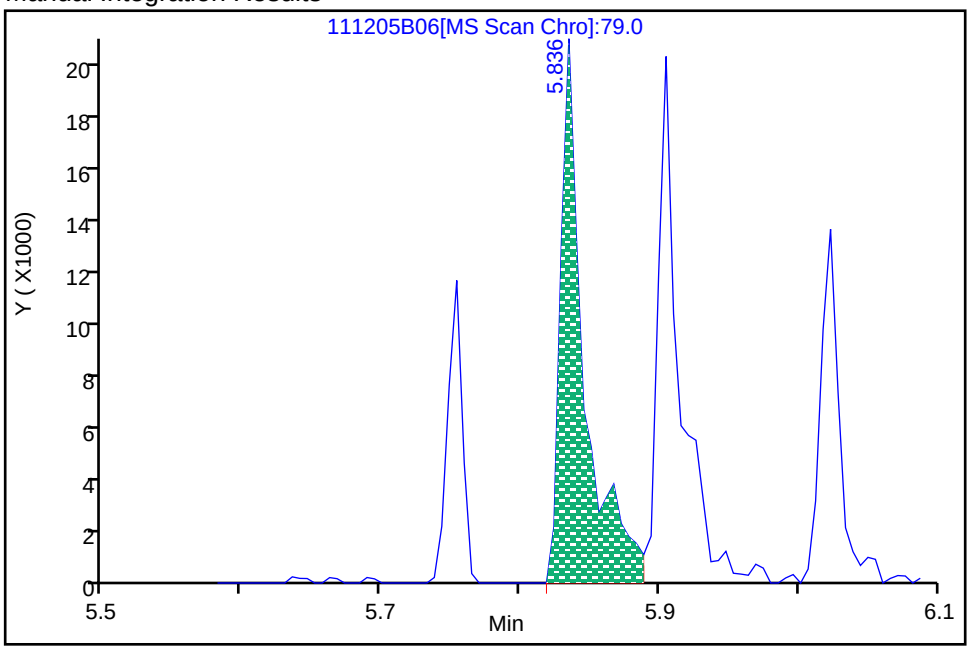
Processing Integration Results

RT: 5.836
Area: 46754
Amount: 4.5897
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 24652
Amount: 2.1900
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:49:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

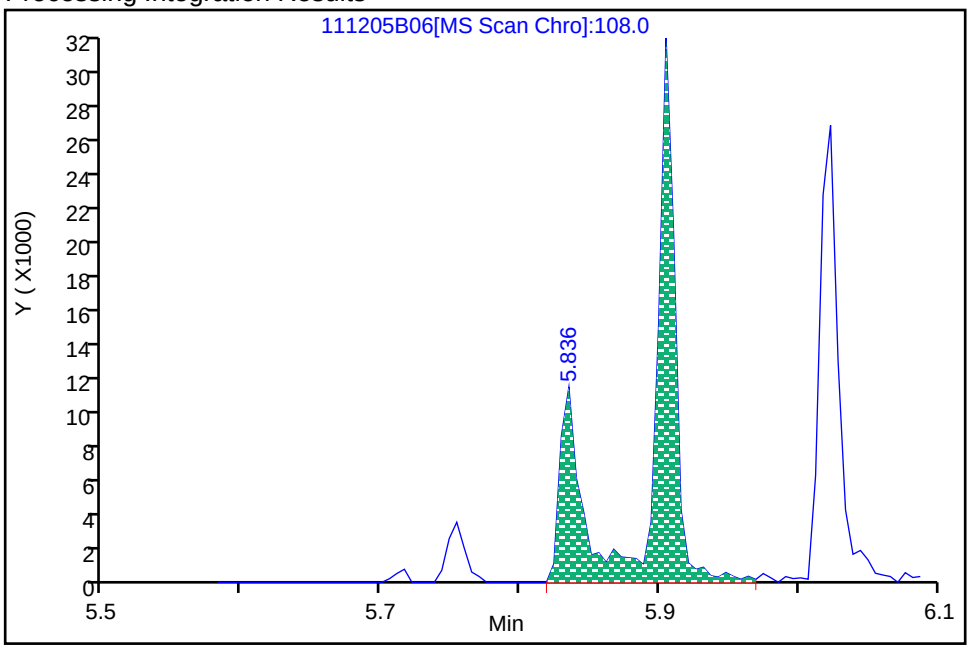
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d		
Injection Date:	05-Dec-2019 13:43:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4159
Sample Info:	11120519B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

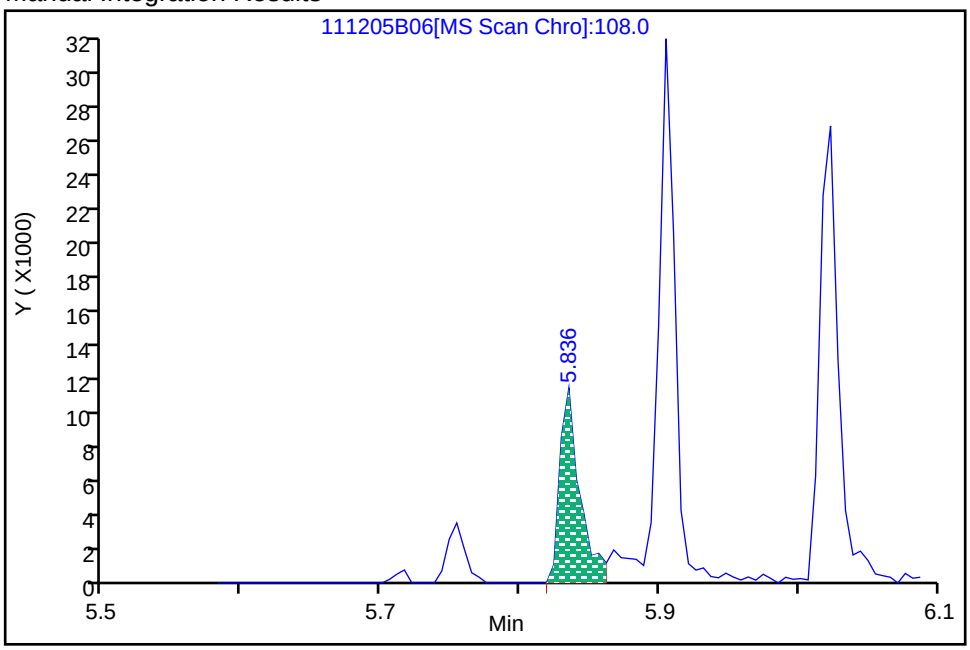
Processing Integration Results

RT: 5.836
Area: 39155
Amount: 4.5897
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 11361
Amount: 2.1900
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:49:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

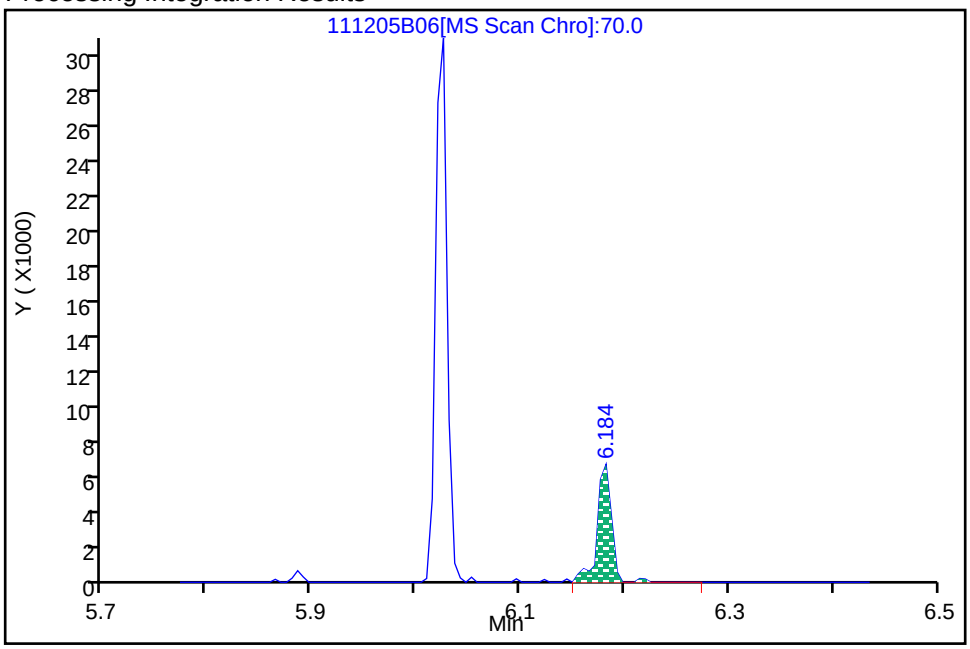
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d		
Injection Date:	05-Dec-2019 13:43:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4159
Sample Info:	11120519B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

26 n-Nitroso-di-n-propylamine, CAS: 621-64-7

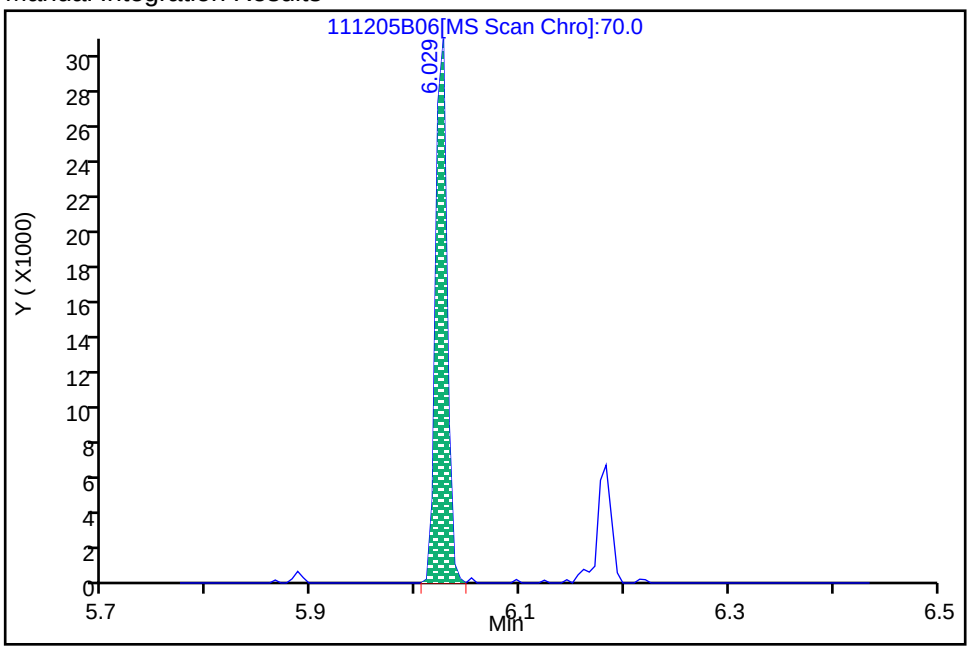
Processing Integration Results

RT: 6.184
Area: 6307
Amount: 0.57009
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.029
Area: 23315
Amount: 2.0523
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:49:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

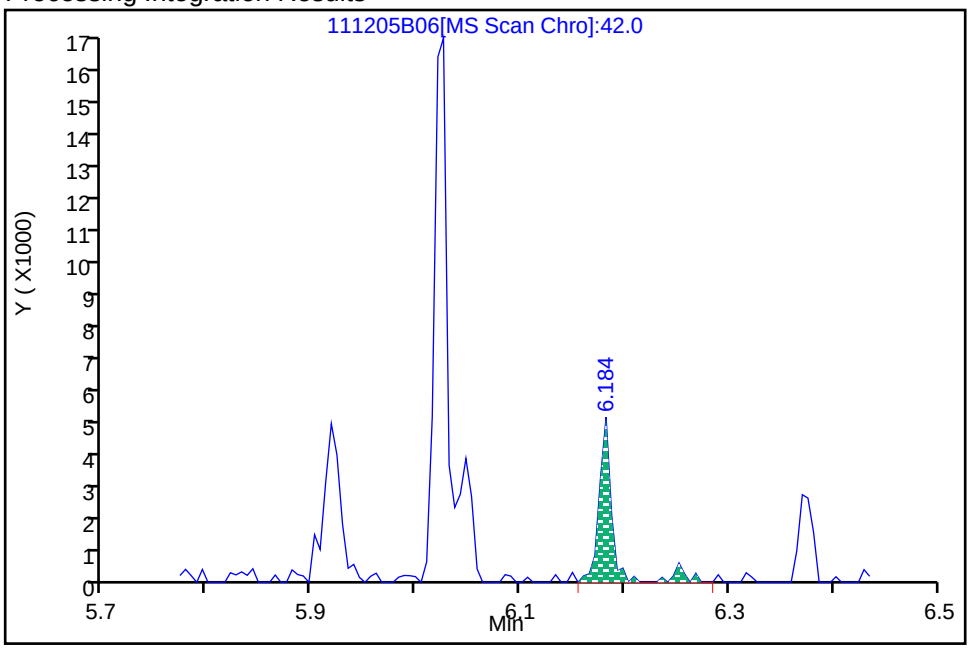
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d		
Injection Date:	05-Dec-2019 13:43:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4159
Sample Info:	11120519B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

26 n-Nitroso-di-n-propylamine, CAS: 621-64-7

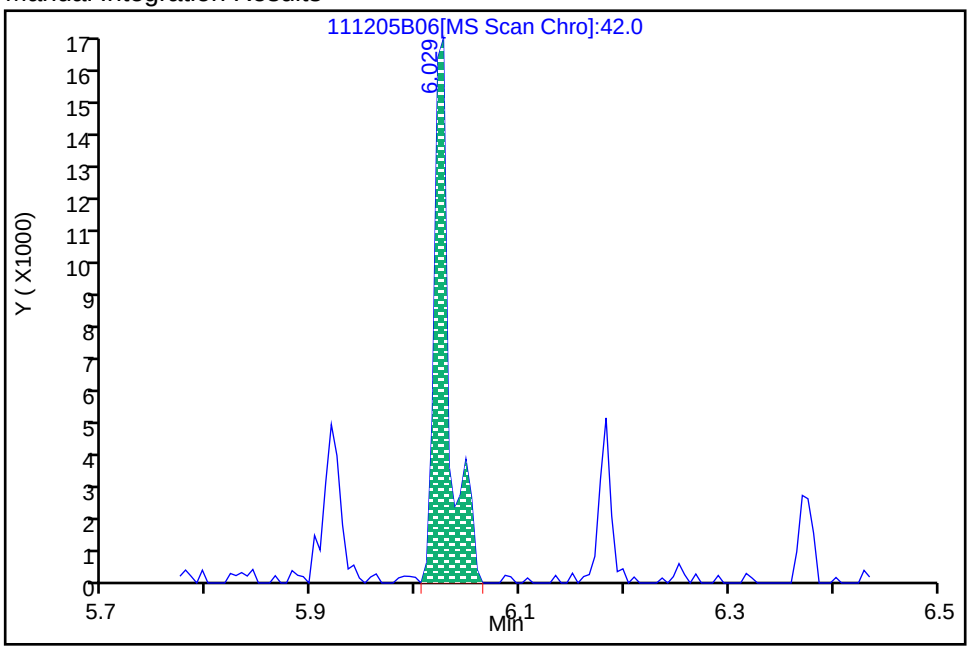
Processing Integration Results

RT: 6.184
Area: 4503
Amount: 0.57009
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.029
Area: 17308
Amount: 2.0523
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:49:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

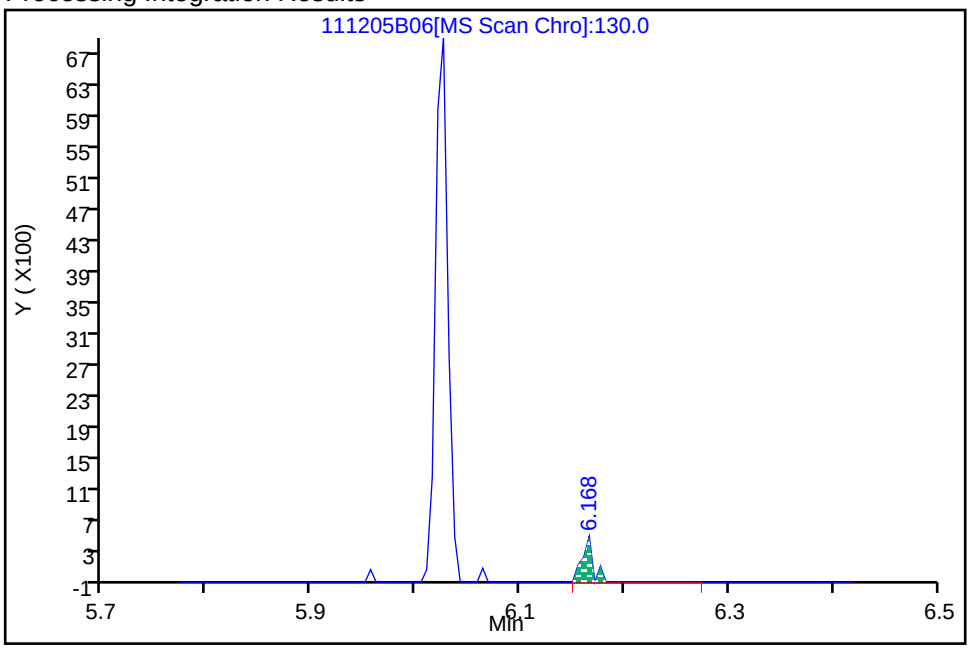
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B06.d		
Injection Date:	05-Dec-2019 13:43:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4159
Sample Info:	11120519B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

26 n-Nitroso-di-n-propylamine, CAS: 621-64-7

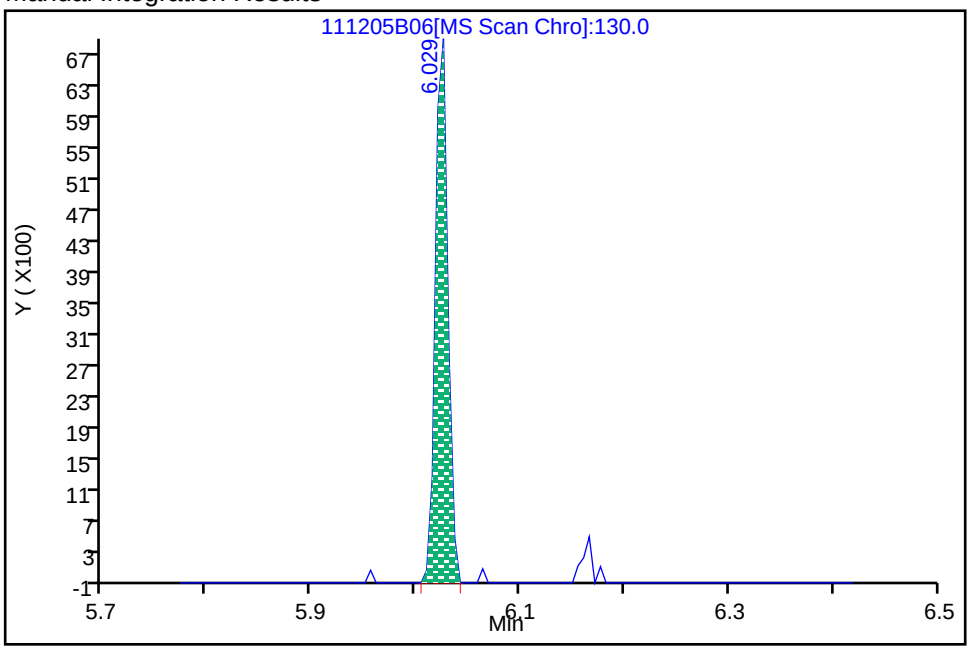
Processing Integration Results

RT: 6.168
Area: 422
Amount: 0.57009
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.029
Area: 5692
Amount: 2.0523
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:49:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B07.d
Lab Sample ID: SVMS 4167 Client Sample ID:
Injection Date: 05-Dec-2019 14:08:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4167
Misc. Info: 1STD005
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 14:51:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 14:08:30 Calib File: 111205B07.d
Sample Type: Ical, Level: 4 ALS Bottle: 4
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 14:50:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.670	3.670	0.000	10389	5.0000	4.4602	
2 N-Nitrosodimethylamine	42.0	3.868	3.868	0.000	64121	5.0000	5.1002	
1 pyridine	79.0	3.921	3.921	0.000	33406	5.0000	5.6302	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	75151	5.0000	5.2225	
$ 9 Phenol-d5	99.0	5.429	5.429	0.000	84638	5.0000	4.9131	
10 Phenol	94.0	5.440	5.440	0.000	97099	5.0000	5.0140	
11 Aniline	66.0	5.494	5.494	0.000	18820	5.0000	4.7042	
12 bis(2-Chloroethyl)ether	63.0	5.515	5.515	0.000	52745	5.0000	4.9467	
201 n-Decane	57.0	5.574	5.574	0.000	37767	5.0000	5.0284	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	72100	5.0000	4.7156	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	66054	5.0000	4.7915	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	214449	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.772	5.772	0.000	72575	5.0000	4.8062	
18 Benzyl alcohol	79.0	5.836	5.836	0.000	62575	5.0000	5.0991	M
20 o-Cresol	108.0	5.906	5.906	0.000	67747	5.0000	5.0175	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	68348	5.0000	4.9269	
21 bis(2Chloro1methylethyl)ether	45.0	5.922	5.922	0.000	41397	5.0000	4.7141	
23 m+p-Cresol	107.0	6.023	6.023	0.000	72939	5.0000	4.8641	
26 n-Nitroso-di-n-propylamine	70.0	6.029	6.029	0.000	61676	5.0000	5.0197	
24 Acetophenone	105.0	6.050	6.050	0.000	101035	5.0000	4.7474	
28 Hexachloroethane	117.0	6.162	6.162	0.000	34952	5.0000	5.2347	
$ 29 Nitrobenzene-d5	82.0	6.184	6.184	0.000	90690	5.0000	5.5236	
30 Nitrobenzene	77.0	6.200	6.200	0.000	95343	5.0000	5.3161	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.376	6.376	0.000	135097	5.0000	5.3262	
34 2,4-Dimethylphenol	107.0	6.451	6.451	0.000	54235	5.0000	4.9284	
33 2-Nitrophenol	139.0	6.456	6.456	0.000	36847	5.0000	5.7305	
36 Benzoic acid	105.0	6.510	6.510	0.000	85692	10.000	12.450	
35 bis(2-Chloroethoxy)methane	93.0	6.521	6.521	0.000	77382	5.0000	5.0993	
38 2,4-Dichlorophenol	162.0	6.649	6.649	0.000	49589	5.0000	5.4508	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	52025	5.0000	5.0364	
* 41 Naphthalene-d8	136.0	6.783	6.783	0.000	884534	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	203669	5.0000	5.0313	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	46191	5.0000	5.0416	
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	35796	5.0000	5.2614	
49 4-Chloro-3-methylphenol	107.0	7.200	7.200	0.000	61996	5.0000	5.0166	
51 2-Methylnaphthalene	142.0	7.360	7.360	0.000	128039	5.0000	5.0247	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	119979	5.0000	5.0536	
53 Hexachlorocyclopentadiene	237.0	7.489	7.489	0.000	201103	25.000	31.450	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.499	7.499	0.000	48811	5.0000	5.1972	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	33797	5.0000	5.3752	
55 2,4,5-Trichlorophenol	196.0	7.633	7.633	0.000	34007	5.0000	5.8192	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	131061	5.0000	4.9727	
184 Biphenyl	154.0	7.740	7.740	0.000	139909	5.0000	5.1524	
58 2-Chloronaphthalene	162.0	7.778	7.778	0.000	104588	5.0000	5.0368	
62 Dimethylphthalate	163.0	7.965	7.965	0.000	128762	5.0000	5.2222	
65 2,6-Dinitrotoluene	165.0	8.034	8.034	0.000	26495	5.0000	5.1235	
64 Acenaphthylene	152.0	8.136	8.136	0.000	159129	5.0000	5.1707	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	441631	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.275	8.275	0.000	26154	10.000	12.881	
68 Acenaphthene	153.0	8.275	8.275	0.000	115578	5.0000	5.2983	
70 4-Nitrophenol	109.0	8.318	8.318	0.000	50634	10.000	11.175	
73 2,4-Dinitrotoluene	165.0	8.377	8.377	0.000	34626	5.0000	5.6201	
71 Dibenzofuran	168.0	8.419	8.419	0.000	142256	5.0000	5.0391	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	22548	5.0000	5.3536	
78 Diethylphthalate	149.0	8.542	8.542	0.000	140229	5.0000	5.3184	
80 4-Chlorophenylphenylether	204.0	8.681	8.681	0.000	52961	5.0000	5.0773	
79 Fluorene	166.0	8.708	8.708	0.000	121226	5.0000	5.1586	
84 4,6-Dinitro-2-methylphenol	198.0	8.724	8.724	0.000	14913	5.0000	5.6817	
86 n-Nitrosodiphenylamine	169.0	8.772	8.772	0.000	83629	5.0000	5.1661	
87 Azobenzene	77.0	8.815	8.815	0.000	198082	5.0000	5.3048	
$ 88 2,4,6-Tribromophenol	330.0	8.911	8.911	0.000	9959	5.0000	6.0348	
94 4-Bromophenylphenylether	248.0	9.099	9.099	0.000	26974	5.0000	5.5007	
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	25584	5.0000	5.3691	
202 Octadecane	57.0	9.297	9.297	0.000	63608	5.0000	5.3192	
99 Pentachlorophenol	266.0	9.339	9.339	0.000	26155	10.000	11.755	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	677284	20.000	20.000	
103 Phenanthrene	178.0	9.532	9.532	0.000	160894	5.0000	5.0648	
104 Anthracene	178.0	9.575	9.575	0.000	147554	5.0000	5.2915	
106 Carbazole	167.0	9.692	9.692	0.000	139085	5.0000	5.3898	
109 Di-n-butylphthalate	149.0	9.906	9.906	0.000	216364	5.0000	5.6931	
114 Fluoranthene	202.0	10.591	10.591	0.000	156883	5.0000	5.2884	
116 Pyrene	202.0	10.832	10.832	0.000	163842	5.0000	5.0554	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	112176	5.0000	4.9417	
122 Butylbenzylphthalate	149.0	11.425	11.425	0.000	86220	5.0000	5.4740	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	118347	5.0000	5.6306	
127 Benzo(a)Anthracene	228.0	12.249	12.249	0.000	156772	5.0000	4.5489	
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	593398	20.000	20.000	
129 Chrysene	228.0	12.302	12.302	0.000	145013	5.0000	4.9265	
131 Di-n-octylphthalate	149.0	13.057	13.057	0.000	207102	5.0000	5.6049	
132 Benzo(b)fluoranthene	252.0	13.821	13.821	0.000	134353	5.0000	4.9650	
134 Benzo(k)fluoranthene	252.0	13.870	13.870	0.000	147628	5.0000	4.8728	
135 Benzo(a)pyrene	252.0	14.340	14.340	0.000	126097	5.0000	4.8249	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	607293	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.335	16.335	0.000	190922	5.0000	5.0494	
139 Dibenzo(a,h)anthracene	278.0	16.335	16.335	0.000	166465	5.0000	5.1079	
140 Benzo(g,h,i)perylene	276.0	16.897	16.897	0.000	150605	5.0000	4.8535	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

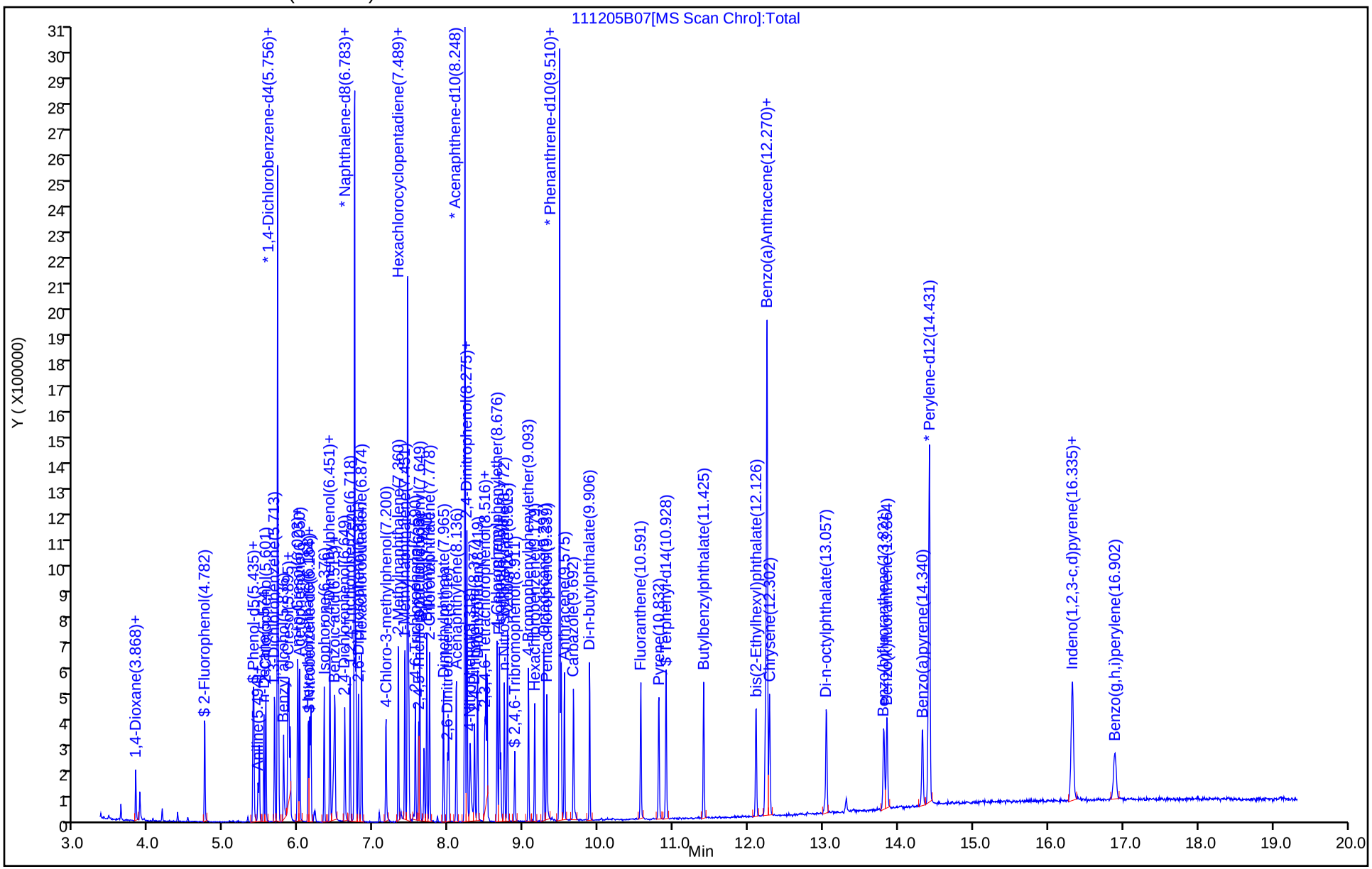
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B07.d				
Injection Date:	05-Dec-2019 14:08:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4167		
Sample Info:	11120519B.b, SVMS 4167				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

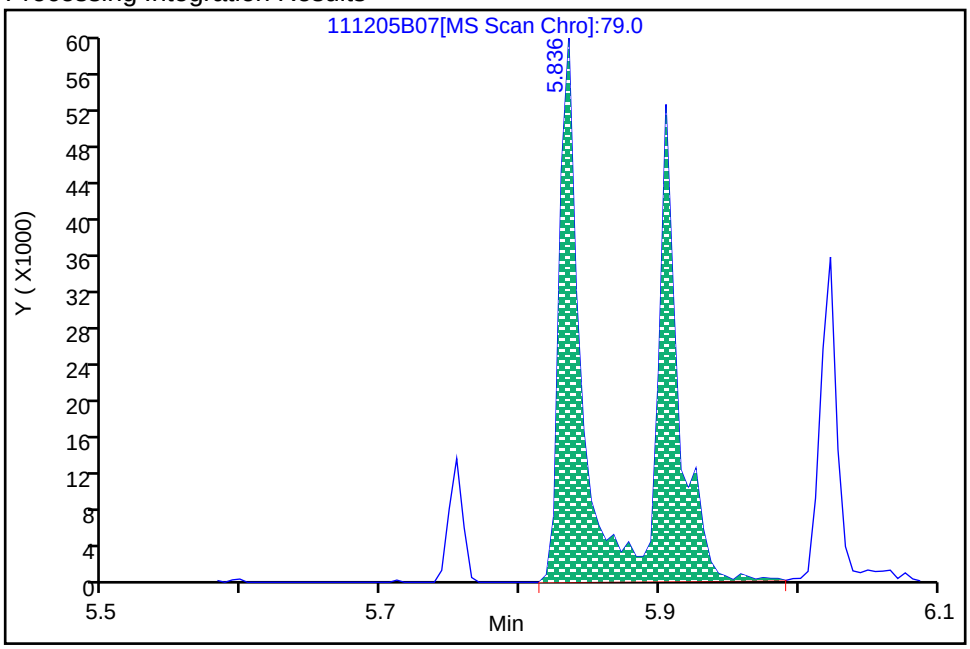
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B07.d		
Injection Date:	05-Dec-2019 14:08:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4167
Sample Info:	11120519B.b, SVMS 4167		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

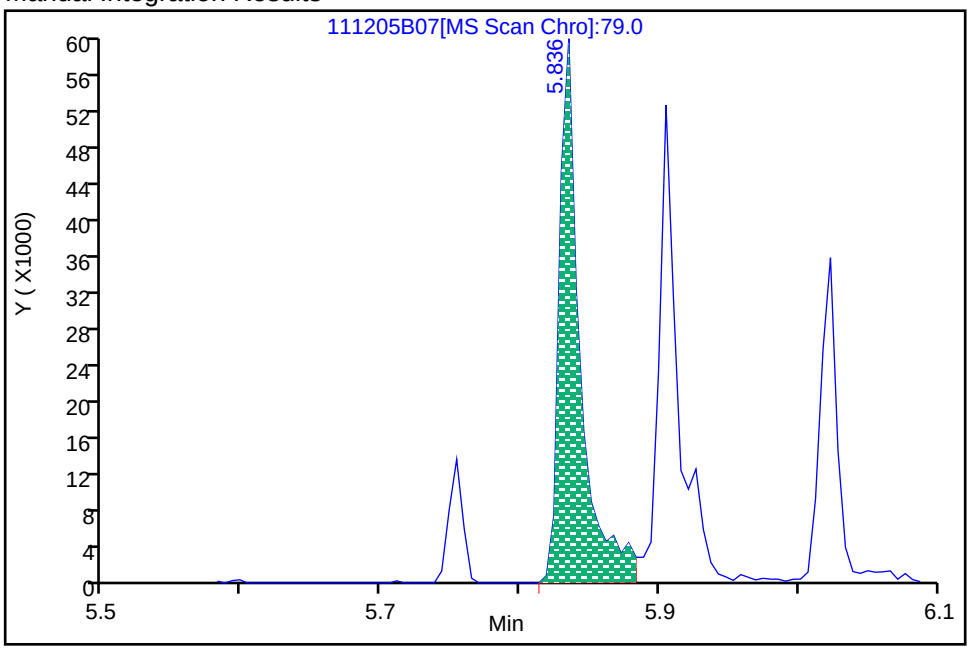
Processing Integration Results

RT: 5.836
Area: 113424
Amount: 10.315
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 62575
Amount: 5.0991
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:50:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 14:51:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

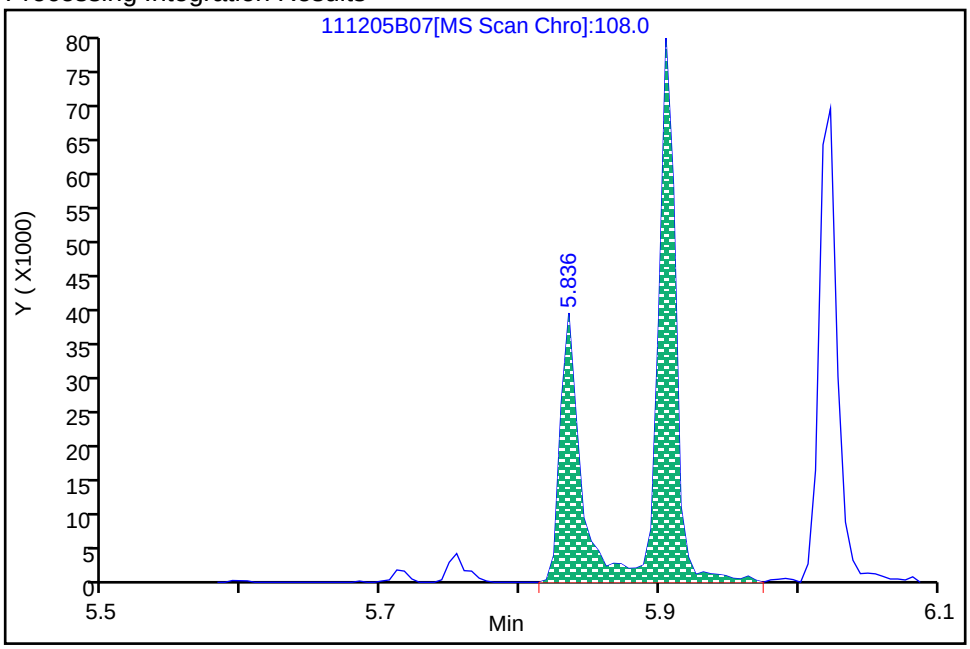
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B07.d		
Injection Date:	05-Dec-2019 14:08:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4167
Sample Info:	11120519B.b, SVMS 4167		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

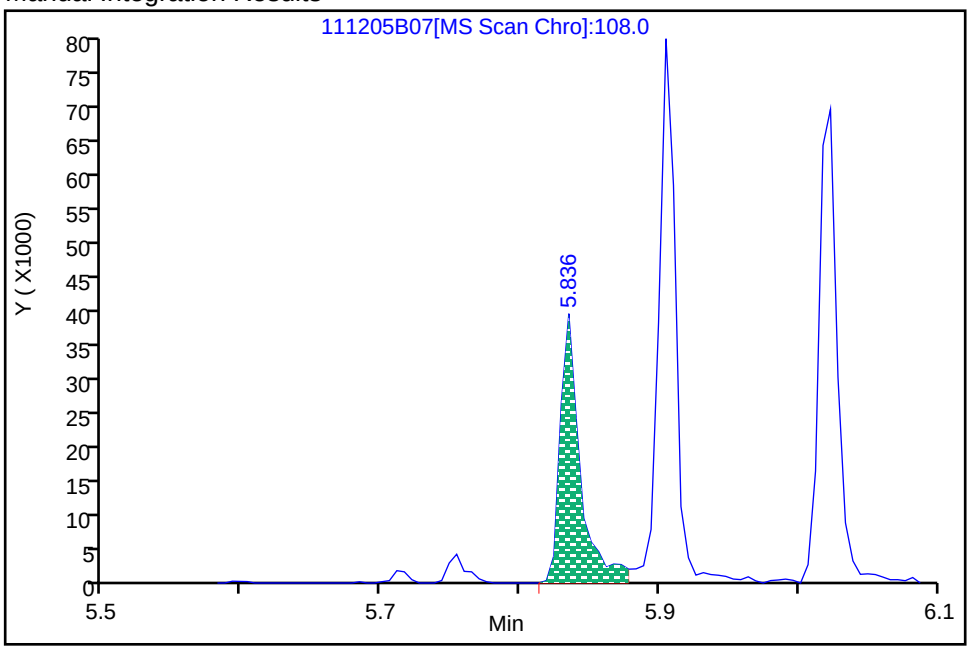
Processing Integration Results

RT: 5.836
Area: 106967
Amount: 10.315
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 39492
Amount: 5.0991
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:50:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 14:56:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B08.d
Lab Sample ID: SVMS 4281 Client Sample ID:
Injection Date: 05-Dec-2019 14:33:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4281
Misc. Info: 1STD010
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 14:56:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 14:33:30 Calib File: 111205B08.d
Sample Type: Ical, Level: 5 ALS Bottle: 5
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 14:55:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.675	3.675	0.000	17378	10.000	7.8618	
2 N-Nitrosodimethylamine	42.0	3.873	3.873	0.000	129717	10.000	10.111	
1 pyridine	79.0	3.926	3.926	0.000	57704	10.000	9.6713	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	161545	10.000	10.817	
$ 9 Phenol-d5	99.0	5.429	5.429	0.000	194822	10.000	10.880	
10 Phenol	94.0	5.440	5.440	0.000	214383	10.000	10.653	
11 Aniline	66.0	5.499	5.499	0.000	6702	10.000	2.0827	
12 bis(2-Chloroethyl)ether	63.0	5.515	5.515	0.000	107389	10.000	9.9300	
201 n-Decane	57.0	5.574	5.574	0.000	83800	10.000	10.714	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	166431	10.000	10.521	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	149459	10.000	10.490	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	218011	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.772	5.772	0.000	166947	10.000	10.642	
18 Benzyl alcohol	79.0	5.836	5.836	0.000	148320	10.000	11.353	M
20 o-Cresol	108.0	5.905	5.905	0.000	140389	10.000	10.170	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	151486	10.000	10.546	
21 bis(2Chloro1methylethyl)ether	45.0	5.922	5.922	0.000	92966	10.000	10.307	
23 m+p-Cresol	107.0	6.023	6.023	0.000	152140	10.000	9.9849	
26 n-Nitroso-di-n-propylamine	70.0	6.034	6.034	0.000	128069	10.000	10.189	
24 Acetophenone	105.0	6.050	6.050	0.000	223142	10.000	10.233	
28 Hexachloroethane	117.0	6.168	6.168	0.000	70219	10.000	10.256	
$ 29 Nitrobenzene-d5	82.0	6.184	6.184	0.000	200083	10.000	11.395	
30 Nitrobenzene	77.0	6.200	6.200	0.000	200677	10.000	10.617	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.376	6.376	0.000	282859	10.000	10.591	
34 2,4-Dimethylphenol	107.0	6.451	6.451	0.000	113326	10.000	9.9826	
33 2-Nitrophenol	139.0	6.456	6.456	0.000	80288	10.000	11.494	
36 Benzoic acid	105.0	6.531	6.531	0.000	215802	20.000	26.889	
35 bis(2-Chloroethoxy)methane	93.0	6.521	6.521	0.000	171946	10.000	10.716	
38 2,4-Dichlorophenol	162.0	6.649	6.649	0.000	108082	10.000	11.091	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	118428	10.000	10.808	
* 41 Naphthalene-d8	136.0	6.783	6.783	0.000	913016	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	451770	10.000	10.639	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	102725	10.000	10.633	
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	80845	10.000	11.093	
49 4-Chloro-3-methylphenol	107.0	7.194	7.194	0.000	139639	10.000	10.694	
51 2-Methylnaphthalene	142.0	7.366	7.366	0.000	285040	10.000	10.659	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	271766	10.000	10.853	
53 Hexachlorocyclopentadiene	237.0	7.489	7.489	0.000	569075	50.000	74.327	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.505	7.505	0.000	118074	10.000	11.786	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	73969	10.000	11.242	
55 2,4,5-Trichlorophenol	196.0	7.633	7.633	0.000	75944	10.000	12.063	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	291116	10.000	10.792	
184 Biphenyl	154.0	7.740	7.740	0.000	315424	10.000	11.139	
58 2-Chloronaphthalene	162.0	7.777	7.777	0.000	234262	10.000	10.906	
62 Dimethylphthalate	163.0	7.965	7.965	0.000	271875	10.000	10.726	
65 2,6-Dinitrotoluene	165.0	8.034	8.034	0.000	61151	10.000	11.283	
64 Acenaphthylene	152.0	8.136	8.136	0.000	354419	10.000	11.150	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	443039	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.275	8.275	0.000	76245	20.000	30.735	
68 Acenaphthene	153.0	8.275	8.275	0.000	272615	10.000	11.874	
70 4-Nitrophenol	109.0	8.318	8.318	0.000	142423	20.000	27.445	
73 2,4-Dinitrotoluene	165.0	8.377	8.377	0.000	71866	10.000	11.173	
71 Dibenzofuran	168.0	8.419	8.419	0.000	320714	10.000	11.032	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	51961	10.000	11.630	
78 Diethylphthalate	149.0	8.548	8.548	0.000	305857	10.000	11.128	
80 4-Chlorophenylphenylether	204.0	8.676	8.676	0.000	118291	10.000	10.947	
79 Fluorene	166.0	8.708	8.708	0.000	262522	10.000	10.888	
84 4,6-Dinitro-2-methylphenol	198.0	8.724	8.724	0.000	39177	10.000	13.120	
86 n-Nitrosodiphenylamine	169.0	8.772	8.772	0.000	172721	10.000	10.346	
87 Azobenzene	77.0	8.815	8.815	0.000	424230	10.000	10.835	
$ 88 2,4,6-Tribromophenol	330.0	8.911	8.911	0.000	22189	10.000	12.216	
94 4-Bromophenylphenylether	248.0	9.099	9.099	0.000	59189	10.000	11.320	
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	55141	10.000	10.981	
202 Octadecane	57.0	9.297	9.297	0.000	138017	10.000	10.960	
99 Pentachlorophenol	266.0	9.339	9.339	0.000	68352	20.000	26.747	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	690381	20.000	20.000	
103 Phenanthrene	178.0	9.532	9.532	0.000	361716	10.000	10.915	
104 Anthracene	178.0	9.575	9.575	0.000	314805	10.000	10.842	
106 Carbazole	167.0	9.692	9.692	0.000	310760	10.000	11.301	
109 Di-n-butylphthalate	149.0	9.912	9.912	0.000	478554	10.000	11.667	
114 Fluoranthene	202.0	10.591	10.591	0.000	354589	10.000	11.335	
116 Pyrene	202.0	10.832	10.832	0.000	352074	10.000	11.342	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	240796	10.000	11.135	
122 Butylbenzylphthalate	149.0	11.425	11.425	0.000	194617	10.000	12.318	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	265664	10.000	12.512	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	314747	10.000	9.8930	
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	549256	20.000	20.000	
129 Chrysene	228.0	12.308	12.308	0.000	302975	10.000	10.876	
131 Di-n-octylphthalate	149.0	13.062	13.062	0.000	459175	10.000	12.073	
132 Benzo(b)fluoranthene	252.0	13.827	13.827	0.000	300984	10.000	11.246	
134 Benzo(k)fluoranthene	252.0	13.870	13.870	0.000	313895	10.000	10.640	
135 Benzo(a)pyrene	252.0	14.340	14.340	0.000	255170	10.000	10.151	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	581928	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.341	16.341	0.000	404819	10.000	10.917	
139 Dibenzo(a,h)anthracene	278.0	16.346	16.346	0.000	357955	10.000	11.137	
140 Benzo(g,h,i)perylene	276.0	16.908	16.908	0.000	296719	10.000	9.9832	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

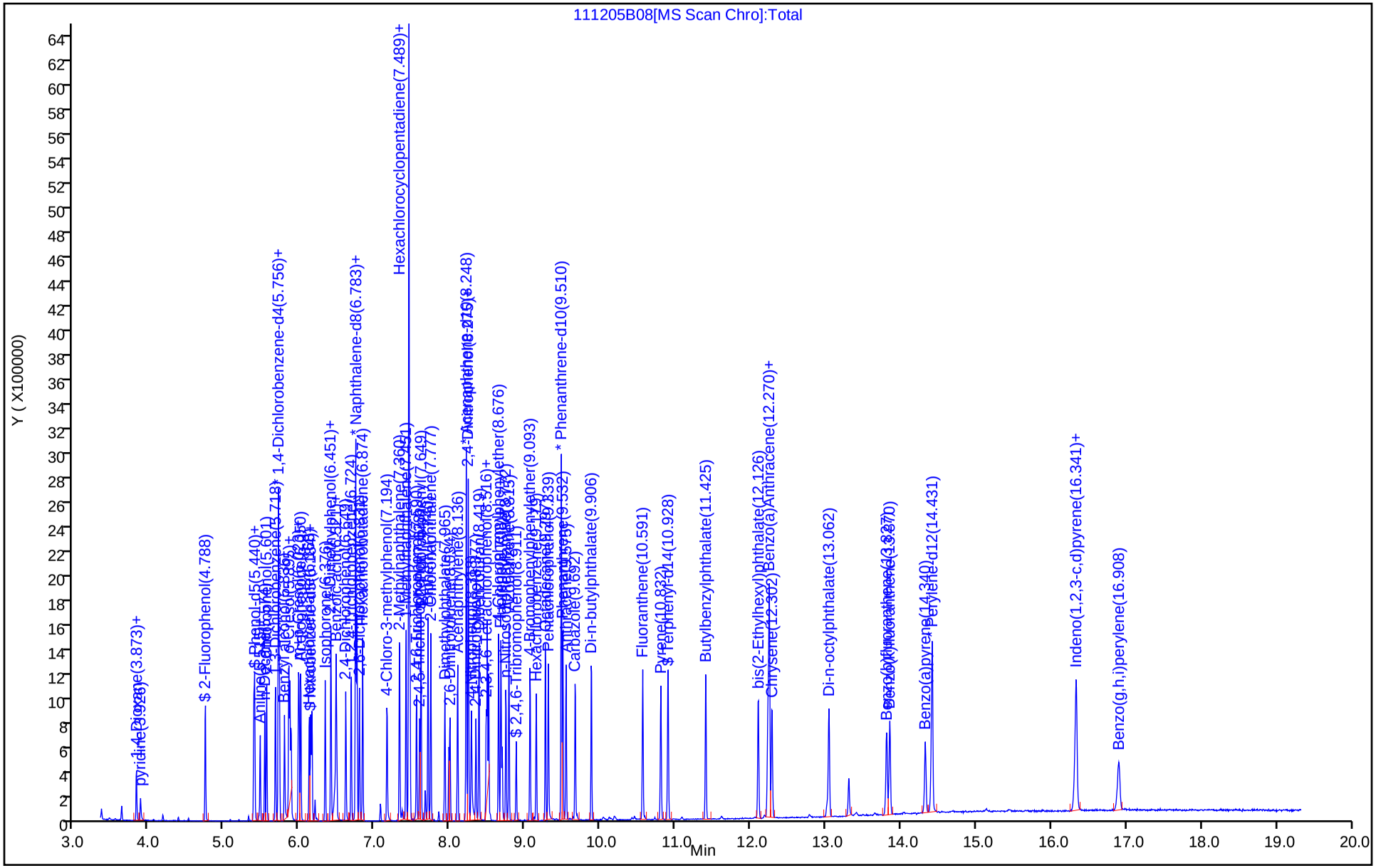
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 05-Dec-2019 14:56:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B08.d				
Injection Date:	05-Dec-2019 14:33:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4281		
Sample Info:	11120519B.b, SVMS 4281				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 14:56:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

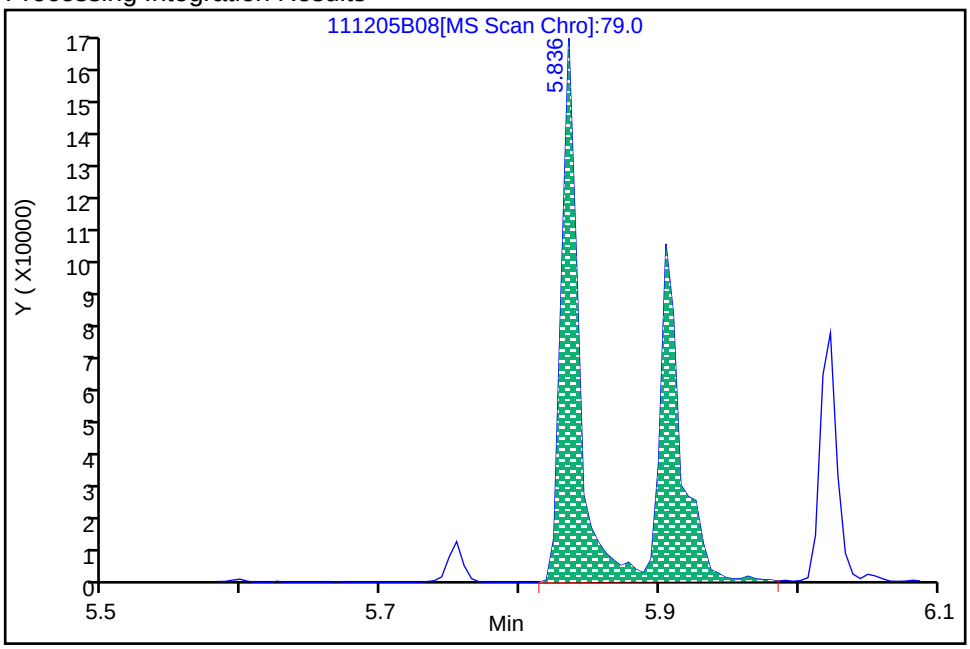
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B08.d		
Injection Date:	05-Dec-2019 14:33:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4281
Sample Info:	11120519B.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

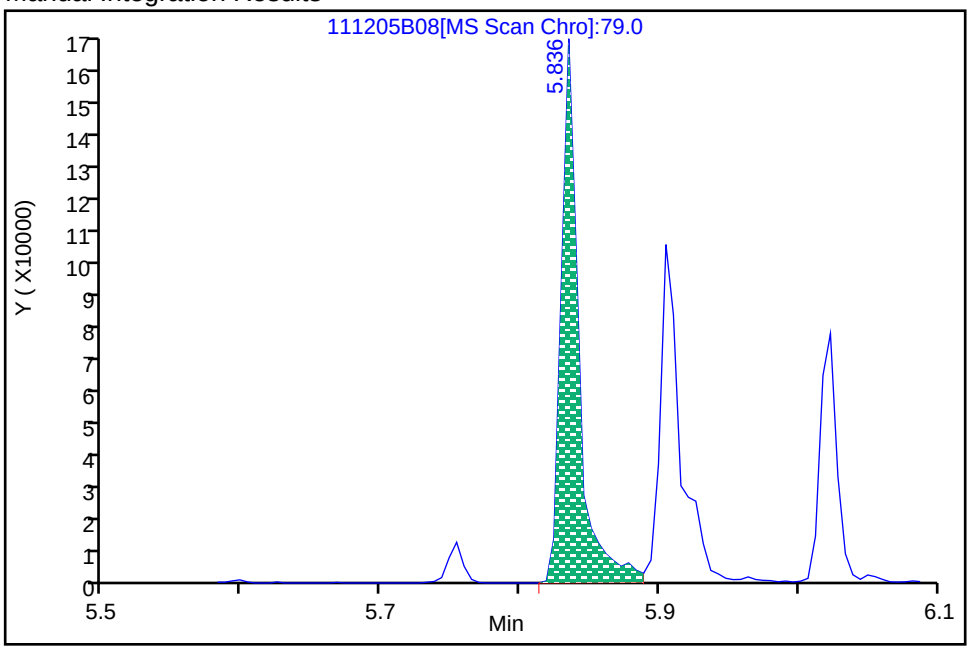
Processing Integration Results

RT: 5.836
Area: 255071
Amount: 20.445
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 148320
Amount: 11.353
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:55:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 14:56:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

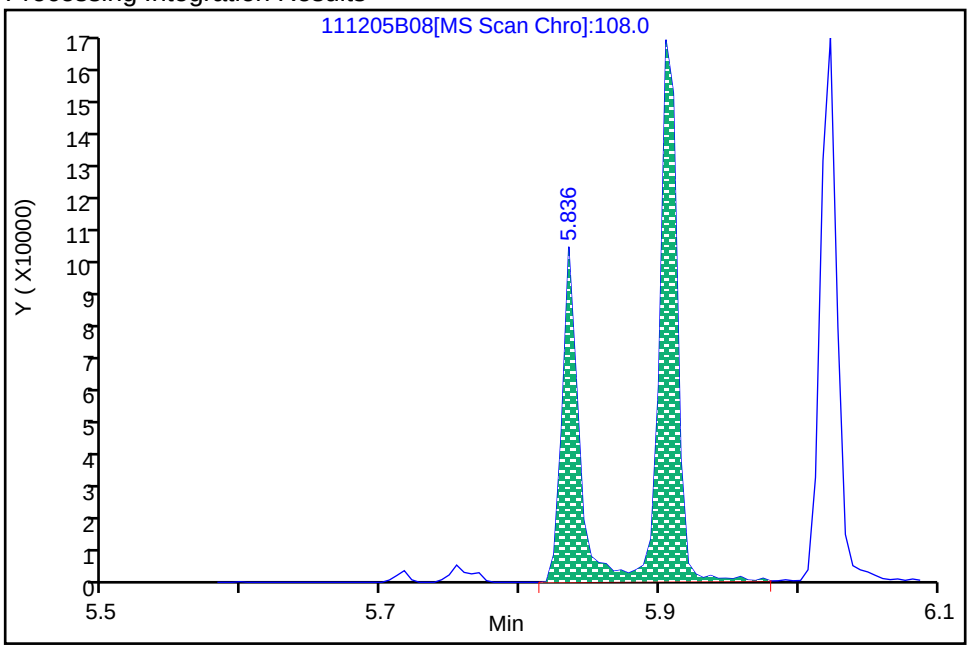
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B08.d		
Injection Date:	05-Dec-2019 14:33:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4281
Sample Info:	11120519B.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

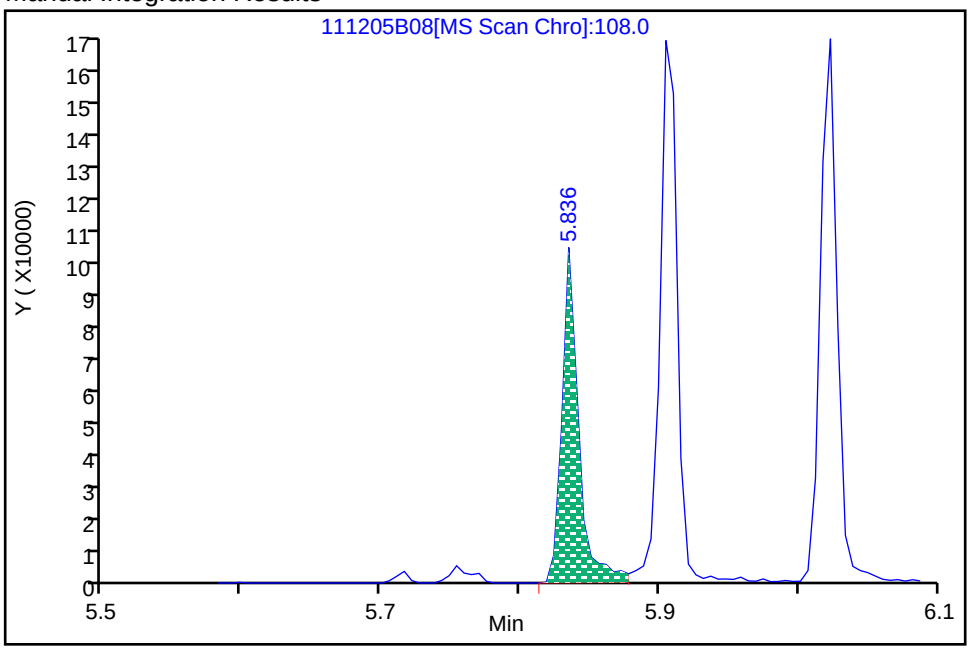
Processing Integration Results

RT: 5.836
Area: 222940
Amount: 20.445
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.836
Area: 83078
Amount: 11.353
Amount Units: ng



Data Editor: scd, 05-Dec-2019 14:55:30
Audit Action: Mint
Audit Reason: Split Peak

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B09.d
Lab Sample ID: SVMS 4162 Client Sample ID:
Injection Date: 05-Dec-2019 14:58:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4162
Misc. Info: 1STD015
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 15:53:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 15:23:30 Calib File: 111205B10.d
Sample Type: Ical, Level: 6 ALS Bottle: 6
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 15:53:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.675	3.675	0.000	29790	15.000	13.642	
2 N-Nitrosodimethylamine	42.0	3.873	3.873	0.000	203330	15.000	15.546	
1 pyridine	79.0	3.926	3.926	0.000	98820	15.000	16.095	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	243892	15.000	15.959	
$ 9 Phenol-d5	99.0	5.429	5.429	0.000	302609	15.000	16.412	
10 Phenol	94.0	5.440	5.440	0.000	333751	15.000	16.111	
11 Aniline	66.0	5.499	5.499	0.000	26179	15.000	8.8747	
12 bis(2-Chloroethyl)ether	63.0	5.515	5.515	0.000	165571	15.000	15.123	
201 n-Decane	57.0	5.574	5.574	0.000	136050	15.000	16.723	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	255468	15.000	15.778	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	238287	15.000	16.219	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	220251	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.772	5.772	0.000	267113	15.000	16.448	
18 Benzyl alcohol	79.0	5.841	5.841	0.000	212705	15.000	15.879	
20 o-Cresol	108.0	5.911	5.911	0.000	228454	15.000	16.085	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	242621	15.000	16.344	
21 bis(2Chloro1methylethyl)ether	45.0	5.927	5.927	0.000	139571	15.000	15.252	
23 m+p-Cresol	107.0	6.023	6.023	0.000	241586	15.000	15.550	
26 n-Nitroso-di-n-propylamine	70.0	6.034	6.034	0.000	197962	15.000	15.467	
24 Acetophenone	105.0	6.055	6.055	0.000	341054	15.000	15.383	
28 Hexachloroethane	117.0	6.168	6.168	0.000	112657	15.000	16.013	
$ 29 Nitrobenzene-d5	82.0	6.189	6.189	0.000	302253	15.000	17.144	
30 Nitrobenzene	77.0	6.205	6.205	0.000	297654	15.000	15.903	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.382	6.382	0.000	439015	15.000	16.447	
34 2,4-Dimethylphenol	107.0	6.451	6.451	0.000	198600	15.000	17.260	
33 2-Nitrophenol	139.0	6.456	6.456	0.000	132647	15.000	18.375	
36 Benzoic acid	105.0	6.542	6.542	0.000	334320	30.000	39.373	
35 bis(2-Chloroethoxy)methane	93.0	6.521	6.521	0.000	264558	15.000	16.485	
38 2,4-Dichlorophenol	162.0	6.654	6.654	0.000	168170	15.000	17.080	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	187723	15.000	16.984	
* 41 Naphthalene-d8	136.0	6.783	6.783	0.000	890519	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	708383	15.000	16.713	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	165209	15.000	16.960	
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	131721	15.000	17.697	
49 4-Chloro-3-methylphenol	107.0	7.200	7.200	0.000	222212	15.000	16.896	
51 2-Methylnaphthalene	142.0	7.366	7.366	0.000	456128	15.000	17.017	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	422521	15.000	16.869	
53 Hexachlorocyclopentadiene	237.0	7.489	7.489	0.000	1113329	75.000	122.64	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.505	7.505	0.000	201234	15.000	18.847	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	115536	15.000	17.013	
55 2,4,5-Trichlorophenol	196.0	7.633	7.633	0.000	114738	15.000	17.508	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	469891	15.000	16.999	
184 Biphenyl	154.0	7.745	7.745	0.000	502625	15.000	17.156	
58 2-Chloronaphthalene	162.0	7.778	7.778	0.000	363805	15.000	16.544	
62 Dimethylphthalate	163.0	7.970	7.970	0.000	417727	15.000	16.193	
65 2,6-Dinitrotoluene	165.0	8.034	8.034	0.000	91966	15.000	16.568	
64 Acenaphthylene	152.0	8.136	8.136	0.000	566069	15.000	17.305	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	441908	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.280	8.280	0.000	139683	30.000	47.989	
68 Acenaphthene	153.0	8.280	8.280	0.000	453058	15.000	18.785	
70 4-Nitrophenol	109.0	8.318	8.318	0.000	225010	30.000	39.889	
73 2,4-Dinitrotoluene	165.0	8.382	8.382	0.000	113953	15.000	17.131	
71 Dibenzofuran	168.0	8.419	8.419	0.000	487762	15.000	16.488	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	82253	15.000	17.644	
78 Diethylphthalate	149.0	8.548	8.548	0.000	479952	15.000	16.941	
80 4-Chlorophenylphenylether	204.0	8.681	8.681	0.000	182254	15.000	16.490	
79 Fluorene	166.0	8.708	8.708	0.000	406658	15.000	16.558	
84 4,6-Dinitro-2-methylphenol	198.0	8.730	8.730	0.000	61186	15.000	19.374	
86 n-Nitrosodiphenylamine	169.0	8.778	8.778	0.000	278169	15.000	16.554	
87 Azobenzene	77.0	8.815	8.815	0.000	630985	15.000	16.127	
$ 88 2,4,6-Tribromophenol	330.0	8.917	8.917	0.000	33908	15.000	18.066	
94 4-Bromophenylphenylether	248.0	9.099	9.099	0.000	95630	15.000	17.786	
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	87806	15.000	17.184	
202 Octadecane	57.0	9.302	9.302	0.000	220209	15.000	17.185	
99 Pentachlorophenol	266.0	9.339	9.339	0.000	113819	30.000	41.188	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	676947	20.000	20.000	
103 Phenanthrene	178.0	9.532	9.532	0.000	570067	15.000	17.061	
104 Anthracene	178.0	9.575	9.575	0.000	512061	15.000	17.408	
106 Carbazole	167.0	9.698	9.698	0.000	460426	15.000	16.617	
109 Di-n-butylphthalate	149.0	9.912	9.912	0.000	756573	15.000	17.901	
114 Fluoranthene	202.0	10.591	10.591	0.000	540472	15.000	17.121	
116 Pyrene	202.0	10.832	10.832	0.000	546914	15.000	16.907	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	376722	15.000	16.752	
122 Butylbenzylphthalate	149.0	11.431	11.431	0.000	305944	15.000	18.085	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	410432	15.000	18.061	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	472884	15.000	14.694	
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	557850	20.000	20.000	
129 Chrysene	228.0	12.308	12.308	0.000	462738	15.000	16.113	
131 Di-n-octylphthalate	149.0	13.062	13.062	0.000	726076	15.000	19.469	
132 Benzo(b)fluoranthene	252.0	13.827	13.827	0.000	454454	15.000	17.970	
134 Benzo(k)fluoranthene	252.0	13.875	13.875	0.000	472197	15.000	17.134	
135 Benzo(a)pyrene	252.0	14.346	14.346	0.000	409330	15.000	17.375	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	528108	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.346	16.346	0.000	624090	15.000	17.843	
139 Dibenzo(a,h)anthracene	278.0	16.351	16.351	0.000	557660	15.000	18.282	
140 Benzo(g,h,i)perylene	276.0	16.913	16.913	0.000	436683	15.000	15.978	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

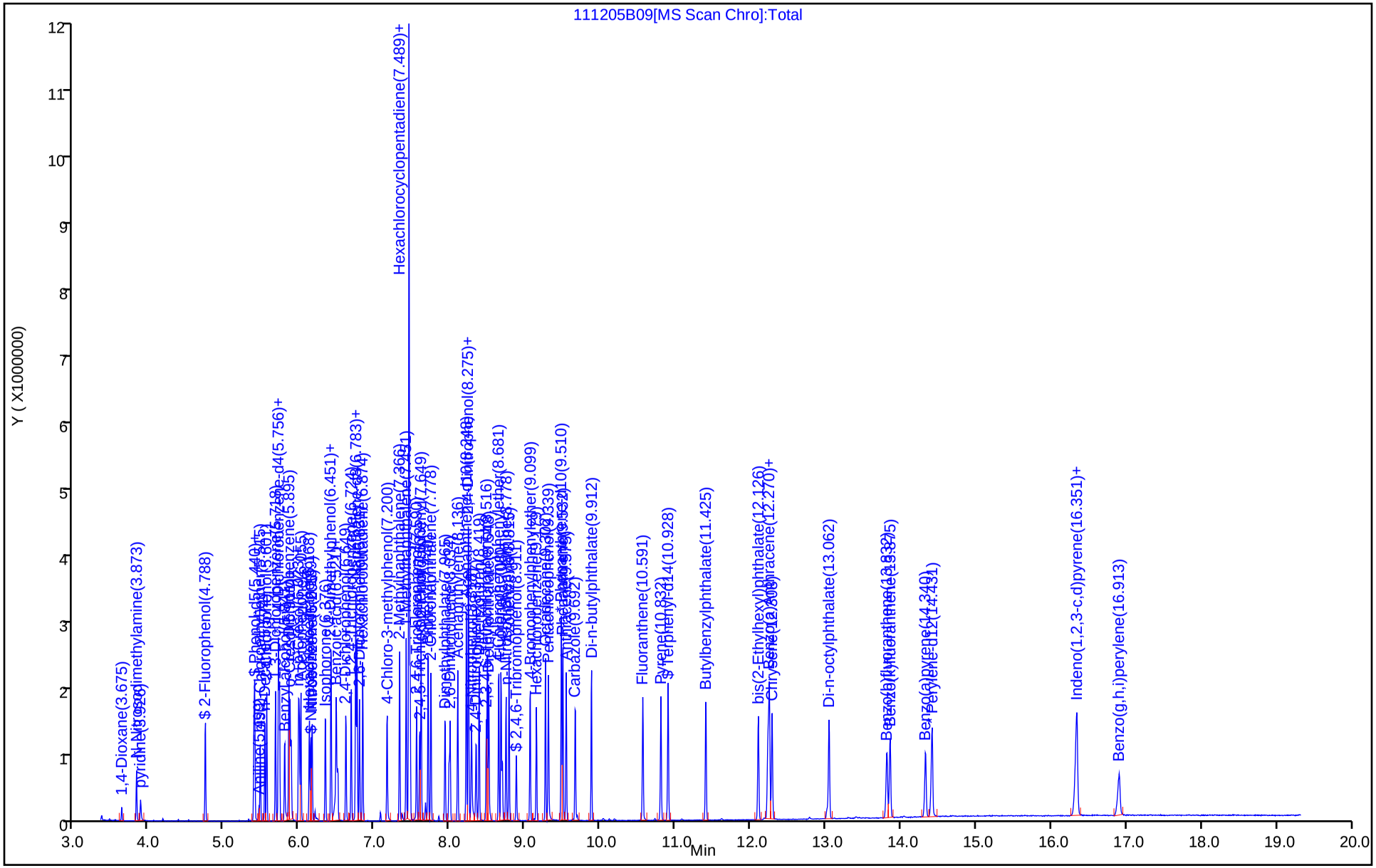
Processing Flags

Review Flags

Report Date: 05-Dec-2019 15:53:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B09.d				
Injection Date:	05-Dec-2019 14:58:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4162		
Sample Info:	11120519B.b, SVMS 4162				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 15:53:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B10.d
Lab Sample ID: SVMS 4168 Client Sample ID:
Injection Date: 05-Dec-2019 15:23:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4168
Misc. Info: 1STD020
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 15:53:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 15:23:30 Calib File: 111205B10.d
Sample Type: Ical, Level: 7 ALS Bottle: 7
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 15:53:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.675	3.675	0.000	35159	20.000	15.994	
2 N-Nitrosodimethylamine	42.0	3.873	3.873	0.000	282466	20.000	20.520	
1 pyridine	79.0	3.932	3.932	0.000	130110	20.000	20.200	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	321077	20.000	20.057	
$ 9 Phenol-d5	99.0	5.435	5.435	0.000	400761	20.000	20.648	
10 Phenol	94.0	5.446	5.446	0.000	450006	20.000	20.620	
11 Aniline	66.0	5.499	5.499	0.000	23539	20.000	8.4983	
12 bis(2-Chloroethyl)ether	63.0	5.515	5.515	0.000	215704	20.000	19.005	
201 n-Decane	57.0	5.574	5.574	0.000	189149	20.000	21.805	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	340625	20.000	20.078	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	337325	20.000	21.582	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	230598	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.772	5.772	0.000	374450	20.000	21.658	
18 Benzyl alcohol	79.0	5.841	5.841	0.000	283330	20.000	20.168	
20 o-Cresol	108.0	5.911	5.911	0.000	314754	20.000	20.963	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	328370	20.000	20.931	
21 bis(2Chloro1methylethyl)ether	45.0	5.927	5.927	0.000	191641	20.000	20.002	
23 m+p-Cresol	107.0	6.023	6.023	0.000	324639	20.000	19.965	
26 n-Nitroso-di-n-propylamine	70.0	6.034	6.034	0.000	270939	20.000	20.183	
24 Acetophenone	105.0	6.055	6.055	0.000	454972	20.000	19.666	
28 Hexachloroethane	117.0	6.168	6.168	0.000	155408	20.000	20.907	
$ 29 Nitrobenzene-d5	82.0	6.189	6.189	0.000	410569	20.000	23.087	
30 Nitrobenzene	77.0	6.205	6.205	0.000	397896	20.000	21.342	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.382	6.382	0.000	584884	20.000	21.878	
34 2,4-Dimethylphenol	107.0	6.451	6.451	0.000	288119	20.000	24.368	
33 2-Nitrophenol	139.0	6.457	6.457	0.000	187837	20.000	25.121	
36 Benzoic acid	105.0	6.553	6.553	0.000	448578	40.000	50.843	
35 bis(2-Chloroethoxy)methane	93.0	6.526	6.526	0.000	352558	20.000	21.924	
38 2,4-Dichlorophenol	162.0	6.654	6.654	0.000	226887	20.000	22.793	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	253671	20.000	22.719	
* 41 Naphthalene-d8	136.0	6.783	6.783	0.000	875143	20.000	20.000	
43 Naphthalene	128.0	6.799	6.799	0.000	957420	20.000	22.506	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	216595	20.000	22.141	
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	180130	20.000	23.712	
49 4-Chloro-3-methylphenol	107.0	7.200	7.200	0.000	292574	20.000	22.150	
51 2-Methylnaphthalene	142.0	7.366	7.366	0.000	615995	20.000	22.833	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	590049	20.000	23.310	
53 Hexachlorocyclopentadiene	237.0	7.489	7.489	0.000	1781409	100.00	173.41	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.505	7.505	0.000	294544	20.000	26.668	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	153662	20.000	22.784	
55 2,4,5-Trichlorophenol	196.0	7.633	7.633	0.000	151356	20.000	23.165	
$ 56 2-Fluorobiphenyl	172.0	7.649	7.649	0.000	655899	20.000	23.799	
184 Biphenyl	154.0	7.746	7.746	0.000	681302	20.000	23.294	
58 2-Chloronaphthalene	162.0	7.783	7.783	0.000	504719	20.000	23.048	
62 Dimethylphthalate	163.0	7.970	7.970	0.000	568712	20.000	22.308	
65 2,6-Dinitrotoluene	165.0	8.034	8.034	0.000	121763	20.000	22.217	
64 Acenaphthylene	152.0	8.136	8.136	0.000	765939	20.000	23.538	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	426643	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.280	8.280	0.000	205296	40.000	64.211	
68 Acenaphthene	153.0	8.280	8.280	0.000	646241	20.000	26.297	
70 4-Nitrophenol	109.0	8.318	8.318	0.000	294990	40.000	51.147	
73 2,4-Dinitrotoluene	165.0	8.382	8.382	0.000	152967	20.000	23.084	
71 Dibenzofuran	168.0	8.419	8.419	0.000	670473	20.000	22.906	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	113926	20.000	24.239	
78 Diethylphthalate	149.0	8.548	8.548	0.000	670855	20.000	23.635	
80 4-Chlorophenylphenylether	204.0	8.682	8.682	0.000	246432	20.000	22.514	
79 Fluorene	166.0	8.714	8.714	0.000	569659	20.000	23.354	
84 4,6-Dinitro-2-methylphenol	198.0	8.730	8.730	0.000	83873	20.000	25.213	
86 n-Nitrosodiphenylamine	169.0	8.778	8.778	0.000	372552	20.000	21.804	
87 Azobenzene	77.0	8.815	8.815	0.000	857937	20.000	21.609	
$ 88 2,4,6-Tribromophenol	330.0	8.917	8.917	0.000	46825	20.000	23.990	
94 4-Bromophenylphenylether	248.0	9.099	9.099	0.000	128290	20.000	23.146	
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	125726	20.000	23.726	
202 Octadecane	57.0	9.302	9.302	0.000	303154	20.000	22.987	
99 Pentachlorophenol	266.0	9.339	9.339	0.000	178354	40.000	58.623	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	675888	20.000	20.000	
103 Phenanthrene	178.0	9.532	9.532	0.000	798823	20.000	23.289	
104 Anthracene	178.0	9.575	9.575	0.000	714815	20.000	23.607	
106 Carbazole	167.0	9.698	9.698	0.000	640927	20.000	22.571	
109 Di-n-butylphthalate	149.0	9.912	9.912	0.000	1048274	20.000	23.878	
114 Fluoranthene	202.0	10.591	10.591	0.000	773963	20.000	23.782	
116 Pyrene	202.0	10.832	10.832	0.000	775851	20.000	22.434	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	528295	20.000	22.046	
122 Butylbenzylphthalate	149.0	11.431	11.431	0.000	424497	20.000	23.193	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	599929	20.000	24.158	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	665488	20.000	19.780	
* 128 Chrysene-d12	240.0	12.271	12.271	0.000	584286	20.000	20.000	
129 Chrysene	228.0	12.308	12.308	0.000	653932	20.000	21.474	
131 Di-n-octylphthalate	149.0	13.062	13.062	0.000	1048267	20.000	25.674	
132 Benzo(b)fluoranthene	252.0	13.832	13.832	0.000	631036	20.000	23.465	
134 Benzo(k)fluoranthene	252.0	13.875	13.875	0.000	680086	20.000	23.250	
135 Benzo(a)pyrene	252.0	14.346	14.346	0.000	547299	20.000	22.102	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	545364	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.357	16.357	0.000	866677	20.000	23.329	
139 Dibenzo(a,h)anthracene	278.0	16.362	16.362	0.000	808361	20.000	24.664	
140 Benzo(g,h,i)perylene	276.0	16.924	16.924	0.000	596038	20.000	20.952	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

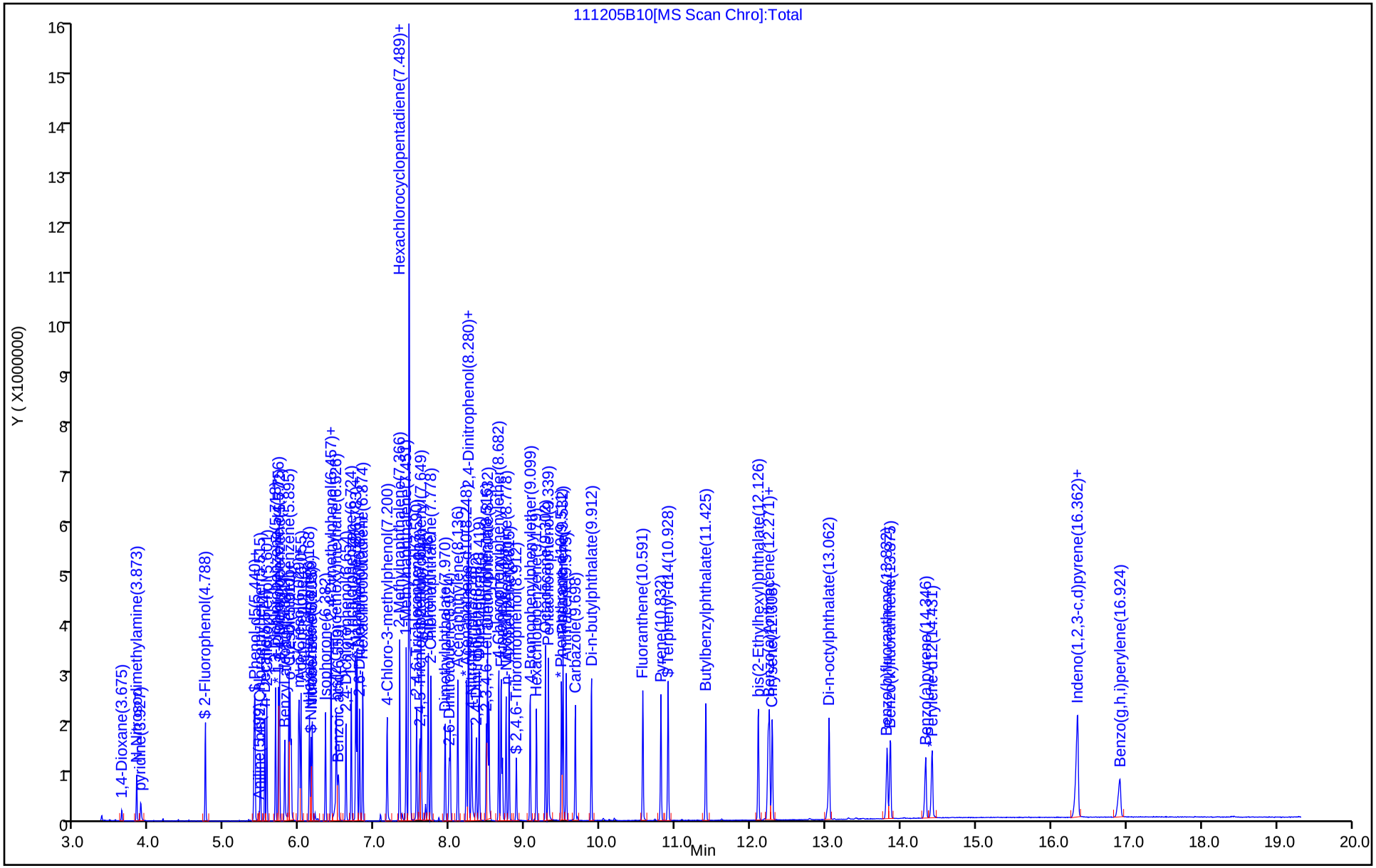
Processing Flags

Review Flags

Report Date: 05-Dec-2019 15:53:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B10.d				
Injection Date:	05-Dec-2019 15:23:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4168		
Sample Info:	11120519B.b, SVMS 4168				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B11.d
Lab Sample ID: SVMS 4164 Client Sample ID:
Injection Date: 05-Dec-2019 15:49:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4164
Misc. Info: 1STD025
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 16:13:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 15:49:30 Calib File: 111205B11.d
Sample Type: Ical, Level: 8 ALS Bottle: 8
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 16:12:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.680	3.680	0.000	43844	25.000	19.872	
2 N-Nitrosodimethylamine	42.0	3.878	3.878	0.000	377148	25.000	26.186	
1 pyridine	79.0	3.932	3.932	0.000	180392	25.000	26.679	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	439014	25.000	26.234	
$ 9 Phenol-d5	99.0	5.435	5.435	0.000	539660	25.000	26.549	
10 Phenol	94.0	5.446	5.446	0.000	601490	25.000	26.318	
11 Aniline	66.0	5.499	5.499	0.000	23618	25.000	9.0861	
12 bis(2-Chloroethyl)ether	63.0	5.520	5.520	0.000	279346	25.000	23.887	
201 n-Decane	57.0	5.574	5.574	0.000	254270	25.000	27.726	
13 2-Chlorophenol	128.0	5.601	5.601	0.000	459029	25.000	25.909	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	457952	25.000	27.716	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	239364	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.772	5.772	0.000	512612	25.000	27.993	
18 Benzyl alcohol	79.0	5.841	5.841	0.000	369830	25.000	25.309	
20 o-Cresol	108.0	5.911	5.911	0.000	423996	25.000	26.866	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	442161	25.000	26.823	
21 bis(2Chloro1methylethyl)ether	45.0	5.927	5.927	0.000	254036	25.000	25.465	
23 m+p-Cresol	107.0	6.029	6.029	0.000	436910	25.000	25.756	
26 n-Nitroso-di-n-propylamine	70.0	6.039	6.039	0.000	357852	25.000	25.581	
24 Acetophenone	105.0	6.055	6.055	0.000	598678	25.000	24.940	
28 Hexachloroethane	117.0	6.168	6.168	0.000	207787	25.000	26.636	
$ 29 Nitrobenzene-d5	82.0	6.189	6.189	0.000	528764	25.000	28.958	
30 Nitrobenzene	77.0	6.205	6.205	0.000	519252	25.000	27.323	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.382	6.382	0.000	794188	25.000	28.844	
34 2,4-Dimethylphenol	107.0	6.456	6.456	0.000	431804	25.000	34.167	
33 2-Nitrophenol	139.0	6.456	6.456	0.000	254851	25.000	32.309	
36 Benzoic acid	105.0	6.563	6.563	0.000	576375	50.000	62.405	M
35 bis(2-Chloroethoxy)methane	93.0	6.526	6.526	0.000	463783	25.000	28.138	
38 2,4-Dichlorophenol	162.0	6.654	6.654	0.000	303345	25.000	29.463	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	340451	25.000	29.477	
* 41 Naphthalene-d8	136.0	6.783	6.783	0.000	878240	20.000	20.000	
43 Naphthalene	128.0	6.804	6.804	0.000	1272775	25.000	29.113	
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	301093	25.000	29.708	
47 Hexachlorobutadiene	224.6	6.879	6.879	0.000	247805	25.000	31.169	
49 4-Chloro-3-methylphenol	107.0	7.200	7.200	0.000	395888	25.000	29.058	
51 2-Methylnaphthalene	142.0	7.366	7.366	0.000	845398	25.000	30.283	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	797188	25.000	30.412	
53 Hexachlorocyclopentadiene	237.0	7.494	7.494	0.000	2747365	125.00	123.37	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.505	7.505	0.000	430567	25.000	35.342	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	209051	25.000	29.314	
55 2,4,5-Trichlorophenol	196.0	7.633	7.633	0.000	211369	25.000	30.372	
$ 56 2-Fluorobiphenyl	172.0	7.654	7.654	0.000	882812	25.000	30.254	
184 Biphenyl	154.0	7.745	7.745	0.000	921910	25.000	29.725	
58 2-Chloronaphthalene	162.0	7.783	7.783	0.000	695829	25.000	29.924	
62 Dimethylphthalate	163.0	7.970	7.970	0.000	744421	25.000	27.886	
65 2,6-Dinitrotoluene	165.0	8.040	8.040	0.000	164649	25.000	28.559	
64 Acenaphthylene	152.0	8.136	8.136	0.000	1032542	25.000	30.012	
* 67 Acenaphthene-d10	164.0	8.254	8.254	0.000	438159	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.280	8.280	0.000	305247	50.000	75.697	
68 Acenaphthene	153.0	8.280	8.280	0.000	928663	25.000	34.747	
70 4-Nitrophenol	109.0	8.323	8.323	0.000	434988	50.000	54.094	
73 2,4-Dinitrotoluene	165.0	8.382	8.382	0.000	197321	25.000	28.348	
71 Dibenzofuran	168.0	8.419	8.419	0.000	908296	25.000	29.448	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	159799	25.000	31.640	
78 Diethylphthalate	149.0	8.553	8.553	0.000	894581	25.000	29.723	
80 4-Chlorophenylphenylether	204.0	8.681	8.681	0.000	352099	25.000	30.230	
79 Fluorene	166.0	8.714	8.714	0.000	767325	25.000	29.792	
84 4,6-Dinitro-2-methylphenol	198.0	8.730	8.730	0.000	108847	25.000	30.125	
86 n-Nitrosodiphenylamine	169.0	8.778	8.778	0.000	487452	25.000	28.588	
87 Azobenzene	77.0	8.820	8.820	0.000	1144577	25.000	28.839	
$ 88 2,4,6-Tribromophenol	330.0	8.917	8.917	0.000	67931	25.000	33.666	
94 4-Bromophenylphenylether	248.0	9.099	9.099	0.000	187769	25.000	32.939	
96 Hexachlorobenzene	284.0	9.184	9.184	0.000	182379	25.000	33.363	
202 Octadecane	57.0	9.302	9.302	0.000	424792	25.000	31.611	
99 Pentachlorophenol	266.0	9.339	9.339	0.000	259898	50.000	73.946	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	658355	20.000	20.000	
103 Phenanthrene	178.0	9.532	9.532	0.000	1070789	25.000	30.958	
104 Anthracene	178.0	9.575	9.575	0.000	987255	25.000	32.113	
106 Carbazole	167.0	9.698	9.698	0.000	869010	25.000	30.307	
109 Di-n-butylphthalate	149.0	9.912	9.912	0.000	1433458	25.000	31.965	
114 Fluoranthene	202.0	10.596	10.596	0.000	1061416	25.000	32.121	
116 Pyrene	202.0	10.837	10.837	0.000	1027682	25.000	28.978	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	754844	25.000	30.453	
122 Butylbenzylphthalate	149.0	11.431	11.431	0.000	575062	25.000	30.254	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	806799	25.000	31.100	
127 Benzo(a)Anthracene	228.0	12.254	12.254	0.000	858525	25.000	25.404	
* 128 Chrysene-d12	240.0	12.276	12.276	0.000	585541	20.000	20.000	
129 Chrysene	228.0	12.313	12.313	0.000	889850	25.000	28.564	
131 Di-n-octylphthalate	149.0	13.067	13.067	0.000	1399283	25.000	32.906	
132 Benzo(b)fluoranthene	252.0	13.838	13.838	0.000	851357	25.000	30.990	
134 Benzo(k)fluoranthene	252.0	13.880	13.880	0.000	903943	25.000	30.363	
135 Benzo(a)pyrene	252.0	14.351	14.351	0.000	757784	25.000	30.112	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	538056	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.367	16.367	0.000	1190173	25.000	31.302	
139 Dibenzo(a,h)anthracene	278.0	16.367	16.367	0.000	1110306	25.000	32.806	
140 Benzo(g,h,i)perylene	276.0	16.929	16.929	0.000	773212	25.000	27.202	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

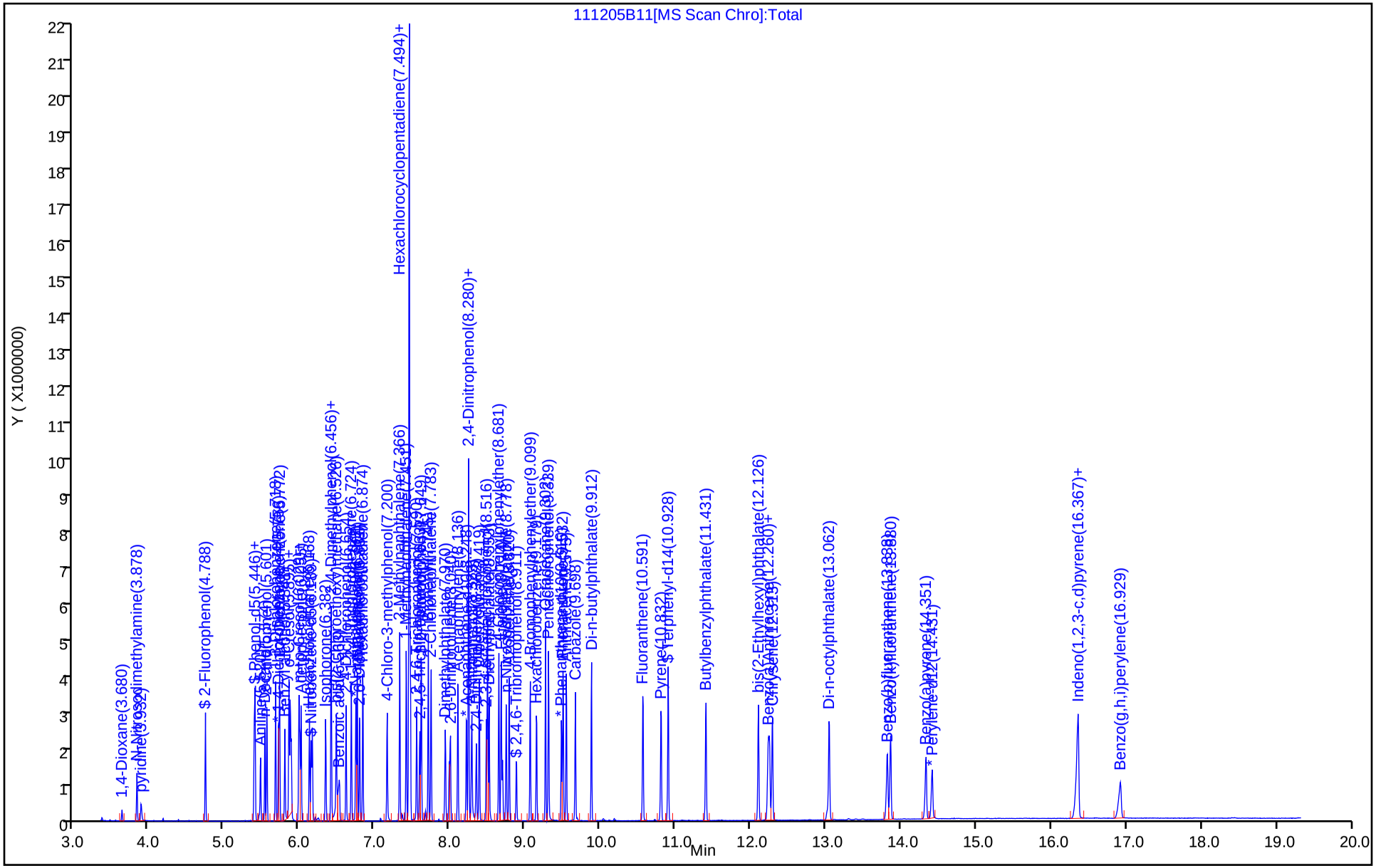
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 05-Dec-2019 16:13:44 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B11.d				
Injection Date:	05-Dec-2019 15:49:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4164		
Sample Info:	11120519B.b, SVMS 4164				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 16:13:44 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

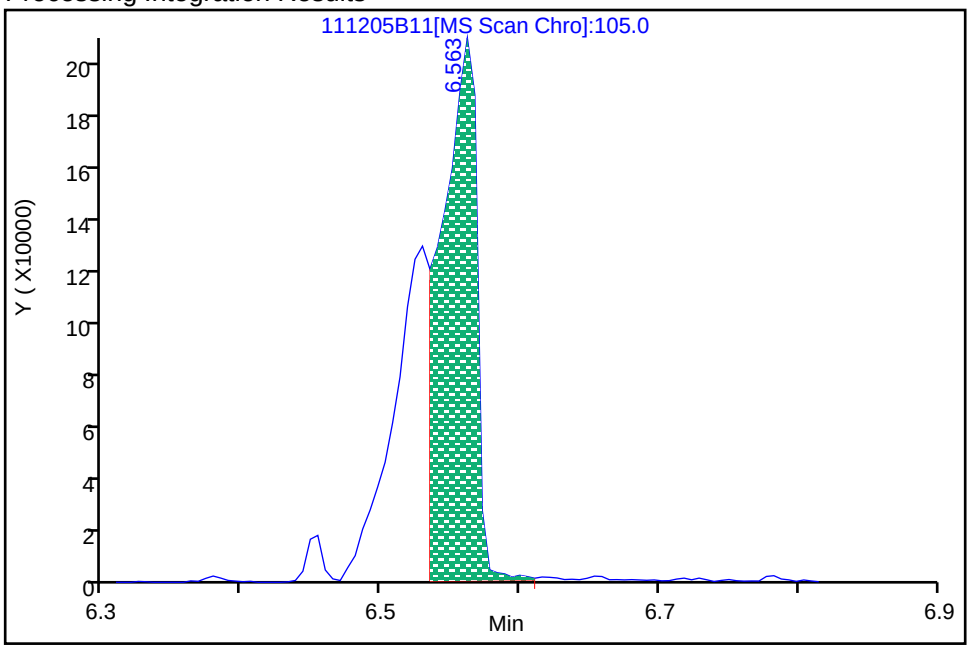
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B11.d		
Injection Date:	05-Dec-2019 15:49:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4164
Sample Info:	11120519B.b, SVMS 4164		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

36 Benzoic acid, CAS: 65-85-0

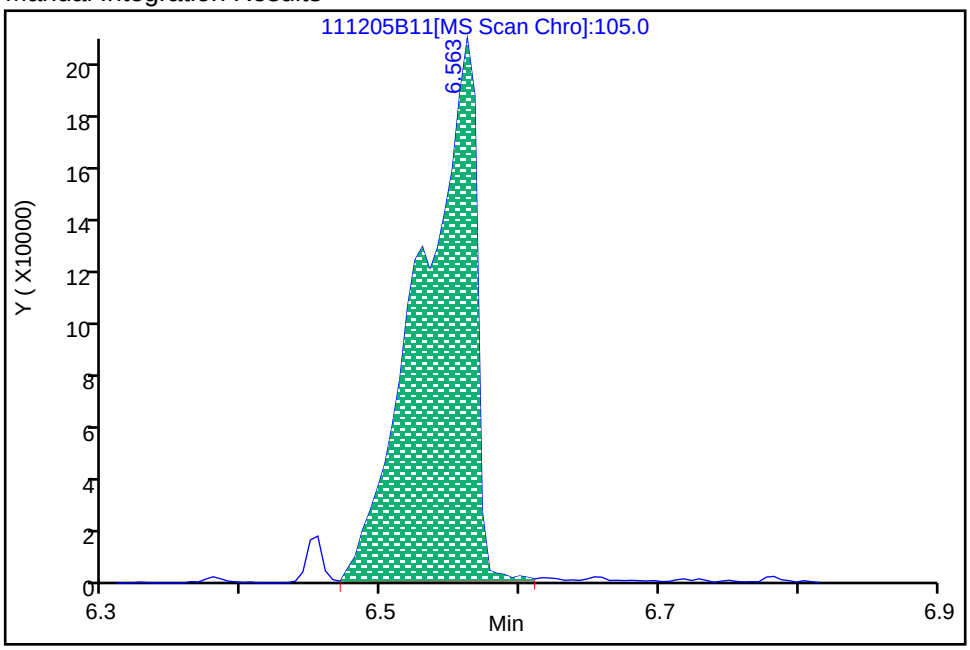
Processing Integration Results

RT: 6.563
Area: 354172
Amount: 40.001
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.563
Area: 576375
Amount: 62.405
Amount Units: ng



Data Editor: scd, 05-Dec-2019 16:12:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d
Lab Sample ID: SVMS 4165 Client Sample ID:
Injection Date: 05-Dec-2019 16:14:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4165
Misc. Info: 1STD030
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 16:35:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 16:14:30 Calib File: 111205B12.d
Sample Type: Ical, Level: 9 ALS Bottle: 9
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 16:34:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.680	3.680	0.000	56508	30.000	26.647	
2 N-Nitrosodimethylamine	42.0	3.878	3.878	0.000	454223	30.000	31.990	
1 pyridine	79.0	3.932	3.932	0.000	208896	30.000	31.423	
$ 6 2-Fluorophenol	112.0	4.788	4.788	0.000	524936	30.000	31.872	
$ 9 Phenol-d5	99.0	5.435	5.435	0.000	650549	30.000	32.441	
10 Phenol	94.0	5.445	5.445	0.000	743424	30.000	32.858	
11 Aniline	66.0	5.499	5.499	0.000	26640	30.000	11.424	
12 bis(2-Chloroethyl)ether	63.0	5.520	5.520	0.000	327926	30.000	28.871	
201 n-Decane	57.0	5.574	5.574	0.000	343146	30.000	37.034	
13 2-Chlorophenol	128.0	5.606	5.606	0.000	560839	30.000	32.094	
14 1,3-Dichlorobenzene	146.0	5.718	5.718	0.000	555263	30.000	33.793	
* 16 1,4-Dichlorobenzene-d4	152.0	5.761	5.761	0.000	233739	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.772	5.772	0.000	620504	30.000	34.034	
18 Benzyl alcohol	79.0	5.841	5.841	0.000	455010	30.000	31.639	M
20 o-Cresol	108.0	5.911	5.911	0.000	517775	30.000	33.101	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	536298	30.000	32.862	
21 bis(2Chloro1methylethyl)ether	45.0	5.927	5.927	0.000	318270	30.000	32.311	
23 m+p-Cresol	107.0	6.028	6.028	0.000	518641	30.000	31.139	
26 n-Nitroso-di-n-propylamine	70.0	6.039	6.039	0.000	425529	30.000	31.002	
24 Acetophenone	105.0	6.061	6.061	0.000	732820	30.000	31.099	
28 Hexachloroethane	117.0	6.168	6.168	0.000	249897	30.000	32.426	
$ 29 Nitrobenzene-d5	82.0	6.189	6.189	0.000	631409	30.000	34.717	
30 Nitrobenzene	77.0	6.205	6.205	0.000	609187	30.000	32.446	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.387	6.387	0.000	922546	30.000	33.707	
34 2,4-Dimethylphenol	107.0	6.456	6.456	0.000	523769	30.000	40.351	
33 2-Nitrophenol	139.0	6.456	6.456	0.000	315348	30.000	40.523	
36 Benzoic acid	105.0	6.574	6.574	0.000	670665	60.000	60.695	M
35 bis(2-Chloroethoxy)methane	93.0	6.526	6.526	0.000	551068	30.000	33.646	
38 2,4-Dichlorophenol	162.0	6.654	6.654	0.000	360015	30.000	34.964	
40 1,2,4-Trichlorobenzene	180.0	6.724	6.724	0.000	428292	30.000	36.755	
* 41 Naphthalene-d8	136.0	6.783	6.783	0.000	857563	20.000	20.000	
43 Naphthalene	128.0	6.804	6.804	0.000	1545383	30.000	35.388	
45 2,6-Dichlorophenol	162.0	6.836	6.836	0.000	353144	30.000	34.858	
47 Hexachlorobutadiene	224.6	6.879	6.879	0.000	308816	30.000	38.222	
49 4-Chloro-3-methylphenol	107.0	7.200	7.200	0.000	483357	30.000	35.399	
51 2-Methylnaphthalene	142.0	7.366	7.366	0.000	1043286	30.000	37.135	
204 1-Methylnaphthalene	142.0	7.451	7.451	0.000	967653	30.000	36.743	
53 Hexachlorocyclopentadiene	237.0	7.494	7.494	0.000	3560687	150.00	146.97	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.510	7.510	0.000	547796	30.000	48.105	
54 2,4,6-Trichlorophenol	196.0	7.590	7.590	0.000	249389	30.000	35.930	
55 2,4,5-Trichlorophenol	196.0	7.633	7.633	0.000	251476	30.000	36.941	
$ 56 2-Fluorobiphenyl	172.0	7.654	7.654	0.000	1081466	30.000	37.896	
184 Biphenyl	154.0	7.745	7.745	0.000	1113498	30.000	36.740	
58 2-Chloronaphthalene	162.0	7.783	7.783	0.000	846925	30.000	37.190	
62 Dimethylphthalate	163.0	7.975	7.975	0.000	886075	30.000	34.364	
65 2,6-Dinitrotoluene	165.0	8.040	8.040	0.000	204448	30.000	36.358	
64 Acenaphthylene	152.0	8.136	8.136	0.000	1228219	30.000	36.692	
* 67 Acenaphthene-d10	164.0	8.254	8.254	0.000	414423	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.280	8.280	0.000	386762	60.000	59.377	
68 Acenaphthene	153.0	8.280	8.280	0.000	1167483	30.000	45.337	
70 4-Nitrophenol	109.0	8.323	8.323	0.000	518900	60.000	64.743	
73 2,4-Dinitrotoluene	165.0	8.387	8.387	0.000	237132	30.000	35.137	
71 Dibenzofuran	168.0	8.425	8.425	0.000	1070020	30.000	35.793	
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	200343	30.000	39.952	
78 Diethylphthalate	149.0	8.553	8.553	0.000	1060752	30.000	36.168	
80 4-Chlorophenylphenylether	204.0	8.681	8.681	0.000	414361	30.000	36.457	
79 Fluorene	166.0	8.713	8.713	0.000	956125	30.000	37.949	
84 4,6-Dinitro-2-methylphenol	198.0	8.735	8.735	0.000	135232	30.000	37.101	
86 n-Nitrosodiphenylamine	169.0	8.778	8.778	0.000	595428	30.000	35.153	
87 Azobenzene	77.0	8.820	8.820	0.000	1357953	30.000	34.545	
$ 88 2,4,6-Tribromophenol	330.0	8.917	8.917	0.000	87253	30.000	34.892	
94 4-Bromophenylphenylether	248.0	9.099	9.099	0.000	222568	30.000	40.146	
96 Hexachlorobenzene	284.0	9.184	9.184	0.000	223744	30.000	41.800	
202 Octadecane	57.0	9.302	9.302	0.000	538260	30.000	39.471	
99 Pentachlorophenol	266.0	9.345	9.345	0.000	335600	60.000	62.533	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	637957	20.000	20.000	
103 Phenanthrene	178.0	9.537	9.537	0.000	1330783	30.000	38.327	
104 Anthracene	178.0	9.580	9.580	0.000	1207874	30.000	39.021	
106 Carbazole	167.0	9.698	9.698	0.000	1037683	30.000	36.237	
109 Di-n-butylphthalate	149.0	9.912	9.912	0.000	1738859	30.000	38.413	
114 Fluoranthene	202.0	10.596	10.596	0.000	1297087	30.000	38.991	
116 Pyrene	202.0	10.837	10.837	0.000	1299436	30.000	34.974	
$ 117 Terphenyl-d14	244.0	10.928	10.928	0.000	955191	30.000	36.537	
122 Butylbenzylphthalate	149.0	11.431	11.431	0.000	706413	30.000	35.308	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.126	12.126	0.000	988845	30.000	36.077	
127 Benzo(a)Anthracene	228.0	12.260	12.260	0.000	1061817	30.000	30.553	
* 128 Chrysene-d12	240.0	12.276	12.276	0.000	600750	20.000	20.000	
129 Chrysene	228.0	12.313	12.313	0.000	1096882	30.000	33.778	
131 Di-n-octylphthalate	149.0	13.067	13.067	0.000	1717169	30.000	32.815	
132 Benzo(b)fluoranthene	252.0	13.837	13.837	0.000	1054031	30.000	37.650	
134 Benzo(k)fluoranthene	252.0	13.886	13.886	0.000	1156996	30.000	38.068	
135 Benzo(a)pyrene	252.0	14.351	14.351	0.000	937450	30.000	36.704	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	530819	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.373	16.373	0.000	1467554	30.000	37.845	
139 Dibenzo(a,h)anthracene	278.0	16.373	16.373	0.000	1397507	30.000	41.425	
140 Benzo(g,h,i)perylene	276.0	16.934	16.934	0.000	926005	30.000	32.656	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

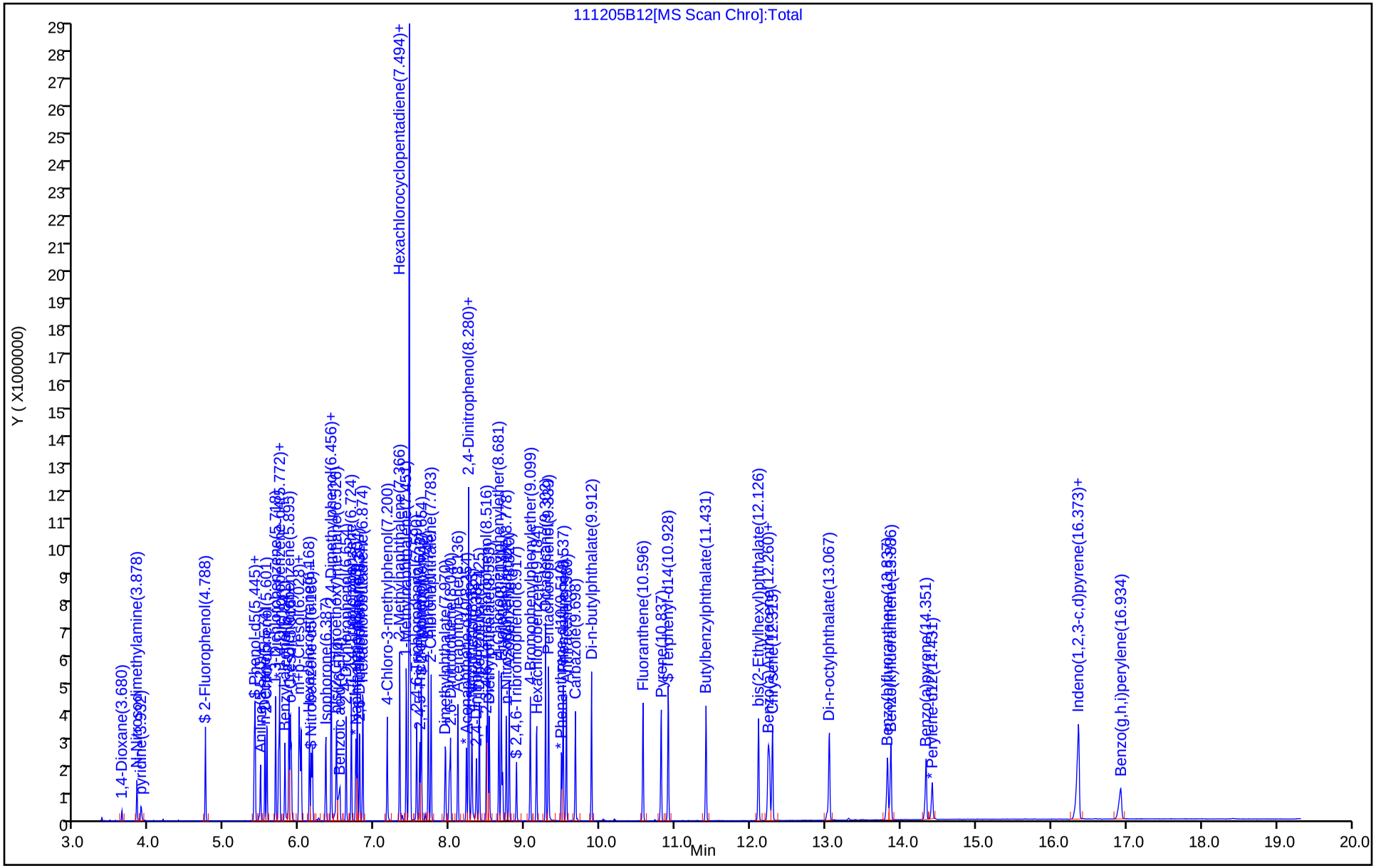
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d				
Injection Date:	05-Dec-2019 16:14:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4165		
Sample Info:	11120519B.b, SVMS 4165				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

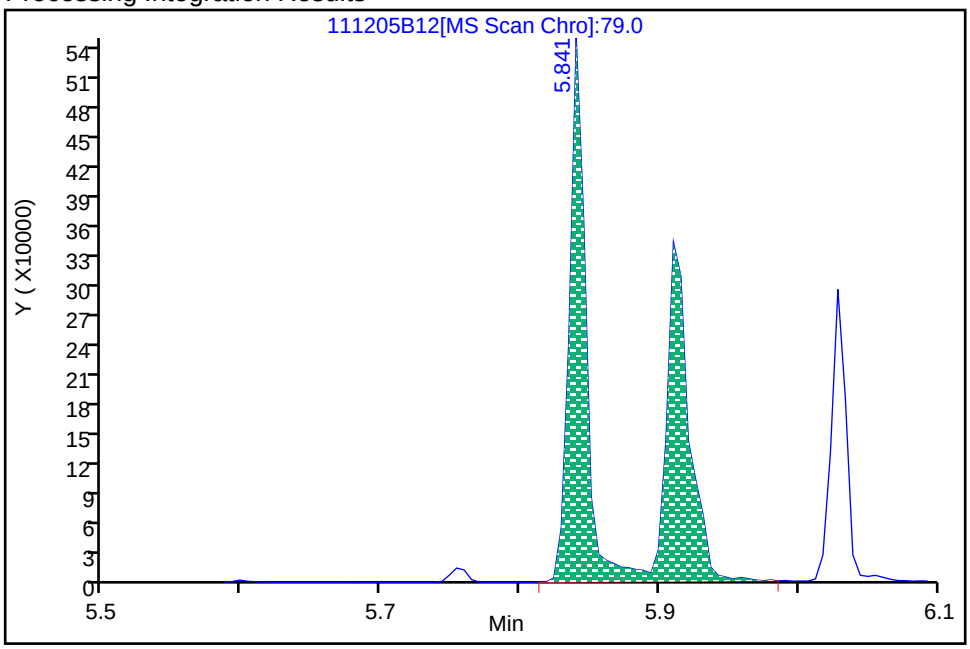
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d		
Injection Date:	05-Dec-2019 16:14:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4165
Sample Info:	11120519B.b, SVMS 4165		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

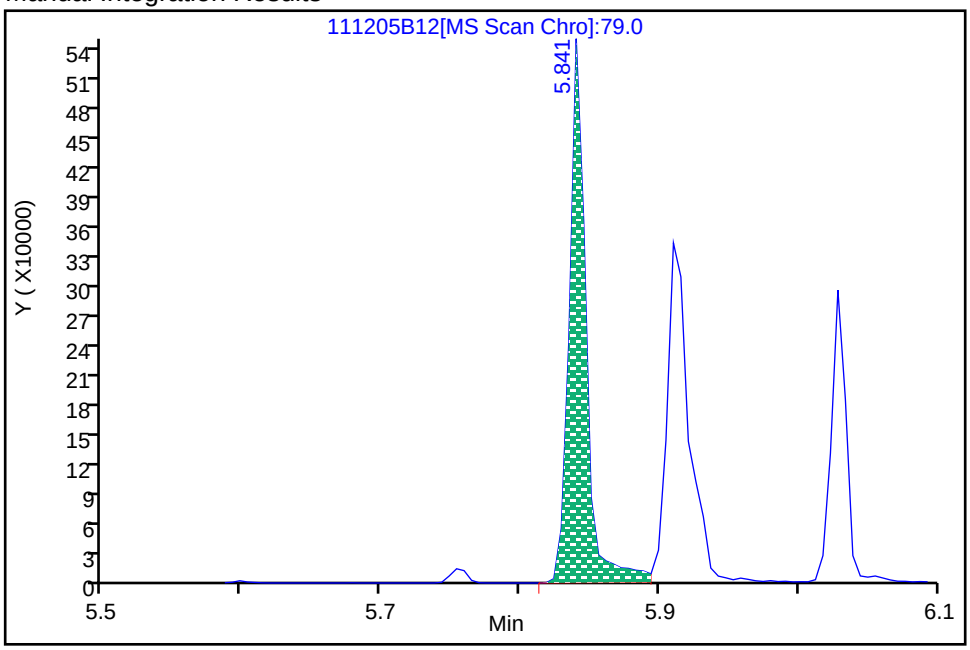
Processing Integration Results

RT: 5.841
Area: 826775
Amount: 57.942
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.841
Area: 455010
Amount: 31.639
Amount Units: ng



Data Editor: scd, 05-Dec-2019 16:34:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

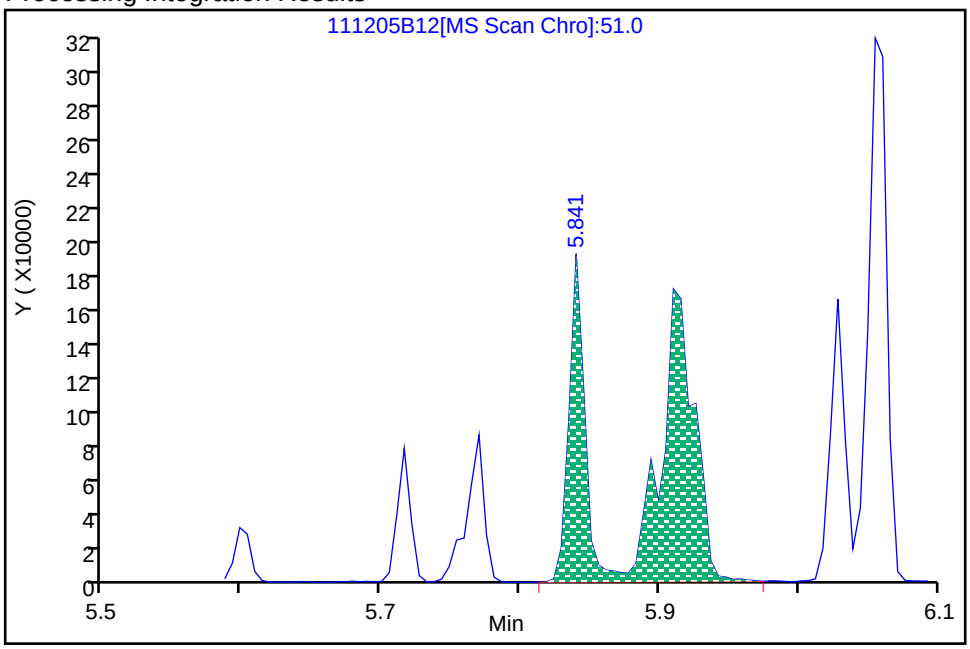
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d		
Injection Date:	05-Dec-2019 16:14:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4165
Sample Info:	11120519B.b, SVMS 4165		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

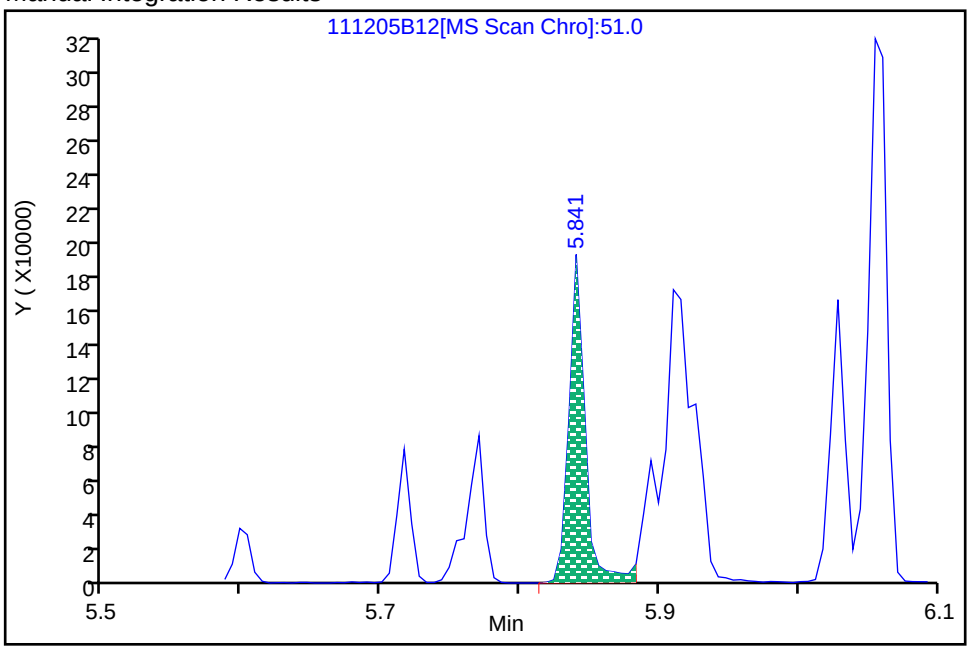
Processing Integration Results

RT: 5.841
Area: 423950
Amount: 57.942
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.841
Area: 153440
Amount: 31.639
Amount Units: ng



Data Editor: scd, 05-Dec-2019 16:34:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

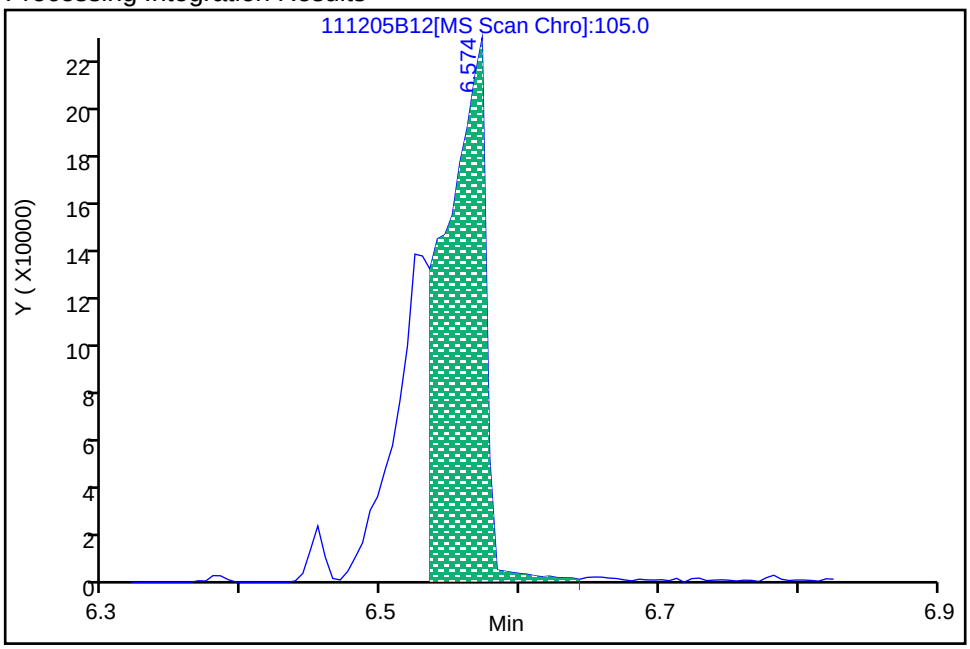
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d		
Injection Date:	05-Dec-2019 16:14:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4165
Sample Info:	11120519B.b, SVMS 4165		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

36 Benzoic acid, CAS: 65-85-0

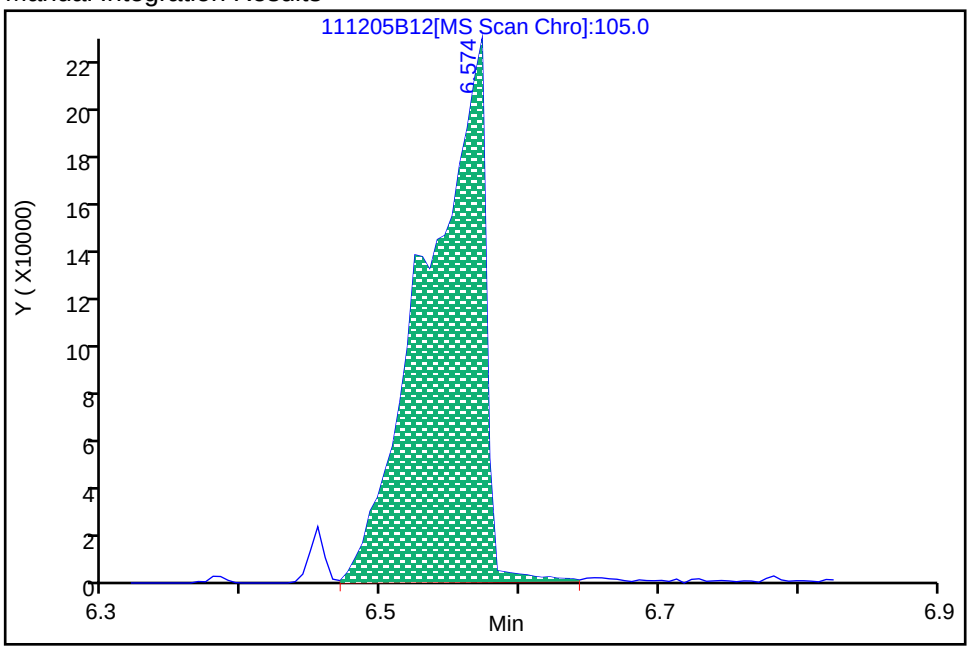
Processing Integration Results

RT: 6.574
Area: 443185
Amount: 40.783
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.574
Area: 670665
Amount: 60.695
Amount Units: ng



Data Editor: scd, 05-Dec-2019 16:34:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

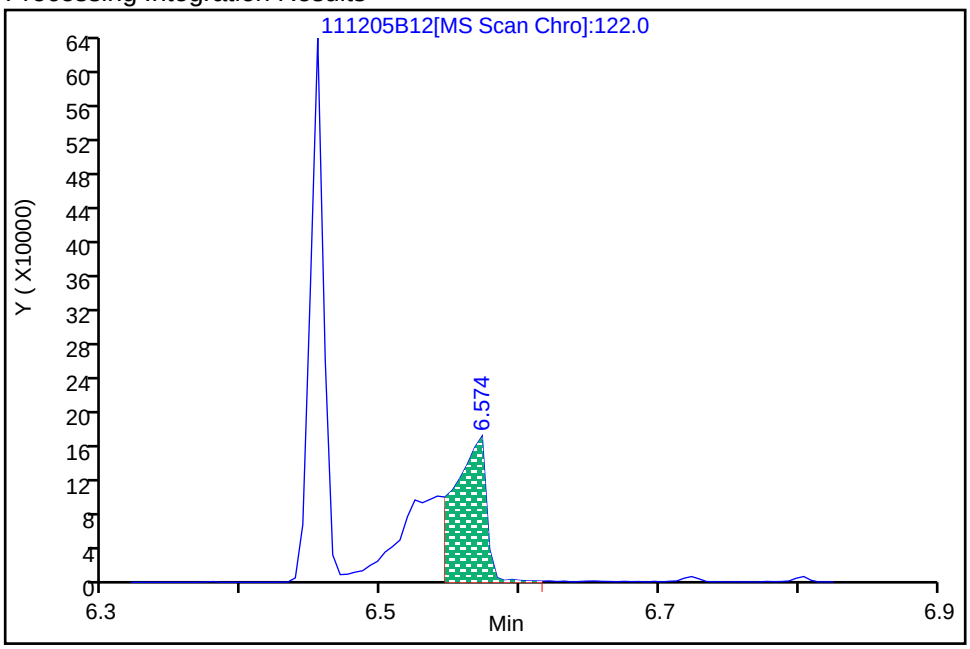
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d		
Injection Date:	05-Dec-2019 16:14:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4165
Sample Info:	11120519B.b, SVMS 4165		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

36 Benzoic acid, CAS: 65-85-0

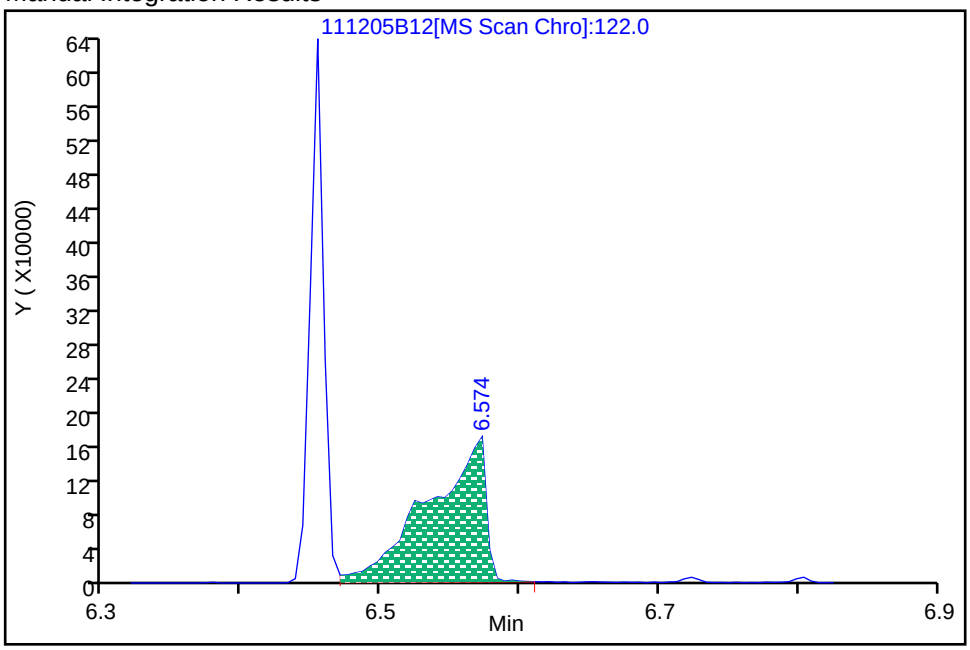
Processing Integration Results

RT: 6.574
Area: 255822
Amount: 40.783
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.574
Area: 481468
Amount: 60.695
Amount Units: ng



Data Editor: scd, 05-Dec-2019 16:34:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 05-Dec-2019 16:35:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

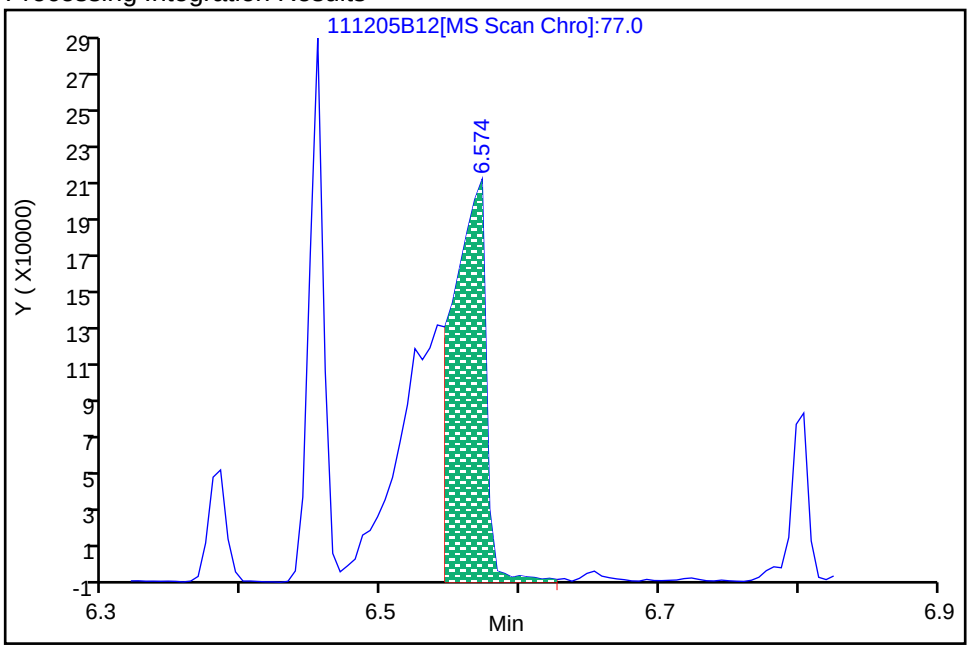
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B12.d		
Injection Date:	05-Dec-2019 16:14:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4165
Sample Info:	11120519B.b, SVMS 4165		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

36 Benzoic acid, CAS: 65-85-0

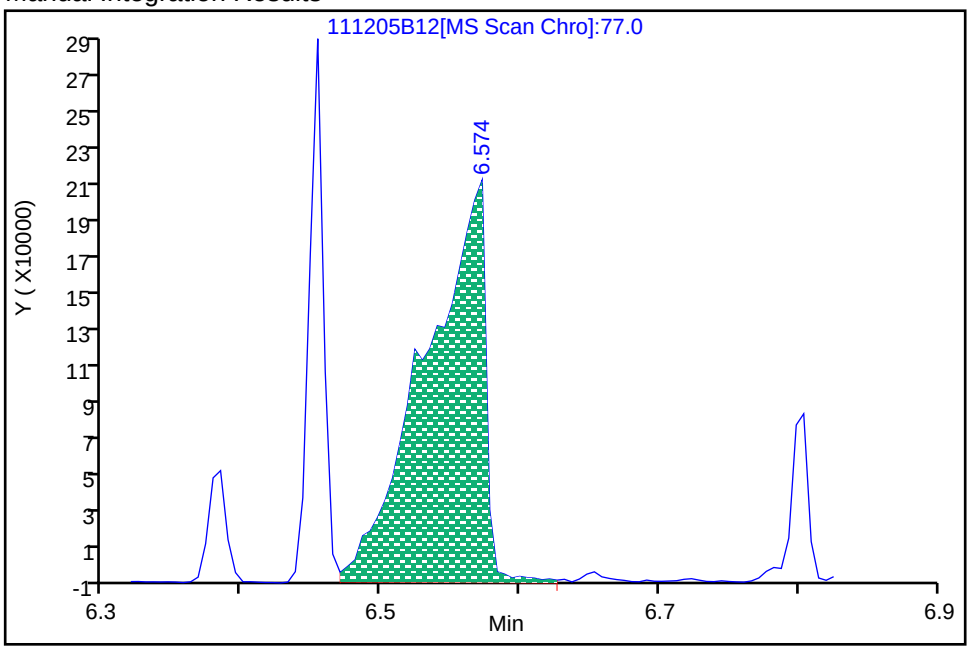
Processing Integration Results

RT: 6.574
Area: 335114
Amount: 40.783
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.574
Area: 637318
Amount: 60.695
Amount Units: ng



Data Editor: scd, 05-Dec-2019 16:34:30
Audit Action: Mint
Audit Reason: Split Peak

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B14.d
Lab Sample ID: SVMS 4212 Client Sample ID:
Injection Date: 05-Dec-2019 17:04:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4212
Misc. Info: 3STD001
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 18:04:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 17:29:30 Calib File: 111205B15.d
Sample Type: Ical, Level: 2 ALS Bottle: 11
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 18:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	10043	1.0000	1.0000	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	165380	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	692108	20.000	20.000	
44 4-Chloroaniline	127.0	6.825	6.825	0.000	9148	1.0000	1.0000	
196 Caprolactam	113.0	7.088	7.088	0.000	2171	1.0000	1.0000	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	360966	20.000	20.000	
200 Atrazine	200.0	9.195	9.195	0.000	4814	1.0000	1.0000	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	533862	20.000	20.000	
115 Benzidine	184.0	10.682	10.682	0.000	35147	5.0000	5.0000	
125 3,3'-Dichlorobenzidine	252.0	12.174	12.174	0.000	5957	1.0000	1.0000	
* 128 Chrysene-d12	240.0	12.265	12.265	0.000	424657	20.000	20.000	
* 136 Perylene-d12	264.0	14.426	14.426	0.000	437306	20.000	20.000	
60 2-Nitroaniline	138.0	7.852	7.852	0.000	4571	1.0000	1.0000	
66 3-Nitroaniline	138.0	8.200	8.200	0.000	4018	1.0000	1.0000	
83 4-Nitroaniline	138.0	8.724	8.724	0.000	3041	1.0000	1.0000	

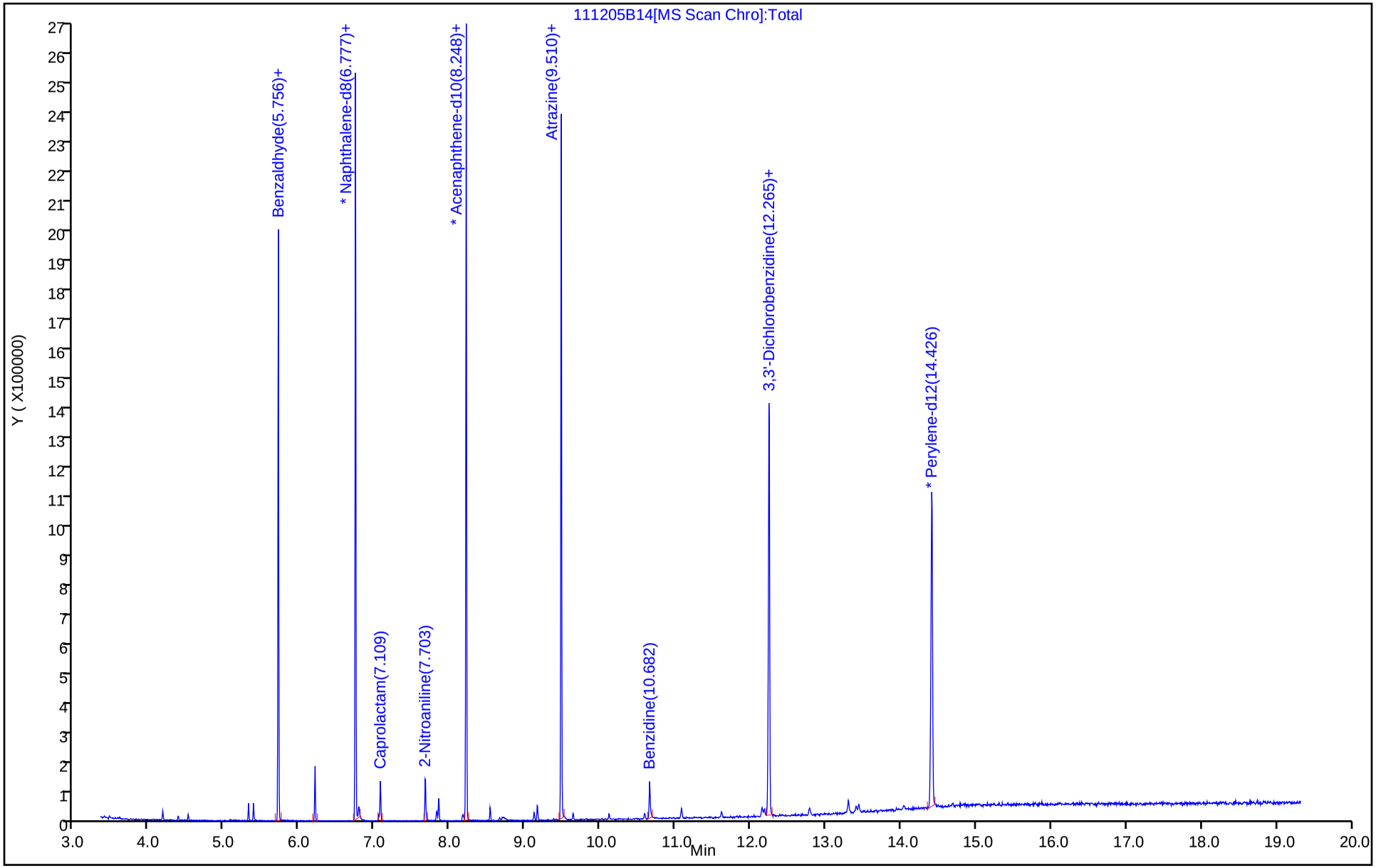
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 05-Dec-2019 18:04:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B14.d				
Injection Date:	05-Dec-2019 17:04:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4212		
Sample Info:	11120519B.b, SVMS 4212				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B15.d
Lab Sample ID: SVMS 4213 Client Sample ID:
Injection Date: 05-Dec-2019 17:29:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4213
Misc. Info: 3STD002
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 05-Dec-2019 18:04:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 17:29:30 Calib File: 111205B15.d
Sample Type: Ical, Level: 3 ALS Bottle: 12
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 05-Dec-2019 18:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	14946	2.0000	1.8150	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	148149	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	655523	20.000	20.000	
44 4-Chloroaniline	127.0	6.820	6.820	0.000	18295	2.0000	2.0542	
196 Caprolactam	113.0	7.088	7.088	0.000	4712	2.0000	2.1359	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	330497	20.000	20.000	
200 Atrazine	200.0	9.190	9.190	0.000	8458	2.0000	1.9158	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	510235	20.000	20.000	
115 Benzidine	184.0	10.682	10.682	0.000	95406	10.000	11.638	
125 3,3'-Dichlorobenzidine	252.0	12.174	12.174	0.000	11131	2.0000	1.9572	
* 128 Chrysene-d12	240.0	12.265	12.265	0.000	414120	20.000	20.000	
* 136 Perylene-d12	264.0	14.426	14.426	0.000	429556	20.000	20.000	
60 2-Nitroaniline	138.0	7.852	7.852	0.000	9471	2.0000	2.1234	
66 3-Nitroaniline	138.0	8.200	8.200	0.000	6560	2.0000	1.8854	
83 4-Nitroaniline	138.0	8.719	8.719	0.000	6925	2.0000	2.2171	

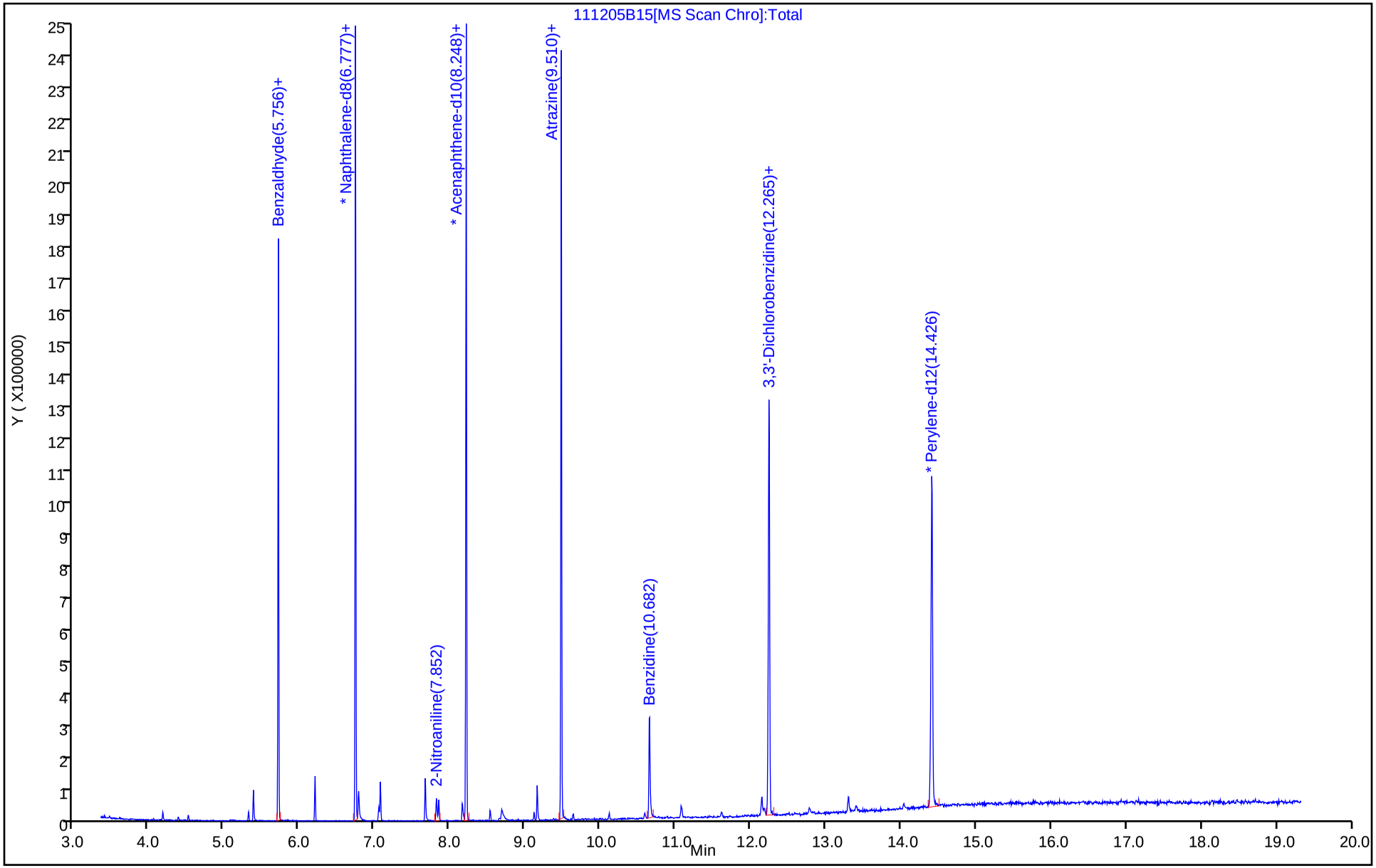
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 05-Dec-2019 18:04:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B15.d				
Injection Date:	05-Dec-2019 17:29:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4213		
Sample Info:	11120519B.b, SVMS 4213				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B16.d
Lab Sample ID: SVMS 4214 Client Sample ID:
Injection Date: 05-Dec-2019 17:54:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4214
Misc. Info: 3STD005
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 09:25:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: Ical, Level: 4 ALS Bottle: 13
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 06-Dec-2019 09:25:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	45071	5.0000	5.3182	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	147614	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	698566	20.000	20.000	
44 4-Chloroaniline	127.0	6.820	6.820	0.000	52945	5.0000	5.3714	
196 Caprolactam	113.0	7.088	7.088	0.000	13033	5.0000	5.3498	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	365972	20.000	20.000	
200 Atrazine	200.0	9.190	9.190	0.000	23935	5.0000	5.0483	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	545290	20.000	20.000	
115 Benzidine	184.0	10.682	10.682	0.000	393448	25.000	35.214	
125 3,3'-Dichlorobenzidine	252.0	12.169	12.169	0.000	28346	5.0000	4.7229	
* 128 Chrysene-d12	240.0	12.265	12.265	0.000	449127	20.000	20.000	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	467974	20.000	20.000	
60 2-Nitroaniline	138.0	7.847	7.847	0.000	24892	5.0000	5.0265	
66 3-Nitroaniline	138.0	8.195	8.195	0.000	19683	5.0000	5.0719	
83 4-Nitroaniline	138.0	8.714	8.714	0.000	19132	5.0000	5.3423	

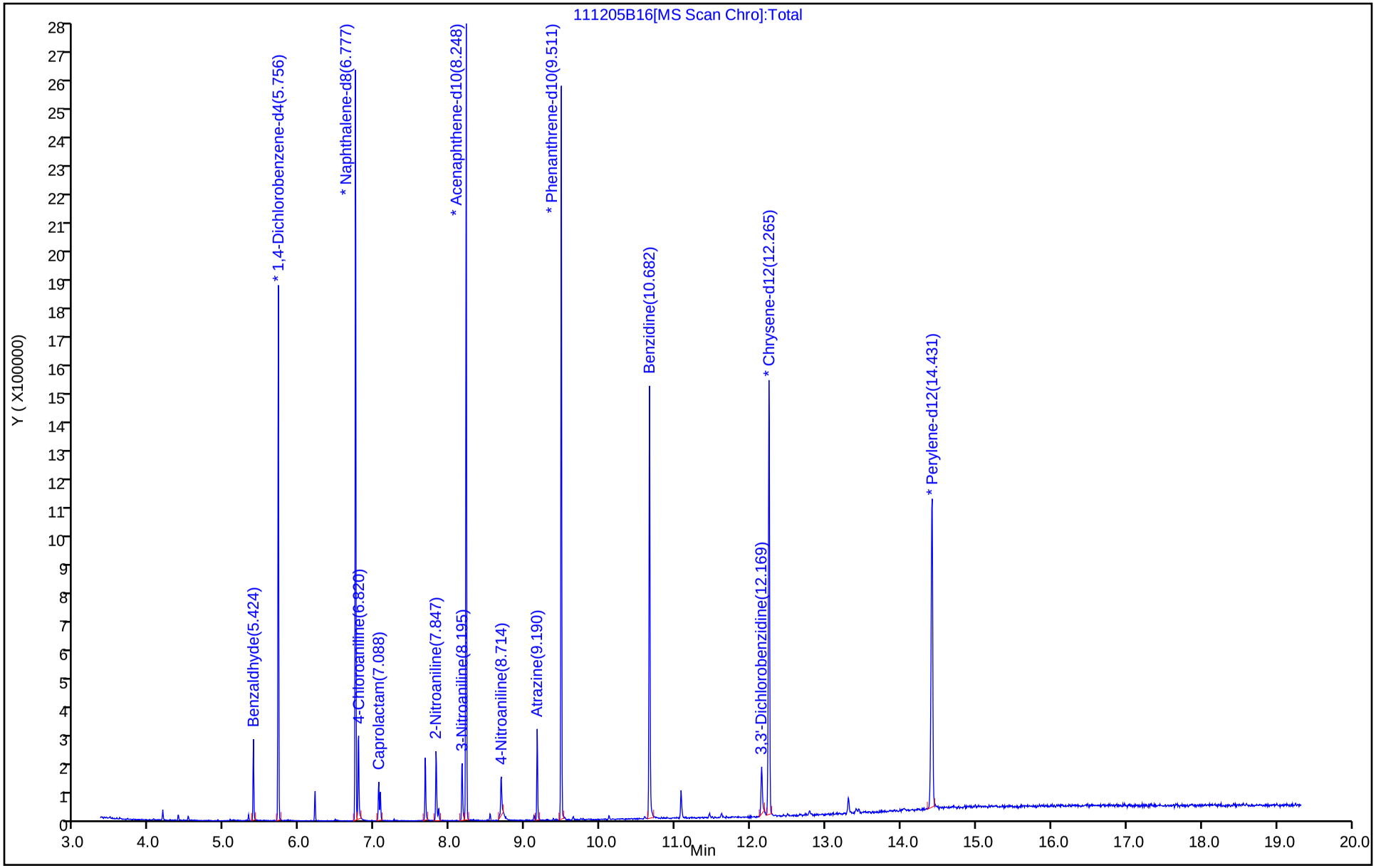
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 06-Dec-2019 09:26:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B16.d				
Injection Date:	05-Dec-2019 17:54:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4214		
Sample Info:	11120519B.b, SVMS 4214				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B17.d
Lab Sample ID: SVMS 4215 Client Sample ID:
Injection Date: 05-Dec-2019 18:19:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4215
Misc. Info: 3STD010
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 09:25:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: Ical, Level: 5 ALS Bottle: 14
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 06-Dec-2019 09:25:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	92283	10.000	10.208	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	156375	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	714938	20.000	20.000	
44 4-Chloroaniline	127.0	6.815	6.815	0.000	121571	10.000	11.463	
196 Caprolactam	113.0	7.093	7.093	0.000	31180	10.000	11.768	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	371578	20.000	20.000	
200 Atrazine	200.0	9.195	9.195	0.000	53091	10.000	10.303	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	586677	20.000	20.000	
115 Benzidine	184.0	10.687	10.687	0.000	1094139	50.000	79.796	
125 3,3'-Dichlorobenzidine	252.0	12.169	12.169	0.000	67263	10.000	11.012	
* 128 Chrysene-d12	240.0	12.271	12.271	0.000	441682	20.000	20.000	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	462355	20.000	20.000	
60 2-Nitroaniline	138.0	7.847	7.847	0.000	56466	10.000	10.895	
66 3-Nitroaniline	138.0	8.190	8.190	0.000	45254	10.000	11.074	
83 4-Nitroaniline	138.0	8.708	8.708	0.000	42051	10.000	11.129	

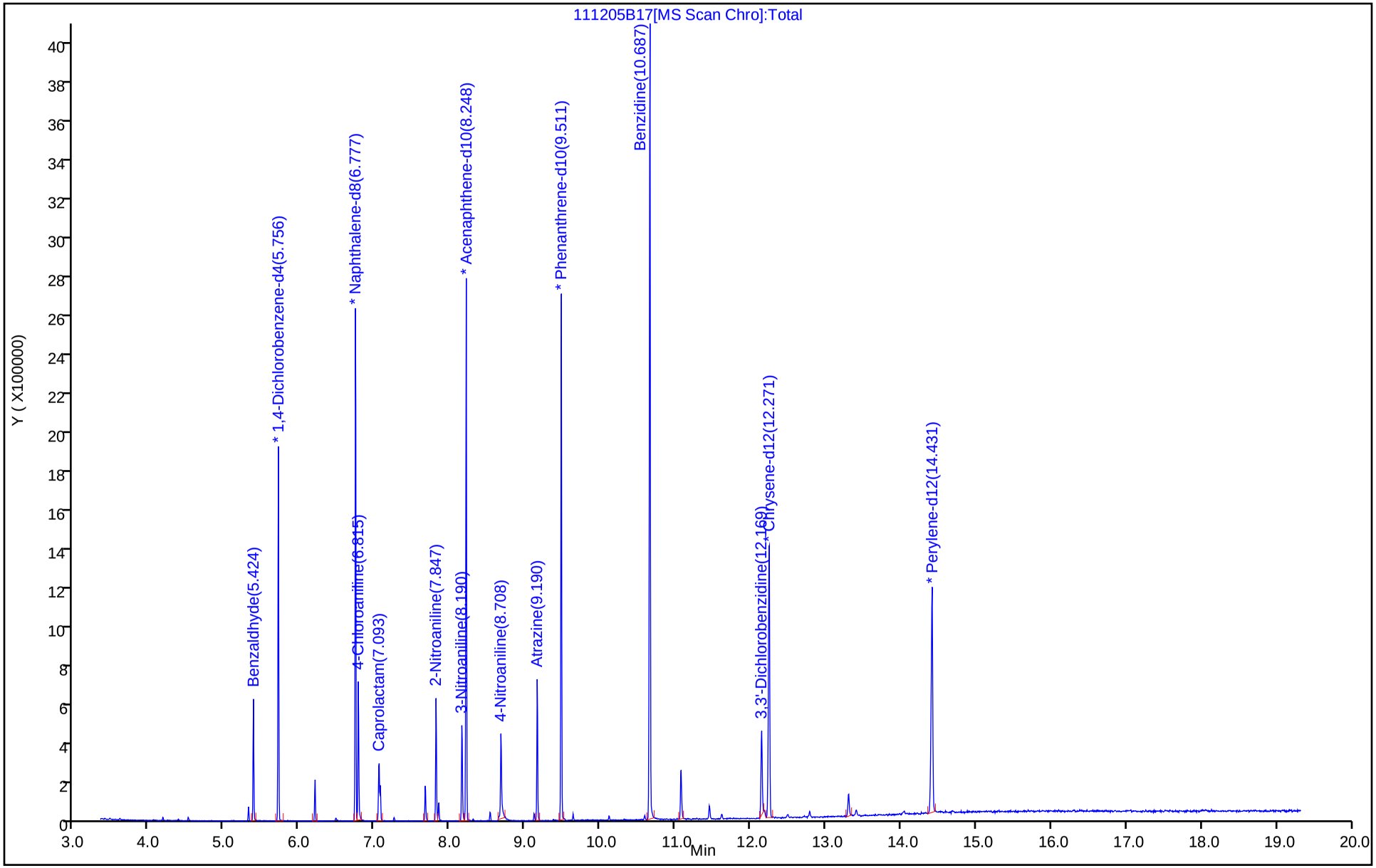
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 06-Dec-2019 09:26:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B17.d				
Injection Date:	05-Dec-2019 18:19:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4215		
Sample Info:	11120519B.b, SVMS 4215				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B18.d
Lab Sample ID: SVMS 4216 Client Sample ID:
Injection Date: 05-Dec-2019 18:44:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4216
Misc. Info: 3STD015
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 09:25:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: Ical, Level: 6 ALS Bottle: 15
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 06-Dec-2019 09:25:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	129504	15.000	16.295	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	134502	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	668531	20.000	20.000	
44 4-Chloroaniline	127.0	6.820	6.820	0.000	185272	15.000	17.808	
196 Caprolactam	113.0	7.093	7.093	0.000	45909	15.000	17.697	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	348979	20.000	20.000	
200 Atrazine	200.0	9.195	9.195	0.000	83667	15.000	16.876	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	546785	20.000	20.000	
115 Benzidine	184.0	10.693	10.693	0.000	2044050	75.000	128.26	
125 3,3'-Dichlorobenzidine	252.0	12.169	12.169	0.000	114845	15.000	18.515	
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	422235	20.000	20.000	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	424424	20.000	20.000	
60 2-Nitroaniline	138.0	7.847	7.847	0.000	88141	15.000	17.388	
66 3-Nitroaniline	138.0	8.195	8.195	0.000	66955	15.000	16.894	
83 4-Nitroaniline	138.0	8.714	8.714	0.000	66382	15.000	17.826	

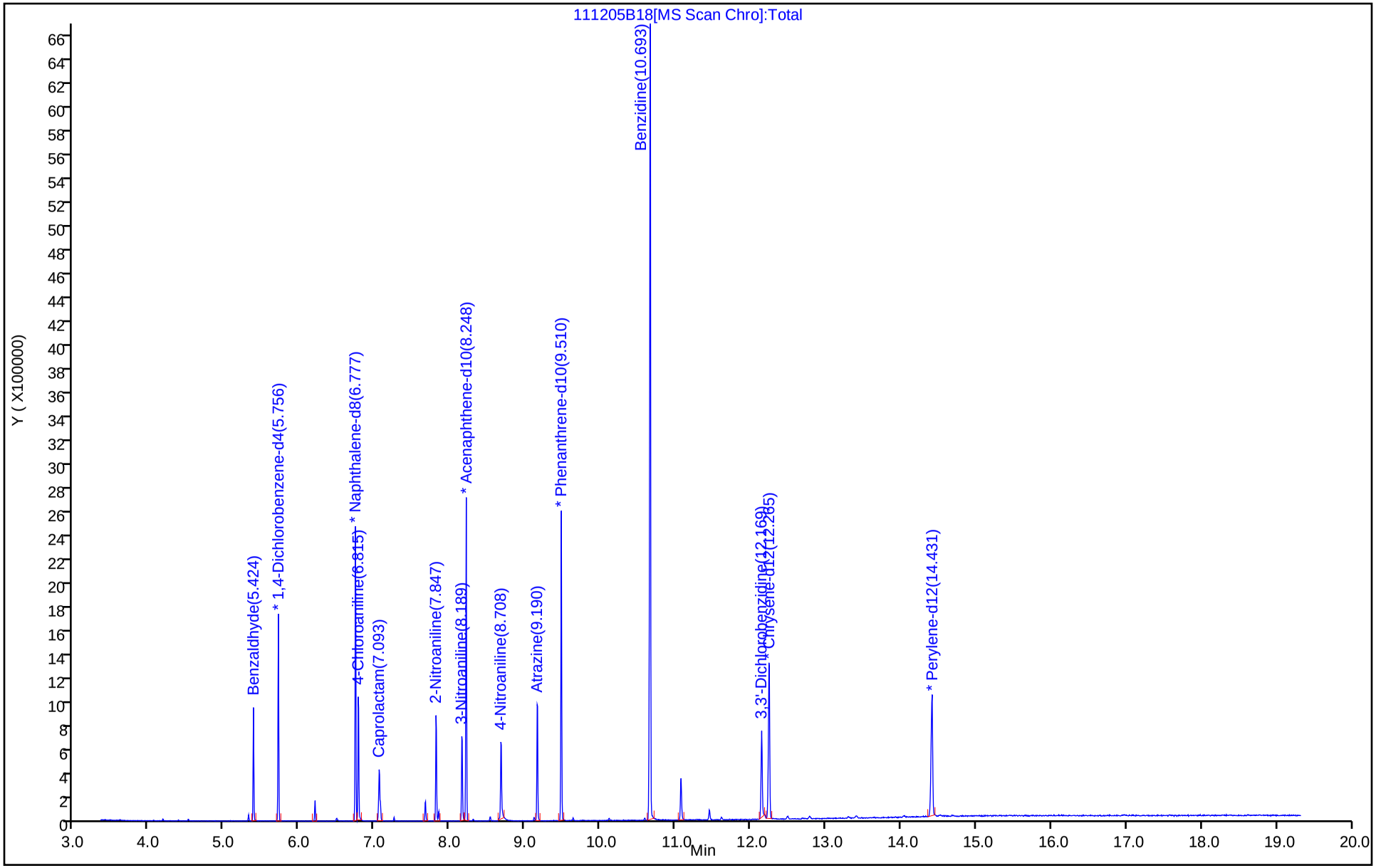
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 06-Dec-2019 09:26:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B18.d				
Injection Date:	05-Dec-2019 18:44:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4216		
Sample Info:	11120519B.b, SVMS 4216				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B19.d
Lab Sample ID: SVMS 4217 Client Sample ID:
Injection Date: 05-Dec-2019 19:10:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4217
Misc. Info: 3STD020
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 09:25:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: Ical, Level: 7 ALS Bottle: 16
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 06-Dec-2019 09:25:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	172415	20.000	20.062	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	145356	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	715606	20.000	20.000	
44 4-Chloroaniline	127.0	6.815	6.815	0.000	267156	20.000	23.218	
196 Caprolactam	113.0	7.098	7.098	0.000	62939	20.000	22.174	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	376379	20.000	20.000	
200 Atrazine	200.0	9.195	9.195	0.000	119231	20.000	22.719	
* 102 Phenanthrene-d10	188.0	9.510	9.510	0.000	563070	20.000	20.000	
115 Benzidine	184.0	10.693	10.693	0.000	3588824	100.00	175.46	
125 3,3'-Dichlorobenzidine	252.0	12.169	12.169	0.000	171441	20.000	24.279	
* 128 Chrysene-d12	240.0	12.270	12.270	0.000	460112	20.000	20.000	
* 136 Perylene-d12	264.0	14.431	14.431	0.000	460235	20.000	20.000	
60 2-Nitroaniline	138.0	7.852	7.852	0.000	123537	20.000	22.118	
66 3-Nitroaniline	138.0	8.195	8.195	0.000	95888	20.000	21.988	
83 4-Nitroaniline	138.0	8.714	8.714	0.000	96415	20.000	23.230	

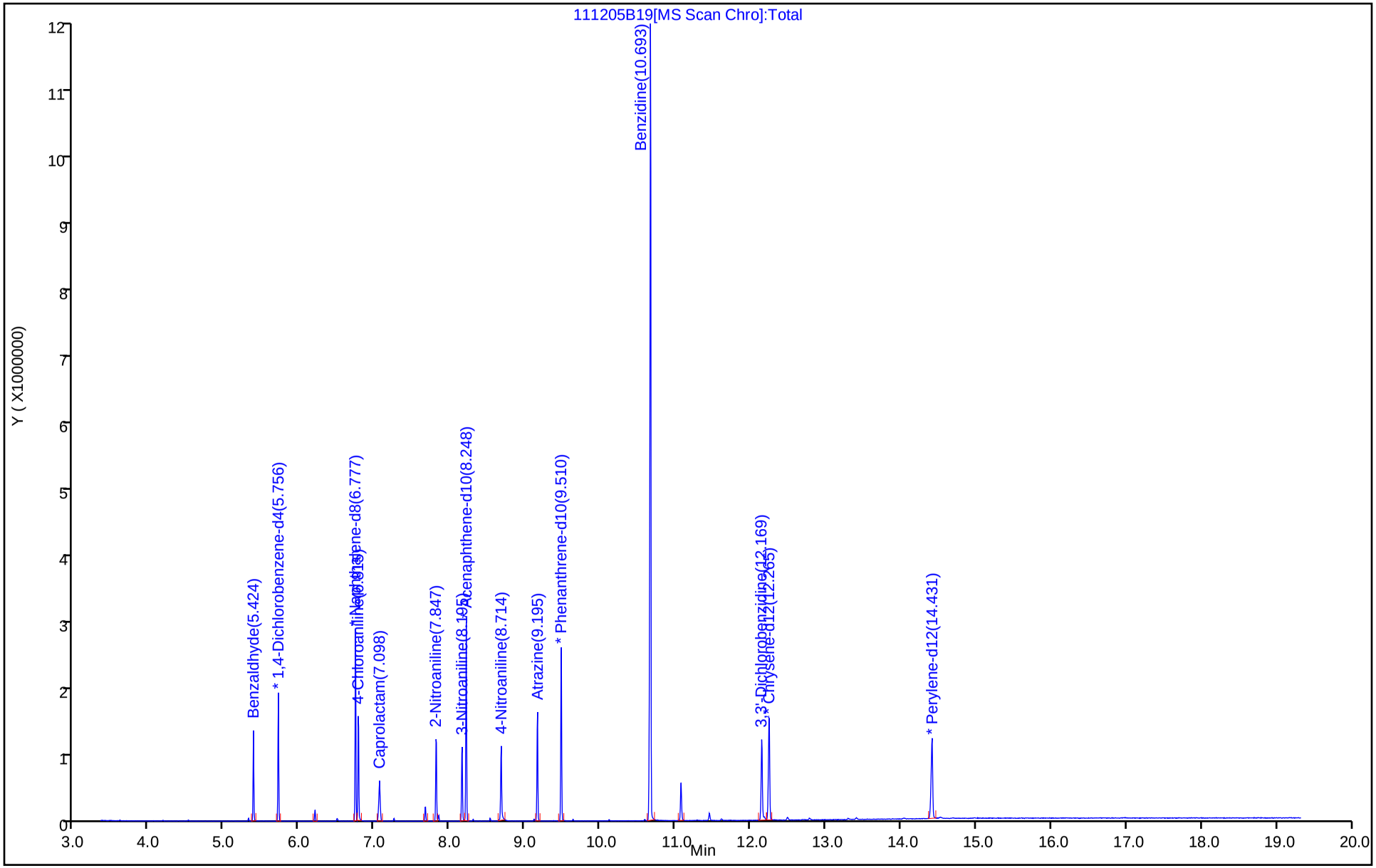
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 06-Dec-2019 09:26:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B19.d				
Injection Date:	05-Dec-2019 19:10:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4217		
Sample Info:	11120519B.b, SVMS 4217				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B20.d
Lab Sample ID: SVMS 4218 Client Sample ID:
Injection Date: 05-Dec-2019 19:35:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4218
Misc. Info: 3STD025
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 09:25:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: Ical, Level: 8 ALS Bottle: 17
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 06-Dec-2019 09:25:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	205210	25.000	25.339	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	136665	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	618760	20.000	20.000	
44 4-Chloroaniline	127.0	6.820	6.820	0.000	305427	25.000	29.730	
196 Caprolactam	113.0	7.104	7.104	0.000	72932	25.000	28.936	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	330378	20.000	20.000	
200 Atrazine	200.0	9.195	9.195	0.000	144018	25.000	30.014	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	497607	20.000	20.000	
115 Benzidine	184.0	10.698	10.698	0.000	4257561	125.00	212.93	
125 3,3'-Dichlorobenzidine	252.0	12.169	12.169	0.000	198398	25.000	31.210	
* 128 Chrysene-d12	240.0	12.271	12.271	0.000	397056	20.000	20.000	
* 136 Perylene-d12	264.0	14.426	14.426	0.000	394733	20.000	20.000	
60 2-Nitroaniline	138.0	7.853	7.853	0.000	143878	25.000	28.635	
66 3-Nitroaniline	138.0	8.195	8.195	0.000	109429	25.000	28.013	
83 4-Nitroaniline	138.0	8.714	8.714	0.000	105834	25.000	28.393	

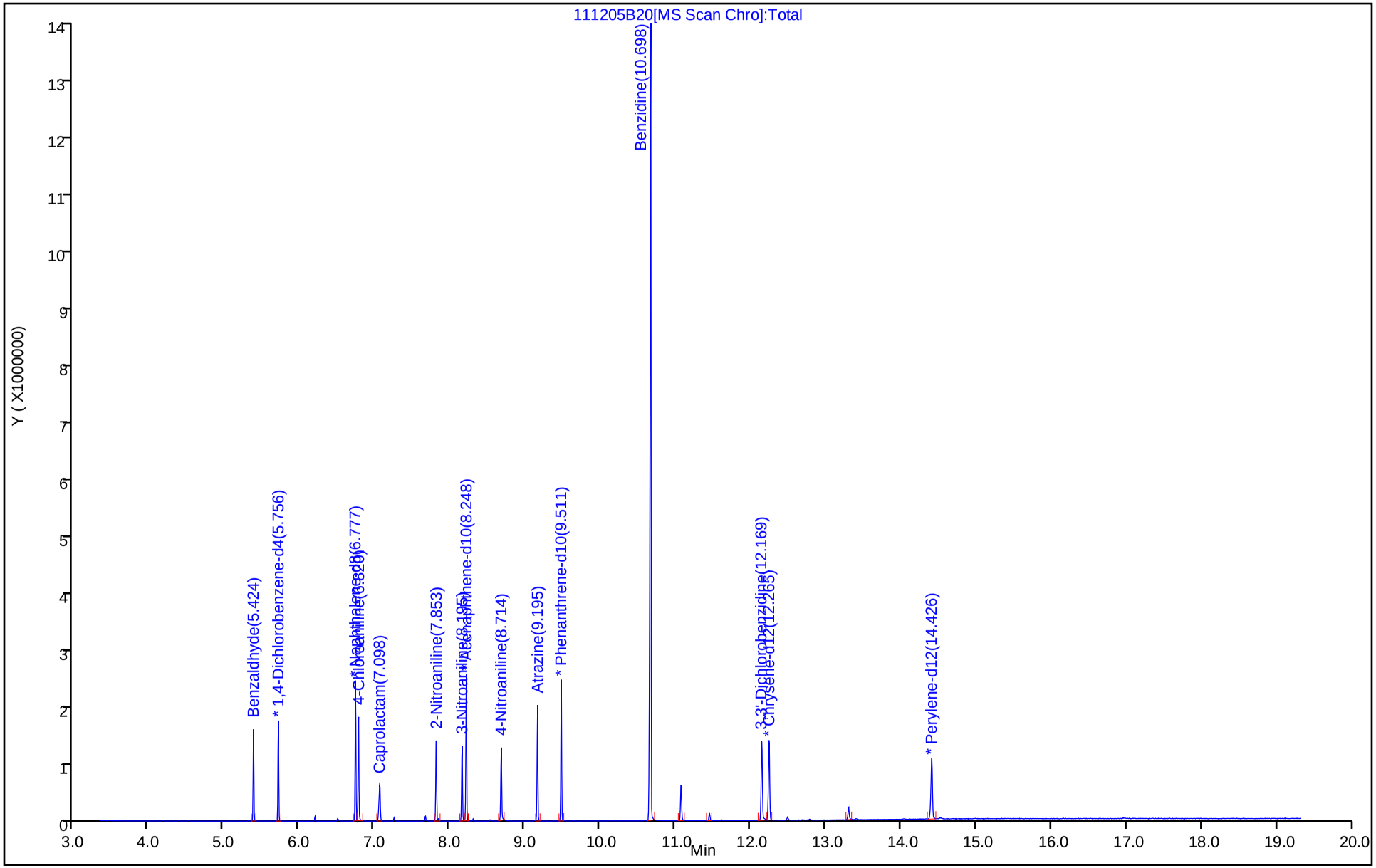
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 06-Dec-2019 09:26:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B20.d				
Injection Date:	05-Dec-2019 19:35:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4218		
Sample Info:	11120519B.b, SVMS 4218				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\HH\chem\msd11.i\11120519B.b\111205B13.d
Lab Sample ID: SVMS 4221 Client Sample ID: 1STDICV
Injection Date: 05-Dec-2019 16:39:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4221
Misc. Info: 1STDICV
Method: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 17:12:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: LCS ALS Bottle: 10
Cpnd Sublist: 1STD.sub Spike List File: ICV1.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 pyridine	20	21.874	9.4	109	70- 130
2 N-Nitrosodimethylamine	20	16.504	-17.5	82.5	70- 130
10 Phenol	20	17.694	-11.5	88.5	70- 130
12 bis(2-Chloroethyl)ether	20	19.884	-0.6	99.4	70- 130
13 2-Chlorophenol	20	19.184	-4.1	95.9	70- 130
14 1,3-Dichlorobenzene	20	17.673	-11.6	88.4	70- 130
17 1,4-Dichlorobenzene	20	17.079	-14.6	85.4	70- 130
18 Benzyl alcohol	20	17.428	-12.9	87.1	70- 130
19 1,2-Dichlorobenzene	20	18.712	-6.4	93.6	70- 130
20 o-Cresol	20	20.672	3.4	103	70- 130
23 m+p-Cresol	20	19.556	-2.2	97.8	70- 130
24 Acetophenone	20	21.309	6.5	106	70- 130
26 n-Nitroso-di-n-propylamine	20	20.755	3.8	103	70- 130
28 Hexachloroethane	20	19.087	-4.6	95.4	70- 130
30 Nitrobenzene	20	17.305	-13.5	86.5	70- 130
32 Isophorone	20	17.557	-12.2	87.8	70- 130
33 2-Nitrophenol	20	16.536	-17.3	82.7	70- 130
34 2,4-Dimethylphenol	20	18.833	-5.8	94.2	70- 130
35 bis(2-Chloroethoxy)methane	20	16.41	-18	82.1	70- 130
38 2,4-Dichlorophenol	20	16.259	-18.7	81.3	70- 130
40 1,2,4-Trichlorobenzene	20	16.958	-15.2	84.8	70- 130
43 Naphthalene	20	17.56	-12.2	87.8	70- 130
45 2,6-Dichlorophenol	20	17.163	-14.2	85.8	70- 130
47 Hexachlorobutadiene	20	15.402	-23	77	70- 130
49 4-Chloro-3-methylphenol	20	15.13	-24.3	75.7	70- 130
51 2-Methylnaphthalene	20	16.596	-17	83	70- 130
52 1,2,4,5-Tetrachlorobenzene	20	16.437	-17.8	82.2	70- 130
53 Hexachlorocyclopentadiene	100	81.068	-18.9	81.1	70- 130
54 2,4,6-Trichlorophenol	20	15.859	-20.7	79.3	70- 130
55 2,4,5-Trichlorophenol	20	14.31	-28.4	71.6	70- 130
58 2-Chloronaphthalene	20	16.607	-17	83	70- 130
62 Dimethylphthalate	20	18.564	-7.2	92.8	70- 130
64 Acenaphthylene	20	18.199	-9	91	70- 130
65 2,6-Dinitrotoluene	20	17.234	-13.8	86.2	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
68 Acenaphthene	20	18.068	-9.7	90.3	70- 130
69 2,4-Dinitrophenol	40	32.423	-18.9	81.1	70- 130
70 4-Nitrophenol	40	31.091	-22.3	77.7	70- 130
71 Dibenzofuran	20	16.487	-17.6	82.4	70- 130
73 2,4-Dinitrotoluene	20	18.487	-7.6	92.4	70- 130
76 2,3,4,6-Tetrachlorophenol	20	14.241	-28.8	71.2	70- 130
78 Diethylphthalate	20	18.109	-9.5	90.5	70- 130
79 Fluorene	20	16.823	-15.9	84.1	70- 130
80 4-Chlorophenylphenylether	20	16.031	-19.8	80.2	70- 130
84 4,6-Dinitro-2-methylphenol	20	18.048	-9.8	90.2	70- 130
86 n-Nitrosodiphenylamine	20	17.518	-12.4	87.6	70- 130
87 Azobenzene	20	18.656	-6.7	93.3	70- 130
94 4-Bromophenylphenylether	20	18.475	-7.6	92.4	70- 130
96 Hexachlorobenzene	20	16.775	-16.1	83.9	70- 130
99 Pentachlorophenol	40	33.445	-16.4	83.6	70- 130
103 Phenanthrene	20	16.85	-15.7	84.3	70- 130
104 Anthracene	20	18.673	-6.6	93.4	70- 130
106 Carbazole	20	17.552	-12.2	87.8	70- 130
109 Di-n-butylphthalate	20	18.859	-5.7	94.3	70- 130
114 Fluoranthene	20	18.14	-9.3	90.7	70- 130
116 Pyrene	20	18.261	-8.7	91.3	70- 130
122 Butylbenzylphthalate	20	18.892	-5.5	94.5	70- 130
127 Benzo(a)Anthracene	20	18.154	-9.2	90.8	70- 130
129 Chrysene	20	18.459	-7.7	92.3	70- 130
130 bis(2-Ethylhexyl)phthalate	20	19.06	-4.7	95.3	70- 130
131 Di-n-octylphthalate	20	17.721	-11.4	88.6	70- 130
132 Benzo(b)fluoranthene	20	17.435	-12.8	87.2	70- 130
134 Benzo(k)fluoranthene	20	17.328	-13.4	86.6	70- 130
135 Benzo(a)pyrene	20	18.704	-6.5	93.5	70- 130
138 Indeno(1,2,3-c,d)pyrene	20	16.914	-15.4	84.6	70- 130
139 Dibenzo(a,h)anthracene	20	16.952	-15.2	84.8	70- 130
140 Benzo(g,h,i)perylene	20	16.388	-18.1	81.9	70- 130
184 Biphenyl	20	16.274	-18.6	81.4	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\HH\chem\msd11.i\11120519B.b\111205B13.d
Lab Sample ID: SVMS 4221 Client Sample ID: 1STDICV
Injection Date: 05-Dec-2019 16:39:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4221
Misc. Info: 1STDICV
Method: \\Organics\HH\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 17:12:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: LCS ALS Bottle: 10
Cpnd Sublist: 1STD.sub Spike List File: ICV1.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: jcg Review Date: 06-Dec-2019 13:18:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
193 1,4-Dioxane	58.0	3.676	3.676	0.000	6662	4.1088	16.435	e
2 N-Nitrosodimethylamine	42.0	3.873	3.873	0.000	43669	4.1259	16.504	e
1 pyridine	79.0	3.927	3.927	0.000	27173	5.4685	21.874	
$ 6 2-Fluorophenol	112.0		4.788		ND			
$ 9 Phenol-d5	99.0		5.430		ND			
10 Phenol	94.0	5.441	5.441	0.000	74292	4.4234	17.694	e
11 Aniline	66.0	5.494	5.499	-0.005	23536	12.321	49.285	Q
12 bis(2-Chloroethyl)ether	63.0	5.510	5.516	-0.006	42720	4.9710	19.884	Qe
201 n-Decane	57.0	5.574	5.574	0.000	24121	3.5791	14.316	e
13 2-Chlorophenol	128.0	5.601	5.601	0.000	62444	4.7960	19.184	e
14 1,3-Dichlorobenzene	146.0	5.719	5.719	0.000	53649	4.4183	17.673	e
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	175903	20.000	80.000	
17 1,4-Dichlorobenzene	146.0	5.767	5.772	-0.005	57458	4.2697	17.079	e
18 Benzyl alcohol	79.0	5.836	5.836	0.000	46786	4.3569	17.428	e
20 o-Cresol	108.0	5.906	5.906	0.000	59936	5.1679	20.672	
19 1,2-Dichlorobenzene	146.0	5.895	5.895	0.000	56669	4.6779	18.712	e
21 bis(2Chloro1methylethyl)ether	45.0	5.922	5.922	0.000	32503	4.4335	17.734	e
23 m+p-Cresol	107.0	6.018	6.024	-0.006	60946	4.8889	19.556	e
26 n-Nitroso-di-n-propylamine	70.0	6.029	6.034	-0.005	53342	5.1888	20.755	
24 Acetophenone	105.0	6.050	6.050	0.000	93976	5.3272	21.309	Q
28 Hexachloroethane	117.0	6.163	6.168	-0.005	27356	4.7718	19.087	e
$ 29 Nitrobenzene-d5	82.0		6.184		ND			
30 Nitrobenzene	77.0	6.200	6.200	0.000	81145	4.3263	17.305	e

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
32 Isophorone	82.0	6.377	6.377	0.000	119279	4.3893	17.557	e
34 2,4-Dimethylphenol	107.0	6.452	6.452	0.000	55137	4.7082	18.833	e
33 2-Nitrophenol	139.0	6.452	6.457	-0.005	30616	4.1341	16.536	e
36 Benzoic acid	105.0	6.510	6.532	-0.022	82731	8.6457	34.583	e
35 bis(2-Chloroethoxy)methane	93.0	6.521	6.521	0.000	66736	4.1025	16.410	e
38 2,4-Dichlorophenol	162.0	6.649	6.649	0.000	41303	4.0647	16.259	e
40 1,2,4-Trichlorobenzene	180.0	6.719	6.724	-0.005	48327	4.2395	16.958	e
* 41 Naphthalene-d8	136.0	6.778	6.783	-0.005	866784	20.000	80.000	
43 Naphthalene	128.0	6.799	6.799	0.000	189419	4.3899	17.560	Qe
45 2,6-Dichlorophenol	162.0	6.831	6.831	0.000	42919	4.2907	17.163	e
47 Hexachlorobutadiene	224.6	6.874	6.874	0.000	30213	3.8504	15.402	e
49 4-Chloro-3-methylphenol	107.0	7.200	7.195	0.005	50862	3.7826	15.130	e
51 2-Methylnaphthalene	142.0	7.361	7.366	-0.005	114318	4.1491	16.596	e
204 1-Methylnaphthalene	142.0	7.452	7.452	0.000	100213	3.8735	15.494	e
53 Hexachlorocyclopentadiene	237.0	7.489	7.489	0.000	174484	20.267	81.068	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.500	7.505	-0.005	42492	4.1093	16.437	Qe
54 2,4,6-Trichlorophenol	196.0	7.591	7.591	0.000	27617	3.9648	15.859	e
55 2,4,5-Trichlorophenol	196.0	7.634	7.634	0.000	24430	3.5775	14.310	e
$ 56 2-Fluorobiphenyl	172.0		7.650		ND			
184 Biphenyl	154.0	7.741	7.741	0.000	123248	4.0685	16.274	e
58 2-Chloronaphthalene	162.0	7.778	7.778	0.000	94294	4.1517	16.607	e
62 Dimethylphthalate	163.0	7.965	7.965	0.000	121012	4.6410	18.564	e
65 2,6-Dinitrotoluene	165.0	8.029	8.035	-0.006	24262	4.3085	17.234	e
64 Acenaphthylene	152.0	8.136	8.136	0.000	152892	4.5498	18.199	e
* 67 Acenaphthene-d10	164.0	8.249	8.249	0.000	427971	20.000	80.000	
69 2,4-Dinitrophenol	184.0	8.275	8.275	0.000	20625	8.1058	32.423	Q
68 Acenaphthene	153.0	8.275	8.275	0.000	105507	4.5171	18.068	e
70 4-Nitrophenol	109.0	8.324	8.318	0.006	42403	7.7728	31.091	
73 2,4-Dinitrotoluene	165.0	8.377	8.377	0.000	31423	4.6218	18.487	e
71 Dibenzofuran	168.0	8.420	8.420	0.000	124178	4.1218	16.487	e
76 2,3,4,6-Tetrachlorophenol	232.0	8.516	8.516	0.000	16786	3.5603	14.241	e
78 Diethylphthalate	149.0	8.543	8.548	-0.005	133094	4.5273	18.109	e
80 4-Chlorophenylphenylether	204.0	8.677	8.677	0.000	45593	4.0077	16.031	e
79 Fluorene	166.0	8.709	8.709	0.000	105807	4.2058	16.823	e
84 4,6-Dinitro-2-methylphenol	198.0	8.725	8.725	0.000	11525	4.5119	18.048	e
86 n-Nitrosodiphenylamine	169.0	8.773	8.773	0.000	71434	4.3796	17.518	e
87 Azobenzene	77.0	8.816	8.816	0.000	177079	4.6641	18.656	e
$ 88 2,4,6-Tribromophenol	330.0		8.912		ND			
94 4-Bromophenylphenylether	248.0	9.094	9.099	-0.005	23853	4.6187	18.475	e
96 Hexachlorobenzene	284.0	9.179	9.179	0.000	20707	4.1937	16.775	e
202 Octadecane	57.0	9.297	9.297	0.000	53219	4.1400	16.560	e
99 Pentachlorophenol	266.0	9.340	9.340	0.000	20439	8.3613	33.445	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	629780	20.000	80.000	
103 Phenanthrene	178.0	9.532	9.532	0.000	139384	4.2126	16.850	e
104 Anthracene	178.0	9.575	9.575	0.000	131711	4.6683	18.673	e
106 Carbazole	167.0	9.693	9.693	0.000	120355	4.3879	17.552	e
109 Di-n-butylphthalate	149.0	9.907	9.912	-0.005	202249	4.7147	18.859	e
114 Fluoranthene	202.0	10.591	10.591	0.000	137516	4.5350	18.140	e
116 Pyrene	202.0	10.832	10.832	0.000	140853	4.5652	18.261	e
$ 117 Terphenyl-d14	244.0		10.928		ND			
122 Butylbenzylphthalate	149.0	11.426	11.426	0.000	81700	4.7230	18.892	e

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.121	12.126	-0.005	113343	4.7649	19.060	e
127 Benzo(a)Anthracene	228.0	12.249	12.255	-0.006	133438	4.5384	18.154	e
* 128 Chrysene-d12	240.0	12.271	12.271	0.000	509422	20.000	80.000	
129 Chrysene	228.0	12.303	12.308	-0.005	125073	4.6147	18.459	e
131 Di-n-octylphthalate	149.0	13.057	13.062	-0.005	185583	4.4303	17.721	e
132 Benzo(b)fluoranthene	252.0	13.822	13.827	-0.005	115280	4.3588	17.435	e
134 Benzo(k)fluoranthene	252.0	13.865	13.870	-0.005	124160	4.3321	17.328	e
135 Benzo(a)pyrene	252.0	14.335	14.341	-0.006	113286	4.6761	18.704	e
* 136 Perylene-d12	264.0	14.432	14.432	0.000	517984	20.000	80.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.325	16.341	-0.016	154781	4.2285	16.914	e
139 Dibenzo(a,h)anthracene	278.0	16.341	16.347	-0.005	131925	4.2380	16.952	Qe
140 Benzo(g,h,i)perylene	276.0	16.908	16.908	0.000	112114	4.0971	16.388	e

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

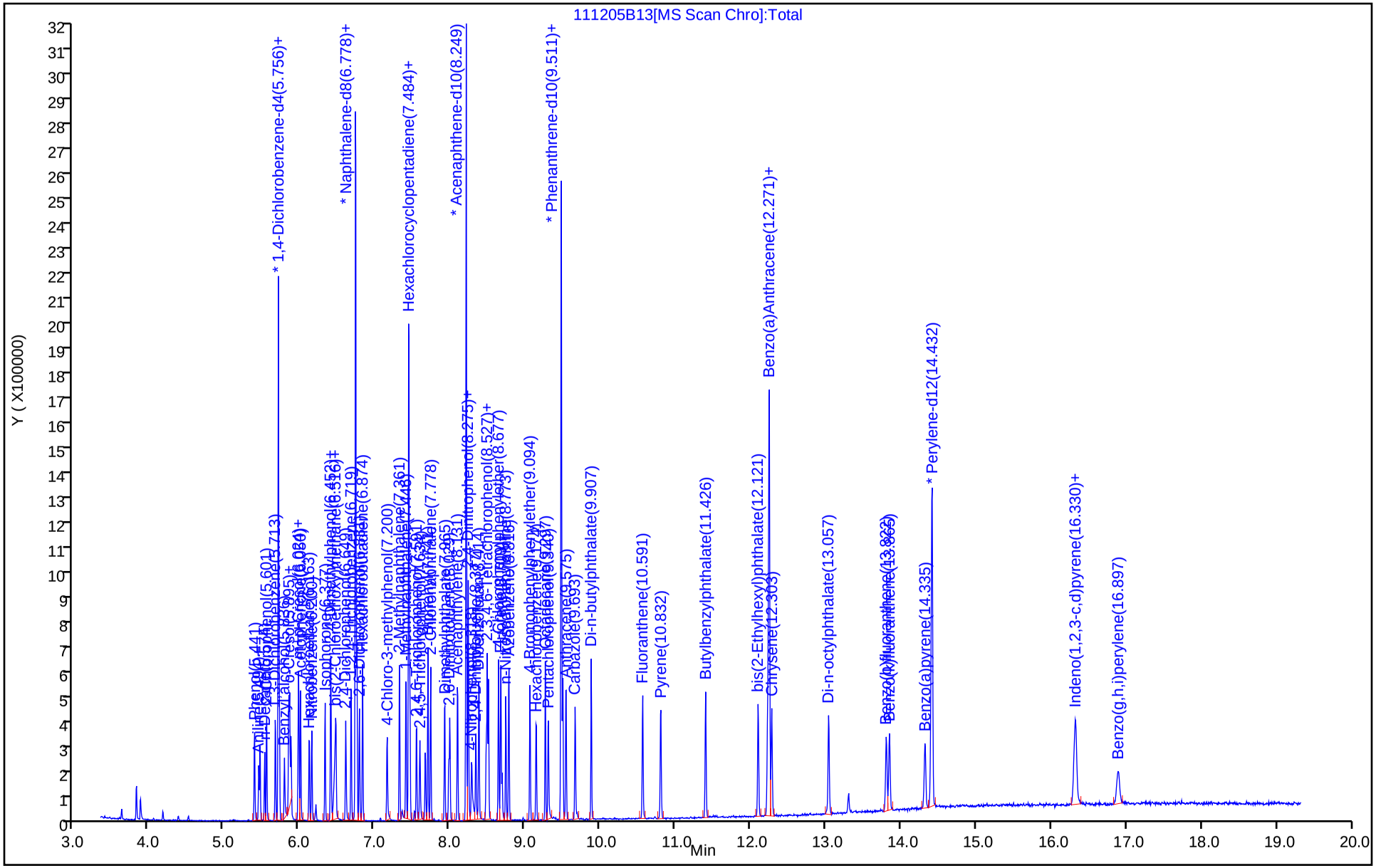
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

Report Date: 17-Feb-2020 11:48:16 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120519B.b\111205B13.d				
Injection Date:	05-Dec-2019 16:39:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STDICV	Lab ID:	SVMS 4221		
Sample Info:	11120519B.b, SVMS 4221				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B21.d
Lab Sample ID: SVMS 4220 Client Sample ID: 3STDICV
Injection Date: 05-Dec-2019 20:00:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4220
Misc. Info: 3STDICV
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 11:50:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: LCS ALS Bottle: 18
Cpnd Sublist: 3STD.sub Spike List File: ICV2.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
196 Caprolactam	40	50.513	26.3	126	70- 130
44 4-Chloroaniline	40	46.457	16.1	116	70- 130
60 2-Nitroaniline	40	47.877	19.7	119	70- 130
66 3-Nitroaniline	40	49.19	23	122	70- 130
83 4-Nitroaniline	40	49.188	23	122	70- 130
115 Benzidine	200	236.68	18.3	118	70- 130
125 3,3'-Dichlorobenzidine	40	44.528	11.3	111	70- 130
199 Benzaldhyde	40	43.529	8.8	108	70- 130
200 Atrazine	40	44.309	10.8	110	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120519B.b\111205B21.d
Lab Sample ID: SVMS 4220 Client Sample ID: 3STDICV
Injection Date: 05-Dec-2019 20:00:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120519B.b, SVMS 4220
Misc. Info: 3STDICV
Method: \\Organics\hh\chem\msd11.i\11120519B.b\8270DLVI-11.m
Method Date: 06-Dec-2019 11:50:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: LCS ALS Bottle: 18
Cpnd Sublist: 3STD.sub Spike List File: ICV2.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 06-Dec-2019 11:50:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
199 Benzaldhyde	77.0	5.424	5.424	0.000	85496	10.882	43.529	
* 16 1,4-Dichlorobenzene-d4	152.0	5.756	5.756	0.000	132580	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.777	6.777	0.000	601053	20.000	20.000	
44 4-Chloroaniline	127.0	6.815	6.820	-0.005	115902	11.614	46.457	
196 Caprolactam	113.0	7.093	7.104	-0.010	30918	12.628	50.513	
* 67 Acenaphthene-d10	164.0	8.248	8.248	0.000	321166	20.000	20.000	
200 Atrazine	200.0	9.190	9.195	-0.005	54961	11.077	44.309	
* 102 Phenanthrene-d10	188.0	9.511	9.511	0.000	514544	20.000	20.000	
115 Benzidine	184.0	10.687	10.698	-0.009	1316820	59.171	236.68	
125 3,3'-Dichlorobenzidine	252.0	12.169	12.169	0.000	72023	11.132	44.528	
* 128 Chrysene-d12	240.0	12.265	12.271	-0.004	404117	20.000	20.000	
* 136 Perylene-d12	264.0	14.426	14.426	0.000	393948	20.000	20.000	
60 2-Nitroaniline	138.0	7.847	7.853	-0.004	58463	11.969	47.877	
66 3-Nitroaniline	138.0	8.189	8.195	-0.004	46700	12.298	49.190	
83 4-Nitroaniline	138.0	8.708	8.714	-0.004	44558	12.297	49.188	

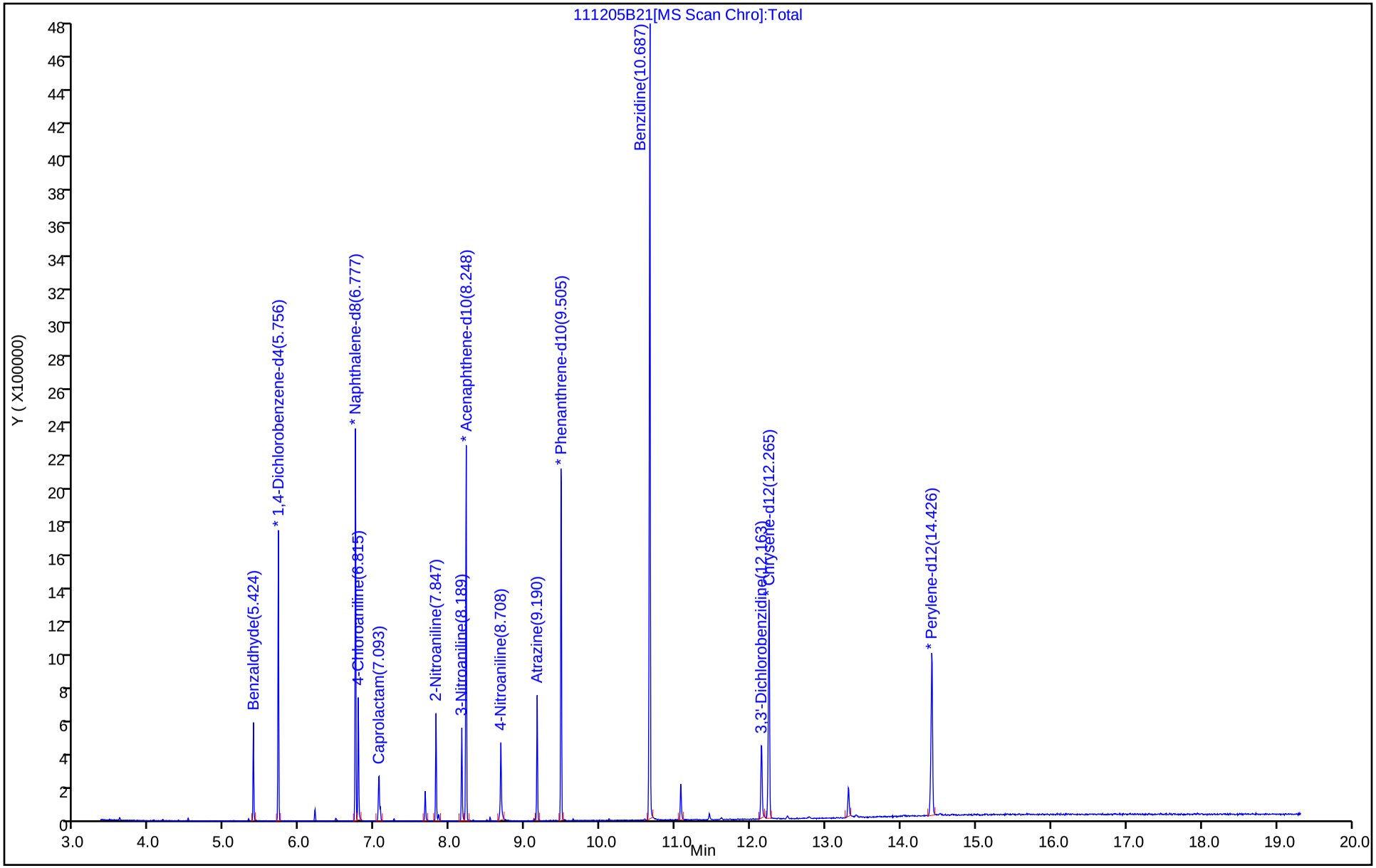
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 06-Dec-2019 11:51:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120519B.b\111205B21.d				
Injection Date:	05-Dec-2019 20:00:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STDICV	Lab ID:	SVMS 4220		
Sample Info:	11120519B.b, SVMS 4220				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C03.d
Lab Sample ID: SVMS 4281 Client Sample ID: 1STD010BE
Injection Date: 06-Dec-2019 12:42:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120619C.b, SVMS 4281
Misc. Info: 1STD010
Method: \\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m
Method Date: 06-Dec-2019 17:09:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: CCV ALS Bottle: 97
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 pyridine	0.564971		0.39503	0.05	* -30.1	20	70
193 1,4-Dioxane	0.184352		0.123509	0.05	* -33	20	67
2 N-Nitrosodimethylamine	1.203409		1.44405	0.05	20	20	120
$ 6 2-Fluorophenol	1.398268		1.333945	0.05	-4.6	20	95
$ 9 Phenol-d5	1.698411		1.649779	0.05	-2.9	20	97
10 Phenol	1.909587		1.864881	0.8	-2.3	20	98
12 bis(2-Chloroethyl)ether	0.977114		0.985892	0.4	0.9	20	101
13 2-Chlorophenol	1.48035		1.402678	0.8	-5.2	20	95
14 1,3-Dichlorobenzene	1.380578		1.307744	0.05	-5.3	20	95
17 1,4-Dichlorobenzene	1.530071		1.505191	0.05	-1.6	20	98
18 Benzyl alcohol	1.220934		1.263142	0.05	3.5	20	103
19 1,2-Dichlorobenzene	1.377364		1.381488	0.05	0.3	20	100
20 o-Cresol	1.318658		1.285284	0.7	-2.5	20	97
21 bis(2Chloro1methylethyl)	0.833549		0.927098	0.05	11.2	20	111
23 m+p-Cresol	1.4174		1.311016	0.6	-7.5	20	92
24 Acetophenone	2.005728		1.940516	0.01	-3.3	20	97
26 n-Nitroso-di-n-propylami	1.168843		1.256198	0.5	7.5	20	107
28 Hexachloroethane	0.651812		0.684152	0.3	5	20	105
$ 29 Nitrobenzene-d5	0.415824		0.477475	0.05	14.8	20	115
30 Nitrobenzene	0.43278		0.450731	0.2	4.1	20	104
32 Isophorone	0.627034		0.662991	0.3	5.7	20	106
33 2-Nitrophenol	0.17088		0.178716	0.05	4.6	20	105
34 2,4-Dimethylphenol	0.270216		0.239517	0.1	-11.4	20	89
35 bis(2-Chloroethoxy)metha	0.375349		0.405986	0.2	8.2	20	108
36 Benzoic acid	20	17.822	0.215759	0.05	-10.9	20	89
38 2,4-Dichlorophenol	0.234462		0.240365	0.1	2.5	20	103
40 1,2,4-Trichlorobenzene	0.263024		0.250687	0.05	-4.7	20	95
43 Naphthalene	0.995605		0.987251	0.7	-0.8	20	99
45 2,6-Dichlorophenol	0.230804		0.221892	0.05	-3.9	20	96
47 Hexachlorobutadiene	0.181052		0.169851	0.01	-6.2	20	94
49 4-Chloro-3-methylphenol	0.31026		0.303254	0.1	-2.3	20	98
51 2-Methylnaphthalene	0.635743		0.629263	0.4	-1	20	99
52 1,2,4,5-Tetrachlorobenze	0.483232		0.524254	0.01	8.5	20	108
53 Hexachlorocyclopentadien	50	49.342	0.530326		-1.3	0	0

Report Date: 07-Dec-2019 14:42:44 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C03.d

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
54 2,4,6-Trichlorophenol	0.325515		0.313172	0.1	-3.8	20	96
55 2,4,5-Trichlorophenol	10	8.6028	0.300789	0.1	-14	20	86
$ 56 2-Fluorobiphenyl	1.331937		1.27755	0.05	-4.1	20	96
58 2-Chloronaphthalene	1.061394		1.048182	0.7	-1.2	20	99
62 Dimethylphthalate	1.218527		1.198968	0.01	-1.6	20	98
64 Acenaphthylene	1.570401		1.551264	0.9	-1.2	20	99
65 2,6-Dinitrotoluene	0.263161		0.249621	0.1	-5.1	20	95
68 Acenaphthene	1.091536		1.232353	0.7	12.9	20	113
69 2,4-Dinitrophenol	20	19.729	0.177837		-1.4	0	0
70 4-Nitrophenol	20	19.969	0.334382	0.01	-0.2	20	100
71 Dibenzofuran	1.407903		1.336029	0.8	-5.1	20	95
73 2,4-Dinitrotoluene	0.317728		0.320327	0.1	0.8	20	101
76 2,3,4,6-Tetrachloropheno	0.22033		0.199645	0.01	-9.4	20	91
78 Diethylphthalate	1.373828		1.374452	0.01	0	20	100
79 Fluorene	1.175652		1.14281	0.8	-2.8	20	97
80 4-Chlorophenylphenylethe	0.531647		0.491802	0.3	-7.5	20	93
84 4,6-Dinitro-2-methylphen	10	9.6525	0.108586	0.01	-3.5	20	97
86 n-Nitrosodiphenylamine	0.51798		0.468871	0.01	-9.5	20	91
87 Azobenzene	1.205702		1.319158	0.05	9.4	20	109
$ 88 2,4,6-Tribromophenol	10	7.8966	0.049936	0.01	* -21	20	79
94 4-Bromophenylphenylether	0.164009		0.157986	0.1	-3.7	20	96
96 Hexachlorobenzene	0.156805		0.150984	0.1	-3.7	20	96
99 Pentachlorophenol	20	18.262	0.093128		-8.7	0	0
103 Phenanthrene	1.050759		1.00646	0.7	-4.2	20	96
104 Anthracene	0.895983		0.882928	0.6	-1.5	20	99
106 Carbazole	0.871065		0.883698	0.01	1.5	20	101
109 Di-n-butylphthalate	1.362305		1.401531	0.01	2.9	20	103
114 Fluoranthene	0.962984		0.948559	0.6	-1.5	20	99
116 Pyrene	1.211312		1.287344	0.6	6.3	20	106
$ 117 Terphenyl-d14	0.846632		0.854005	0.05	0.9	20	101
122 Butylbenzylphthalate	10	9.6615	0.697035	0.01	-3.4	20	97
127 Benzo(a)Anthracene	1.154323		1.115129	0.8	-3.4	20	97
129 Chrysene	1.06407		1.056689	0.7	-0.7	20	99
130 bis(2-Ethylhexyl)phthala	10	9.5153	0.948532	0.01	-4.8	20	95
131 Di-n-octylphthalate	10	9.0153	1.573064	0.01	-9.8	20	90
132 Benzo(b)fluoranthene	1.021171		1.028637	0.5	0.7	20	101
134 Benzo(k)fluoranthene	1.106627		1.028006	0.5	-7.1	20	93
135 Benzo(a)pyrene	0.935427		0.834589	0.5	-10.8	20	89
138 Indeno(1,2,3-c,d)pyrene	1.413322		1.271618	0.5	-10	20	90
139 Dibenzo(a,h)anthracene	1.201929		1.112811	0.4	-7.4	20	93
140 Benzo(g,h,i)perylene	1.056568		0.940802	0.4	-11	20	89
184 Biphenyl	1.415676		1.382132	0.01	-2.4	20	98
201 n-Decane	0.766266		0.857592	0.05	11.9	20	112
202 Octadecane	0.408234		0.451248	0.05	10.5	20	111
204 1-Methylnaphthalene	0.596946		0.599647	0.05	0.5	20	100

Report Date: 07-Dec-2019 14:42:44 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C03.d
Lab Sample ID: SVMS 4281 Client Sample ID: 1STD010BE
Injection Date: 06-Dec-2019 12:42:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120619C.b, SVMS 4281
Misc. Info: 1STD010
Method: \\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m
Method Date: 06-Dec-2019 17:09:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: CCV ALS Bottle: 97
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: jcg Review Date: 06-Dec-2019 13:14:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.649	3.649	0.000	8947	10.000	6.6996	
2 N-Nitrosodimethylamine	42.0	3.847	3.847	0.000	104607	10.000	12.000	
1 pyridine	79.0	3.900	3.900	0.000	28616	10.000	6.9920	
$ 6 2-Fluorophenol	112.0	4.767	4.767	0.000	96631	10.000	9.5400	
$ 9 Phenol-d5	99.0	5.414	5.414	0.000	119510	10.000	9.7137	
10 Phenol	94.0	5.425	5.425	0.000	135092	10.000	9.7659	
12 bis(2-Chloroethyl)ether	63.0	5.500	5.500	0.000	71418	10.000	10.090	
201 n-Decane	57.0	5.558	5.558	0.000	62124	10.000	11.192	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	101610	10.000	9.4753	
14 1,3-Dichlorobenzene	146.0	5.703	5.703	0.000	94733	10.000	9.4724	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	144880	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	109036	10.000	9.8374	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	91502	10.000	10.346	M
20 o-Cresol	108.0	5.890	5.890	0.000	93106	10.000	9.7469	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	100075	10.000	10.030	
21 bis(2Chloro1methylethyl)ether	45.0	5.911	5.911	0.000	67159	10.000	11.122	
23 m+p-Cresol	107.0	6.008	6.008	0.000	94970	10.000	9.2494	
26 n-Nitroso-di-n-propylamine	70.0	6.018	6.018	0.000	90999	10.000	10.747	
24 Acetophenone	105.0	6.040	6.040	0.000	140571	10.000	9.6749	
28 Hexachloroethane	117.0	6.152	6.152	0.000	49560	10.000	10.496	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	140633	10.000	11.483	
30 Nitrobenzene	77.0	6.184	6.184	0.000	132756	10.000	10.415	
32 Isophorone	82.0	6.361	6.361	0.000	195274	10.000	10.573	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
34 2,4-Dimethylphenol	107.0	6.436	6.436	0.000	70546	10.000	8.8639	
33 2-Nitrophenol	139.0	6.441	6.441	0.000	52638	10.000	10.459	
36 Benzoic acid	105.0	6.510	6.510	0.000	127097	20.000	17.822	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	119577	10.000	10.816	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	70796	10.000	10.252	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	73836	10.000	9.5310	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	589070	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	290780	10.000	9.9161	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	65355	10.000	9.6139	
47 Hexachlorobutadiene	224.6	6.863	6.863	0.000	50027	10.000	9.3813	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	89319	10.000	9.7742	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	185340	10.000	9.8981	
204 1-Methylnaphthalene	142.0	7.436	7.436	0.000	176617	10.000	10.045	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	389499	50.000	49.342	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.489	7.489	0.000	77008	10.000	10.849	
54 2,4,6-Trichlorophenol	196.0	7.575	7.575	0.000	46002	10.000	9.6208	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	44183	10.000	8.6028	
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	187660	10.000	9.5917	
184 Biphenyl	154.0	7.725	7.725	0.000	203022	10.000	9.7630	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	153968	10.000	9.8755	
62 Dimethylphthalate	163.0	7.949	7.949	0.000	176117	10.000	9.8395	
65 2,6-Dinitrotoluene	165.0	8.019	8.019	0.000	36667	10.000	9.4855	
64 Acenaphthylene	152.0	8.120	8.120	0.000	227866	10.000	9.8781	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	293781	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	52245	20.000	19.729	
68 Acenaphthene	153.0	8.265	8.265	0.000	181021	10.000	11.290	
70 4-Nitrophenol	109.0	8.297	8.297	0.000	98235	20.000	19.969	
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	47053	10.000	10.082	
71 Dibenzofuran	168.0	8.404	8.404	0.000	196250	10.000	9.4895	
76 2,3,4,6-Tetrachlorophenol	232.0	8.500	8.500	0.000	29326	10.000	9.0612	
78 Diethylphthalate	149.0	8.532	8.532	0.000	201894	10.000	10.005	
80 4-Chlorophenylphenylether	204.0	8.666	8.666	0.000	72241	10.000	9.2505	
79 Fluorene	166.0	8.693	8.693	0.000	167868	10.000	9.7207	
84 4,6-Dinitro-2-methylphenol	198.0	8.714	8.714	0.000	25509	10.000	9.6525	
86 n-Nitrosodiphenylamine	169.0	8.762	8.762	0.000	110147	10.000	9.0519	
87 Azobenzene	77.0	8.800	8.800	0.000	309896	10.000	10.941	
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	11731	10.000	7.8966	
94 4-Bromophenylphenylether	248.0	9.083	9.083	0.000	37114	10.000	9.6328	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	35469	10.000	9.6287	
202 Octadecane	57.0	9.286	9.286	0.000	106007	10.000	11.054	
99 Pentachlorophenol	266.0	9.324	9.324	0.000	43755	20.000	18.262	M
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	469839	20.000	20.000	
103 Phenanthrene	178.0	9.516	9.516	0.000	236437	10.000	9.5784	
104 Anthracene	178.0	9.559	9.559	0.000	207417	10.000	9.8543	
106 Carbazole	167.0	9.677	9.677	0.000	207598	10.000	10.145	
109 Di-n-butylphthalate	149.0	9.896	9.896	0.000	329247	10.000	10.288	
114 Fluoranthene	202.0	10.575	10.575	0.000	222835	10.000	9.8502	
116 Pyrene	202.0	10.811	10.811	0.000	236695	10.000	10.628	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	157020	10.000	10.087	
122 Butylbenzylphthalate	149.0	11.410	11.410	0.000	128159	10.000	9.6615	
130 bis(2-Ethylhexyl)phthalate	149.0	12.105	12.105	0.000	174400	10.000	9.5153	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
127 Benzo(a)Anthracene	228.0	12.228	12.228	0.000	205031	10.000	9.6605	
* 128 Chrysene-d12	240.0	12.249	12.249	0.000	367726	20.000	20.000	
129 Chrysene	228.0	12.282	12.282	0.000	194286	10.000	9.9306	
131 Di-n-octylphthalate	149.0	13.036	13.036	0.000	291797	10.000	9.0153	
132 Benzo(b)fluoranthene	252.0	13.801	13.801	0.000	190808	10.000	10.073	
134 Benzo(k)fluoranthene	252.0	13.843	13.843	0.000	190691	10.000	9.2895	
135 Benzo(a)pyrene	252.0	14.314	14.314	0.000	154813	10.000	8.9220	
* 136 Perylene-d12	264.0	14.405	14.405	0.000	370992	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.298	16.298	0.000	235880	10.000	8.9974	
139 Dibenzo(a,h)anthracene	278.0	16.304	16.304	0.000	206422	10.000	9.2585	
140 Benzo(g,h,i)perylene	276.0	16.860	16.860	0.000	174515	10.000	8.9043	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

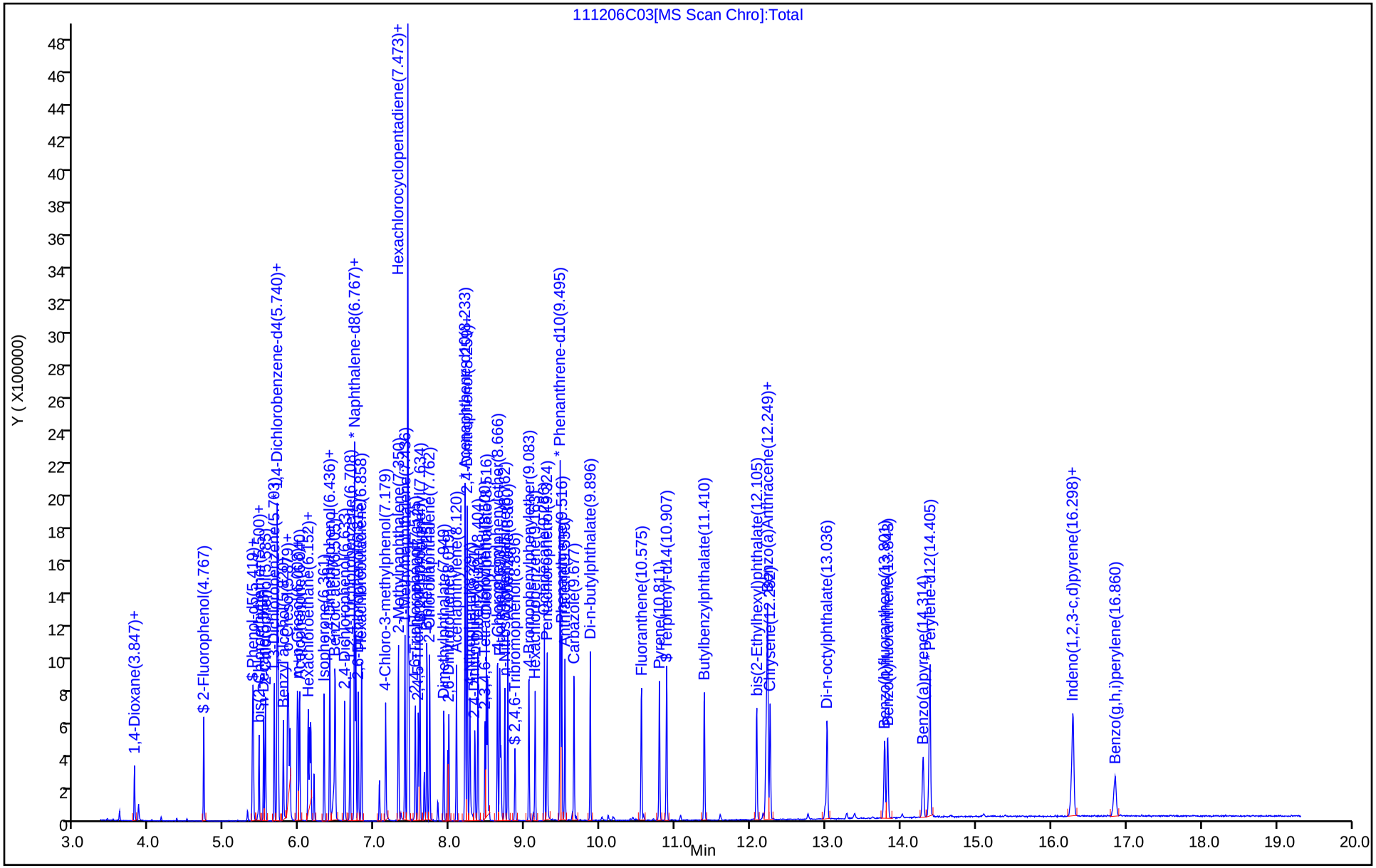
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Dec-2019 14:42:44 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C03.d				
Injection Date:	06-Dec-2019 12:42:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD010BE	Lab ID:	SVMS 4281		
Sample Info:	11120619C.b, SVMS 4281				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Dec-2019 14:42:44 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

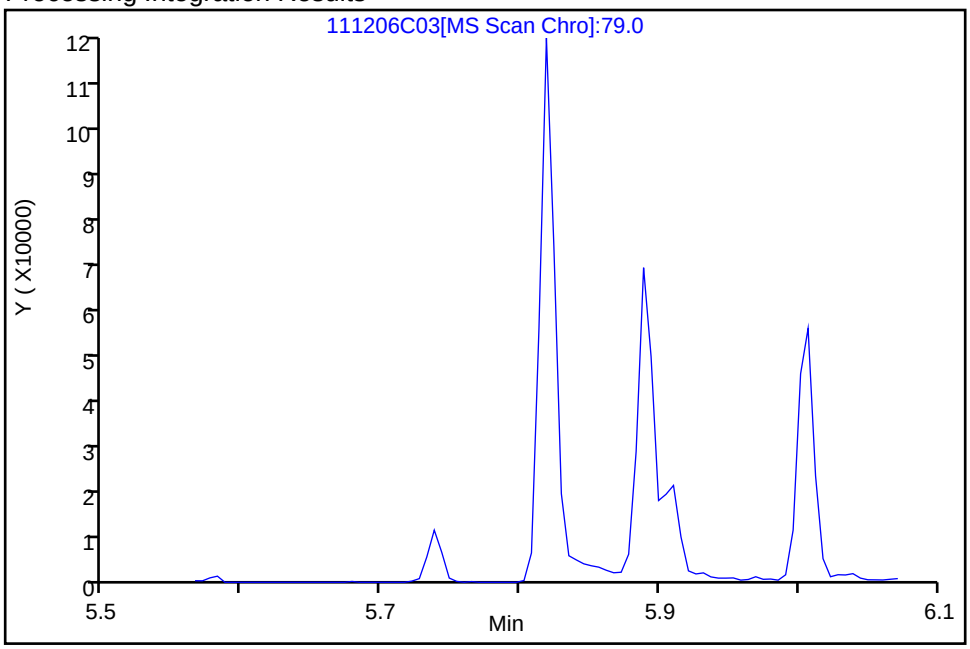
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C03.d		
Injection Date:	06-Dec-2019 12:42:30	Inst. ID:	msd11.i
Client ID:	1STD010BE	Lab ID:	SVMS 4281
Sample Info:	11120619C.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

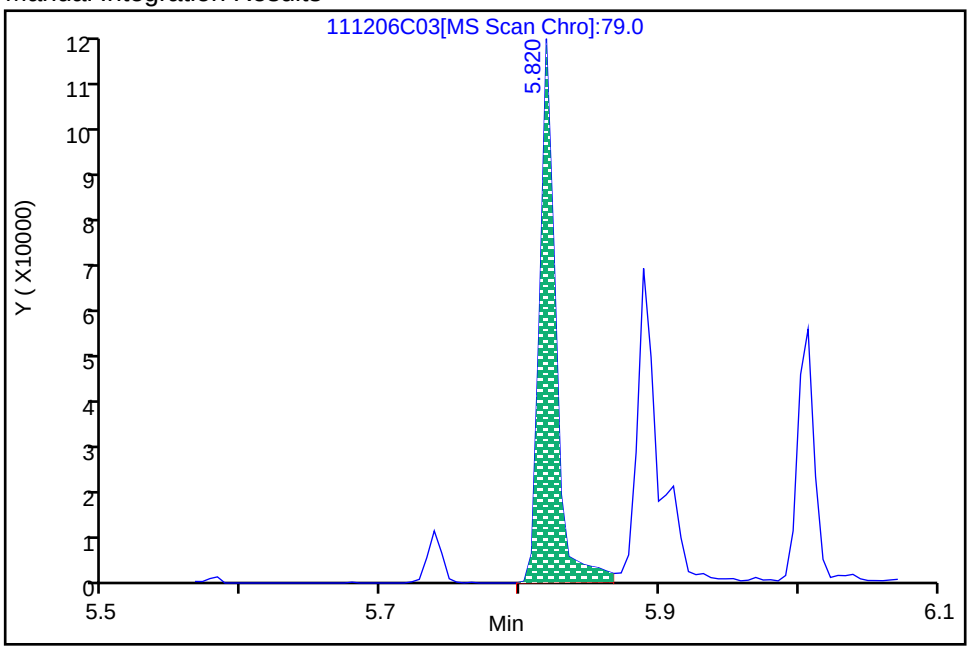
Not Detected
Expected RT: 5.820
RT Window: 5.476-6.165

Processing Integration Results



Manual Integration Results

RT: 5.820
Area: 91502
Amount: 10.346
Amount Units: ng



Data Editor: jcg, 06-Dec-2019 13:20:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 07-Dec-2019 14:42:44 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

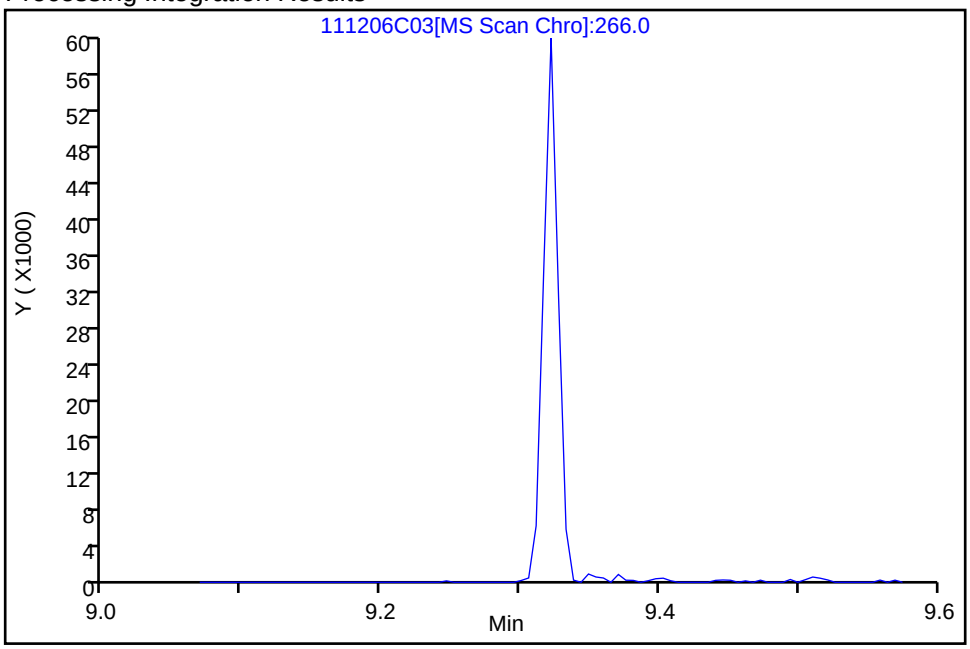
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C03.d		
Injection Date:	06-Dec-2019 12:42:30	Inst. ID:	msd11.i
Client ID:	1STD010BE	Lab ID:	SVMS 4281
Sample Info:	11120619C.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

99 Pentachlorophenol, CAS: 87-86-5

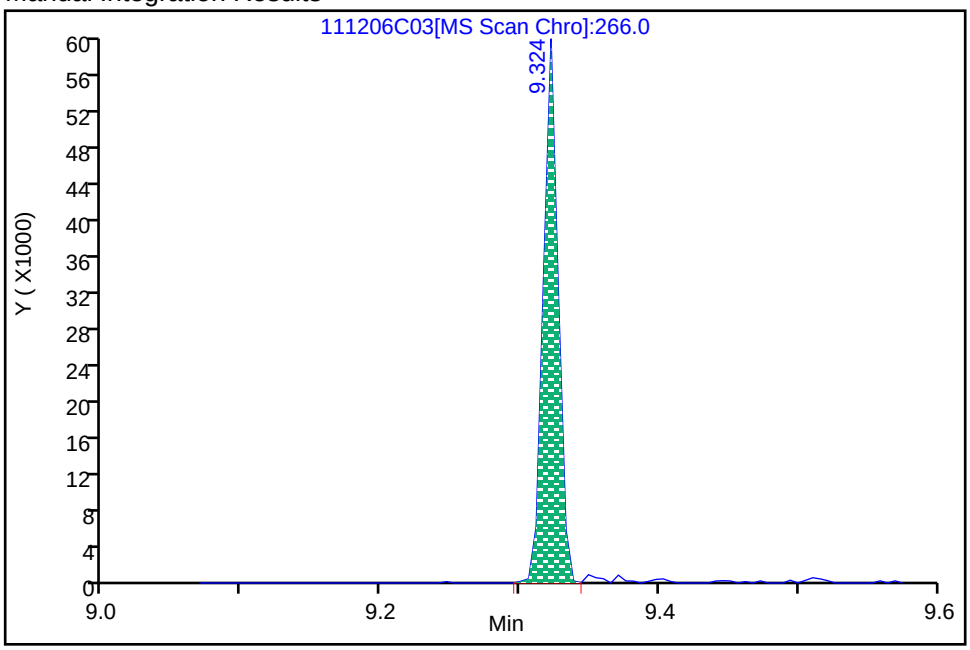
Not Detected
Expected RT: 9.324
RT Window: 8.754-9.893

Processing Integration Results



Manual Integration Results

RT: 9.324
Area: 43755
Amount: 18.262
Amount Units: ng



Data Editor: jcg, 06-Dec-2019 13:14:30
Audit Action: Mint
Audit Reason: Manually Assigned

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C04.d
Lab Sample ID: SVMS 4215 Client Sample ID: 3STD010BF
Injection Date: 06-Dec-2019 13:07:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120619C.b, SVMS 4215
Misc. Info: 3STD010
Method: \\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m
Method Date: 06-Dec-2019 17:09:30 Quant Method: ISTD
Calib Date: 05-Dec-2019 19:35:30 Calib File: 111205B20.d
Sample Type: CCV ALS Bottle: 98
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
196 Caprolactam	0.081468		0.084784	0.01	4.1	20	104
44 4-Chloroaniline	0.33206		0.345328	0.01	4	20	104
60 2-Nitroaniline	0.304172		0.287191	0.01	-5.6	20	94
66 3-Nitroaniline	0.236483		0.228453	0.01	-3.4	20	97
83 4-Nitroaniline	0.225648		0.2361	0.01	4.6	20	105
115 Benzidine	50	53.56	1.138547		7.1	0	0
125 3,3'-Dichlorobenzidine	0.320197		0.30415	0.01	-5	20	95
199 Benzaldhyde	1.185167		1.252328	0.01	5.7	20	106
200 Atrazine	0.192855		0.182053	0.01	-5.6	20	94

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C04.d		
Lab Sample ID:	SVMS 4215	Client Sample ID:	3STD010BF
Injection Date:	06-Dec-2019 13:07:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, SVMS 4215		
Misc. Info:	3STD010		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	CCV	ALS Bottle:	98
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	06-Dec-2019 14:25:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.409	5.409	0.000	73635	10.000	10.567	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	117597	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	550954	20.000	20.000	
44 4-Chloroaniline	127.0	6.805	6.805	0.000	95130	10.000	10.400	
196 Caprolactam	113.0	7.077	7.077	0.000	23356	10.000	10.407	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	287175	20.000	20.000	
200 Atrazine	200.0	9.179	9.179	0.000	39583	10.000	9.4399	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	434851	20.000	20.000	
115 Benzidine	184.0	10.666	10.666	0.000	881472	50.000	53.560	
125 3,3'-Dichlorobenzidine	252.0	12.148	12.148	0.000	47095	10.000	9.4988	
* 128 Chrysene-d12	240.0	12.244	12.244	0.000	309683	20.000	20.000	
* 136 Perylene-d12	264.0	14.400	14.400	0.000	313480	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	41237	10.000	9.4417	
66 3-Nitroaniline	138.0	8.174	8.174	0.000	32803	10.000	9.6605	
83 4-Nitroaniline	138.0	8.693	8.693	0.000	33901	10.000	10.463	

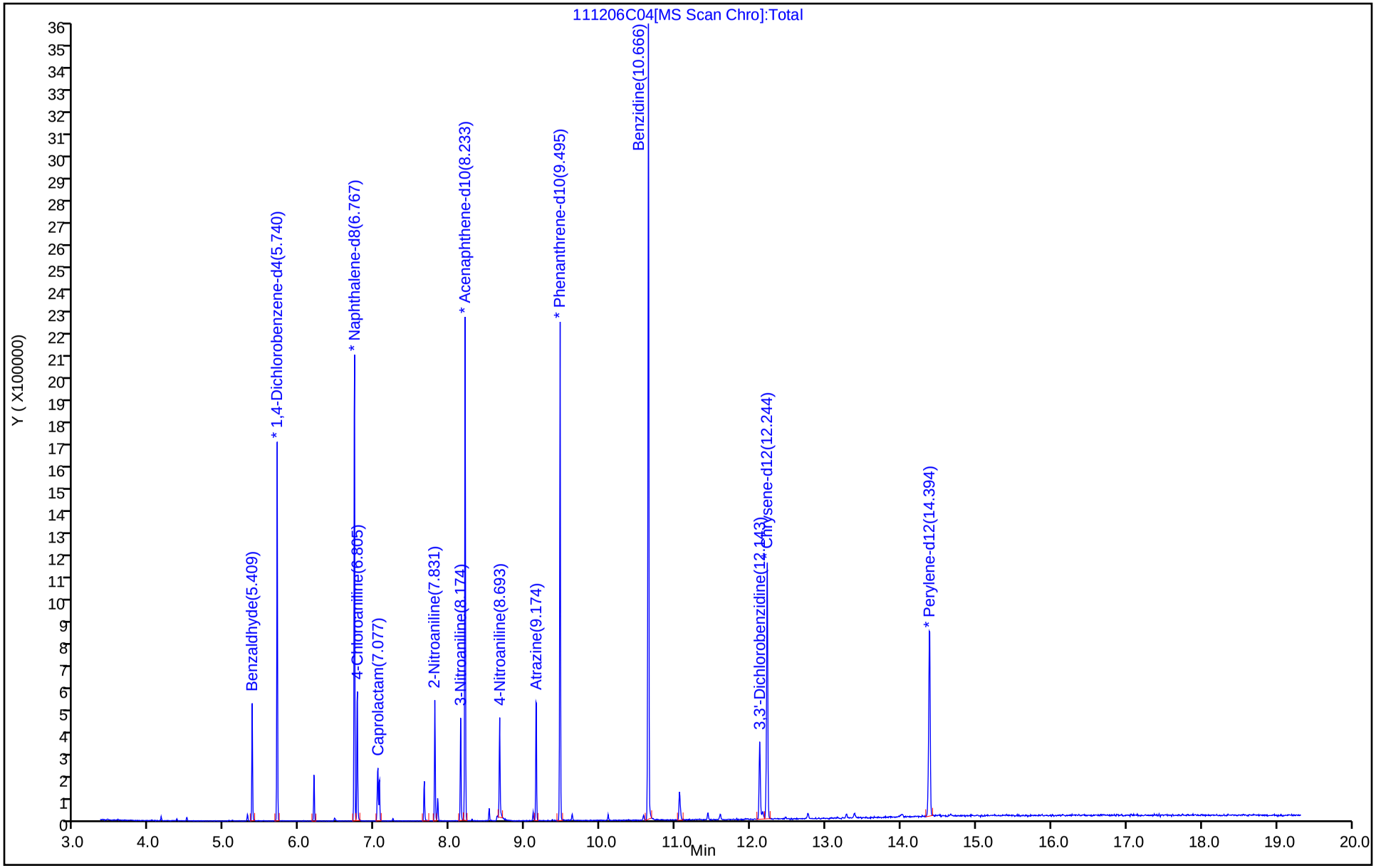
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 07-Dec-2019 14:42:45 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C04.d				
Injection Date:	06-Dec-2019 13:07:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD010BF	Lab ID:	SVMS 4215		
Sample Info:	11120619C.b, SVMS 4215				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		

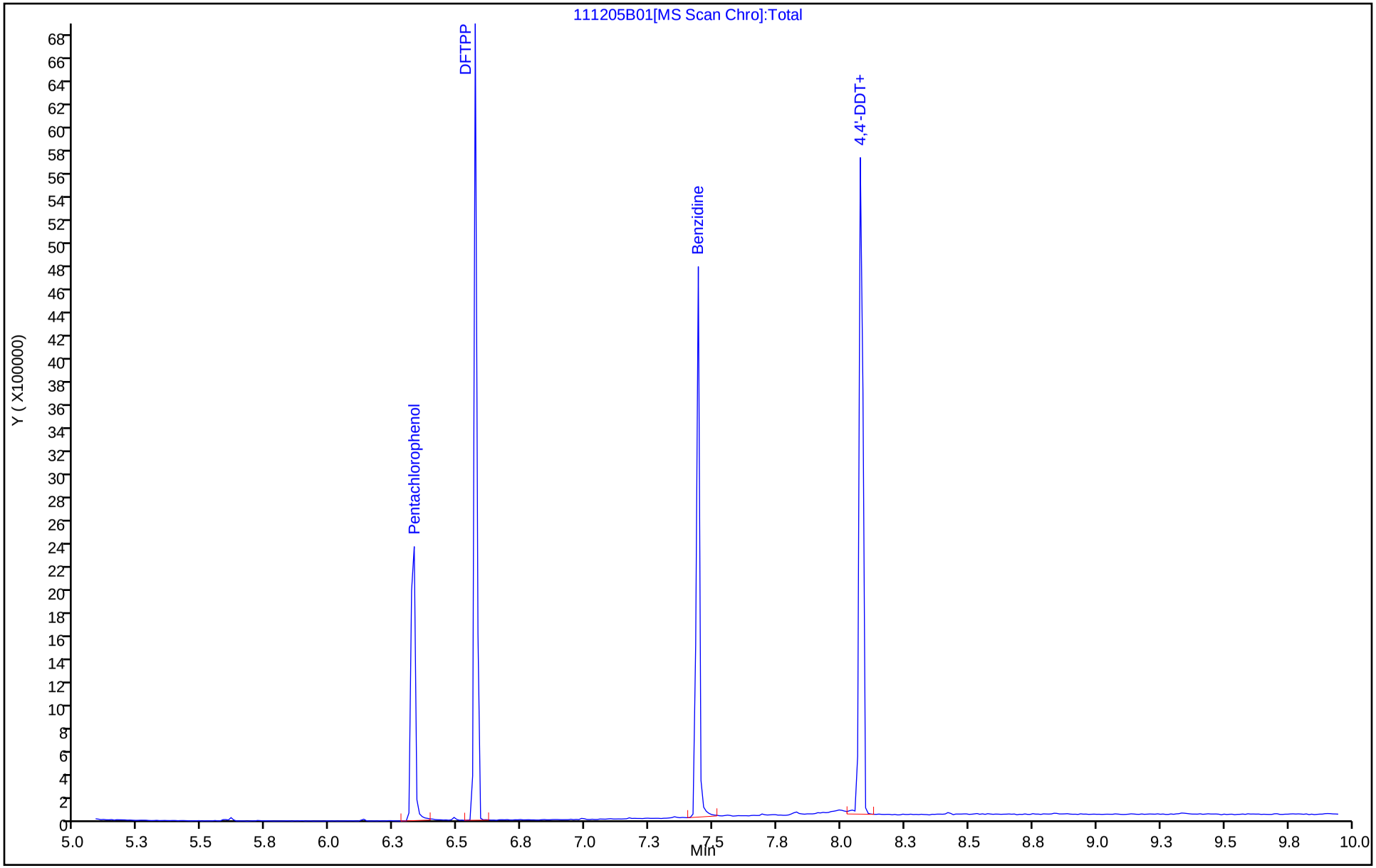


RAW QC DATA

Report Date: 05-Dec-2019 12:13:27 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d				
Injection Date:	05-Dec-2019 11:42:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4186		
Sample Info:	11120519B.b, SVMS 4186				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



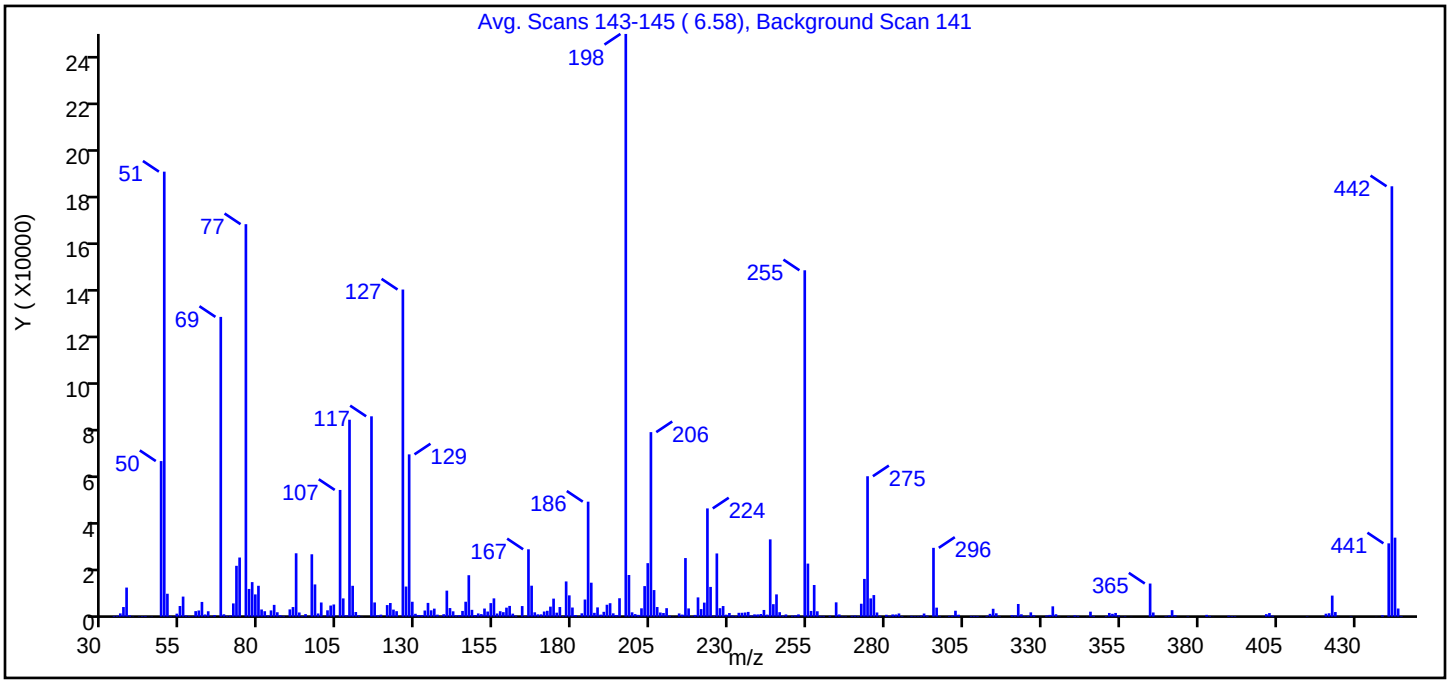
Report Date: 05-Dec-2019 12:13:27 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d		
Injection Date:	05-Dec-2019 11:42:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120519B.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

1 dftpp



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	76.4
68	Less than 2.00% of mass 69	0.0 (0.0)
69	Present	51.4
70	Less than 2.00% of mass 69	0.4 (0.8)
127	10.00 - 80.00% of mass 198	56.1
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	7.1
275	10.00 - 60.00% of mass 198	24.1
365	Greater than 1.00% of mass 198	5.7
441	0.01 - 24.00% of mass 442	12.6 (17.0)
442	Greater than 50.00% of mass 198	73.9
443	15.00 - 24.00% of mass 442	13.5 (18.3)

Data File: \\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d
Injection Date: 05-Dec-2019 11:42:30
Spectrum: Avg. Scans 143-145 (6.58), Background Scan 141
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	288	125.00	2325	209.00	1751	296.00	29496
36.00	368	126.00	95	210.00	1548	297.00	3847
37.00	1378	127.00	140288	211.00	3616	298.00	204
38.00	4100	128.00	12893	212.00	409	300.00	60
39.00	12454	129.00	69584	213.00	97	301.00	317
40.00	557	130.00	6370	214.00	68	302.00	440
41.00	114	131.00	1211	215.00	1356	303.00	2521
43.00	123	132.00	699	216.00	860	304.00	796
44.00	225	133.00	628	217.00	25112	308.00	288
45.00	285	134.00	2616	218.00	3510	309.00	300
46.00	55	135.00	5877	219.00	178	310.00	256
47.00	111	136.00	2694	220.00	719	311.00	63
50.00	66712	137.00	3418	221.00	8242	313.00	304
51.00	190848	138.00	834	222.00	3224	314.00	1185
52.00	9805	139.00	207	223.00	6000	315.00	3361
53.00	288	140.00	1024	224.00	46408	316.00	1432
54.00	132	141.00	11135	225.00	12732	317.00	212
55.00	1265	142.00	3666	226.00	353	321.00	631
56.00	4542	143.00	2266	227.00	27088	322.00	517
57.00	8585	144.00	546	228.00	3612	323.00	5413
58.00	509	145.00	629	229.00	4530	324.00	994
59.00	253	146.00	2424	230.00	812	325.00	203
60.00	191	147.00	6378	231.00	1540	326.00	306
61.00	2350	148.00	17752	232.00	475	327.00	1819
62.00	2631	149.00	2901	233.00	259	328.00	544
63.00	6293	150.00	655	234.00	1627	330.00	53
64.00	911	151.00	1363	235.00	1648	332.00	466
65.00	2296	152.00	1067	236.00	1757	333.00	728
66.00	163	153.00	3458	237.00	2010	334.00	4408
67.00	666	154.00	2182	238.00	443	335.00	1008
69.00	128552	155.00	5787	239.00	960	336.00	116
70.00	992	156.00	7818	240.00	936	339.00	180
71.00	329	157.00	1333	241.00	1117	340.00	66

Report Date: 05-Dec-2019 12:13:27 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d
Injection Date: 05-Dec-2019 11:42:30
Spectrum: Avg. Scans 143-145 (6.58), Background Scan 141
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	432	158.00	2312	242.00	2850	341.00	535
73.00	5659	159.00	1898	243.00	838	342.00	313
74.00	21784	160.00	3844	244.00	33128	345.00	74
75.00	25344	161.00	4581	245.00	5331	346.00	2115
77.00	168320	162.00	1276	246.00	9528	347.00	270
78.00	11867	163.00	383	247.00	1896	351.00	238
79.00	14795	165.00	4521	248.00	394	352.00	1564
80.00	9525	166.00	254	249.00	927	353.00	1201
81.00	13221	167.00	28872	250.00	59	354.00	1568
82.00	3054	168.00	13258	251.00	420	355.00	505
83.00	2309	169.00	1834	252.00	560	356.00	72
84.00	478	170.00	976	253.00	945	357.00	182
85.00	2655	171.00	958	254.00	114	359.00	50
86.00	5032	172.00	2183	255.00	148544	365.00	14186
87.00	1867	173.00	2498	256.00	22736	366.00	1768
88.00	585	174.00	4278	257.00	2437	367.00	54
89.00	307	175.00	7712	258.00	13555	370.00	214
90.00	59	176.00	1691	259.00	2289	371.00	457
91.00	3094	177.00	4112	260.00	305	372.00	2768
92.00	4099	178.00	264	261.00	321	373.00	582
93.00	27160	179.00	15086	263.00	332	374.00	63
94.00	1765	180.00	9113	264.00	26	377.00	159
95.00	227	181.00	3895	265.00	6120	383.00	756
96.00	1070	182.00	682	266.00	913	384.00	298
97.00	96	183.00	178	267.00	165	385.00	50
98.00	26736	184.00	1425	268.00	169	390.00	365
99.00	13803	185.00	7323	270.00	344	391.00	223
100.00	1341	186.00	49296	271.00	478	392.00	203
101.00	6056	187.00	14542	272.00	232	401.00	50
102.00	117	188.00	1616	273.00	5522	402.00	1060
103.00	2700	189.00	3953	274.00	16164	403.00	1519
104.00	4742	190.00	834	275.00	60208	404.00	409
105.00	5206	191.00	2051	276.00	7807	415.00	143
106.00	76	192.00	5082	277.00	9236	420.00	69

Report Date: 05-Dec-2019 12:13:27 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d
Injection Date: 05-Dec-2019 11:42:30
Spectrum: Avg. Scans 143-145 (6.58), Background Scan 141
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
107.00	54328	193.00	5746	278.00	1773	421.00	1239
108.00	7803	194.00	1408	279.00	330	422.00	1440
109.00	552	195.00	700	281.00	781	423.00	9008
110.00	84448	196.00	7876	282.00	307	424.00	1953
111.00	13217	198.00	249920	283.00	922	425.00	90
112.00	1962	199.00	17840	284.00	903	429.00	140
113.00	535	200.00	1836	285.00	1353	437.00	54
114.00	84	201.00	1072	286.00	235	439.00	593
117.00	85912	202.00	750	288.00	70	441.00	31424
118.00	6070	203.00	3560	289.00	310	442.00	184576
119.00	542	204.00	13088	290.00	205	443.00	33864
120.00	841	205.00	22928	291.00	203	444.00	3474
122.00	4941	206.00	79120	292.00	392	445.00	252
123.00	5828	207.00	11380	293.00	1323		
124.00	3001	208.00	4109	294.00	399		

Report Date: 05-Dec-2019 12:13:27 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Breakdown Report

Data File:	\\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d		
Injection Date:	05-Dec-2019 11:42:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120519B.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

5 4,4'-DDT

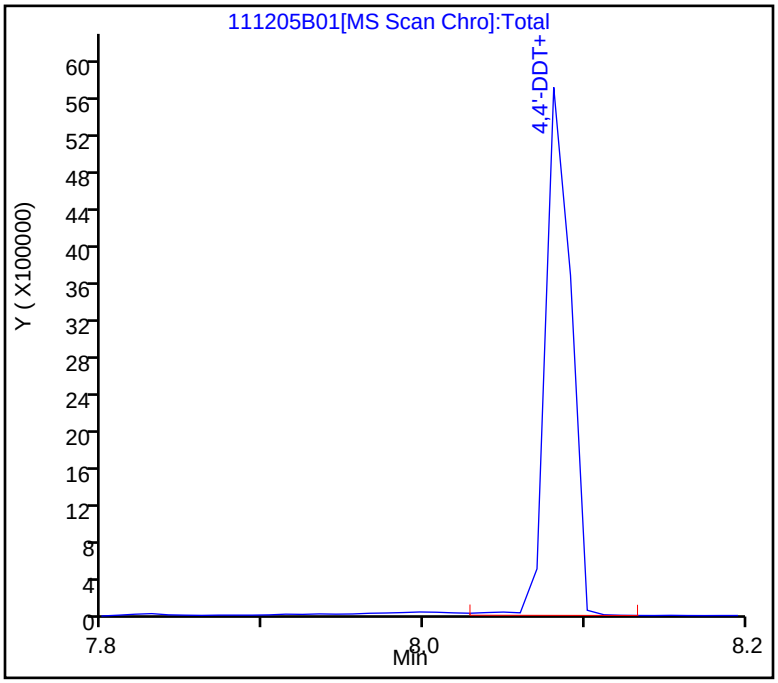
SW-846 Method

%Breakdown =
(Sum of Degrad. Peak Areas/
Total Area All Peaks) * 100

5 4,4'-DDT, Area = 753777 @ 8.09

6 4,4'-DDE, Area = 1304 @ 7.92
4 4,4'-DDD, Area = 2528 @ 7.93

%Breakdown:0.51%, Max Limit:20%
Passed



Report Date: 05-Dec-2019 12:13:27 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Peak Tailing Report

Data File:	\\Organics\HH\chem\msd11.i\11120519B.b\111205B01.d		
Injection Date:	05-Dec-2019 11:42:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120519B.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

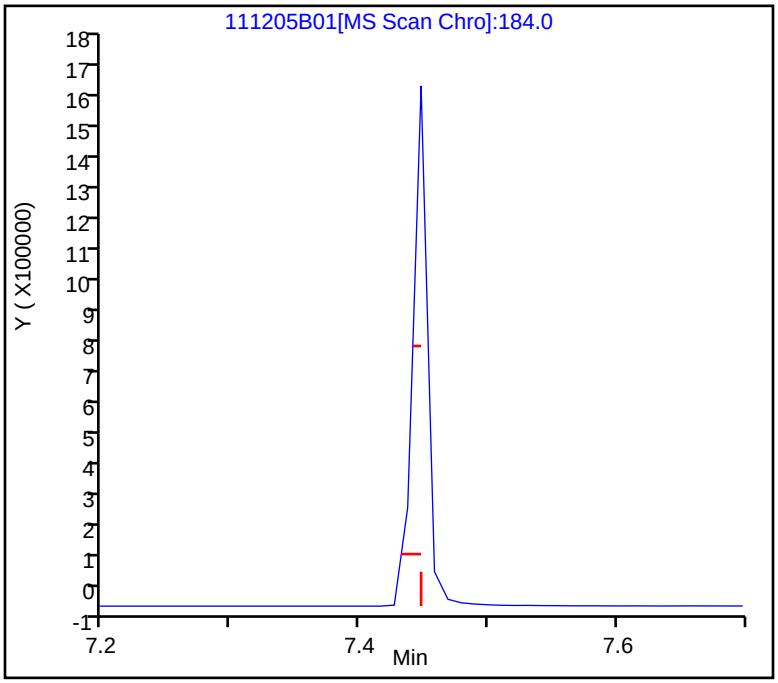
3 Benzidine

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.000 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 0.00, Max. Tailing < 2.00
Passed



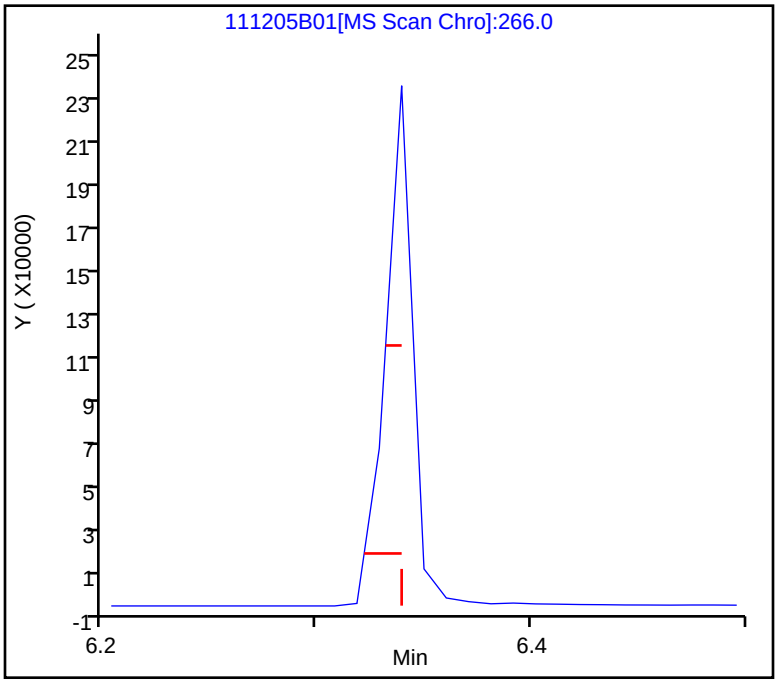
2 Pentachlorophenol

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.000 (min.)
Front Width = 0.017 (min.)

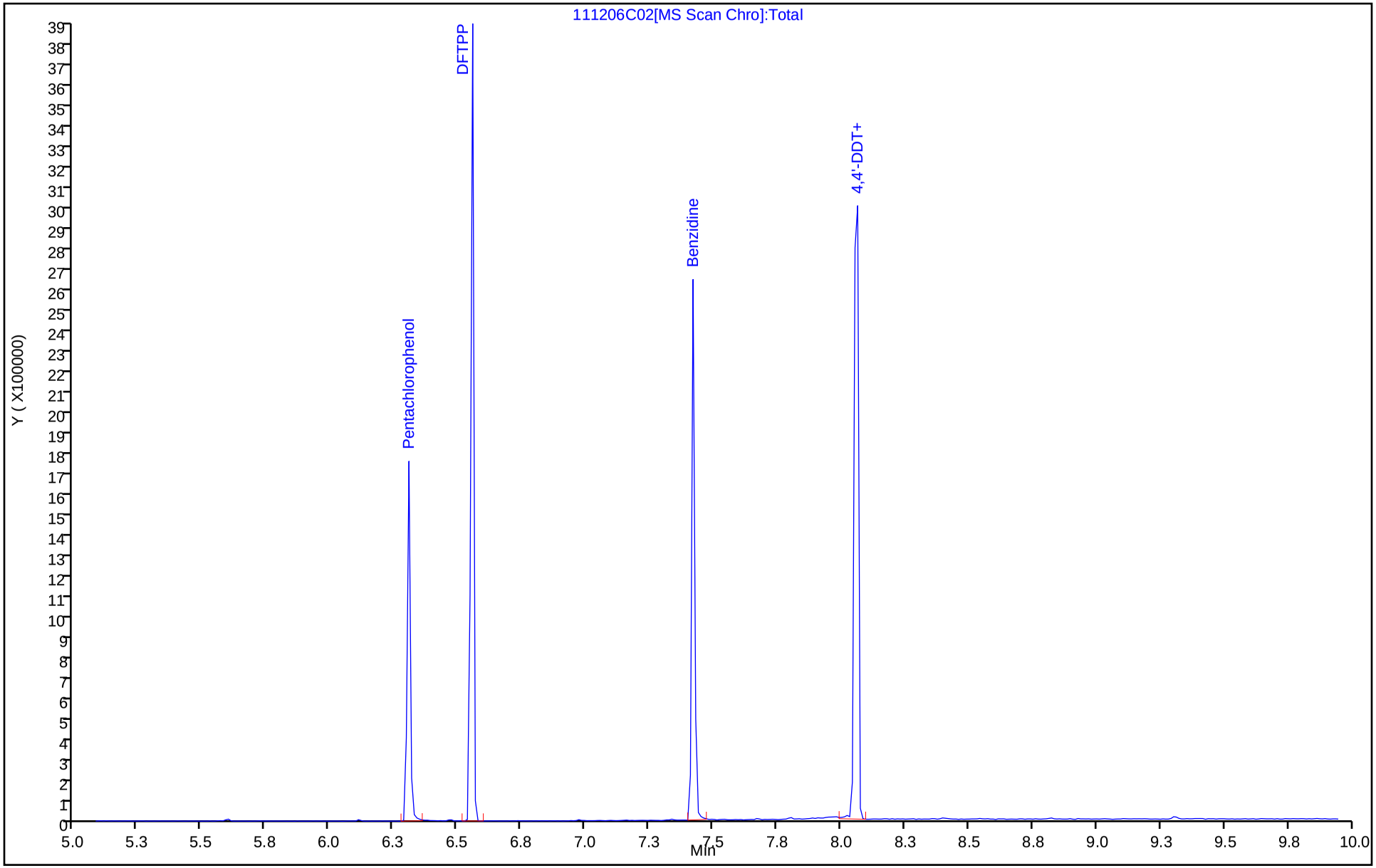
Tailing Factor = 0.00, Max. Tailing < 2.00
Passed



Report Date: 06-Dec-2019 12:36:45 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d				
Injection Date:	06-Dec-2019 12:23:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4186		
Sample Info:	11120619C.b, SVMS 4186				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



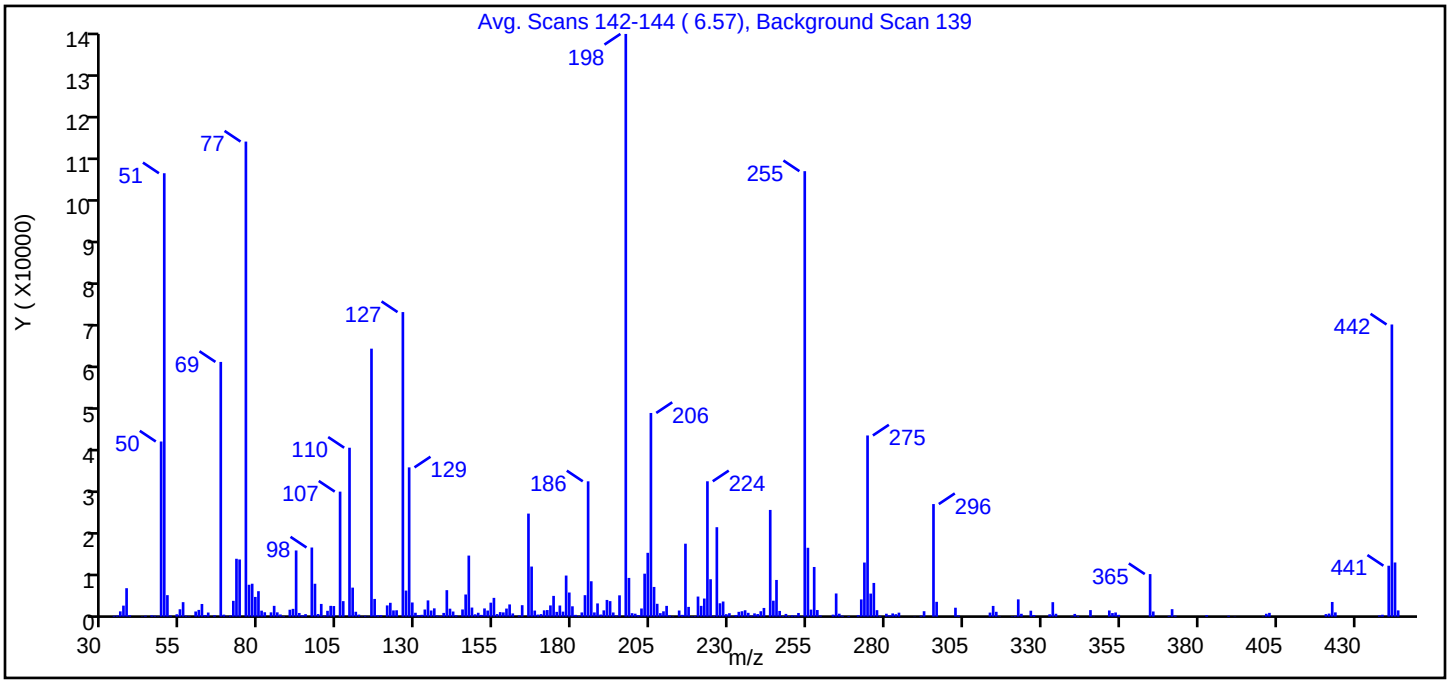
Report Date: 06-Dec-2019 12:36:46 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d		
Injection Date:	06-Dec-2019 12:23:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120619C.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

1 dftpp



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	76.1
68	Less than 2.00% of mass 69	0.0 (0.0) 1
69	Present	43.7
70	Less than 2.00% of mass 69	0.3 (0.8) 1
127	10.00 - 80.00% of mass 198	52.3
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	6.6
275	10.00 - 60.00% of mass 198	31.1
365	Greater than 1.00% of mass 198	7.3
441	0.01 - 24.00% of mass 442	8.7 (17.4) 2
442	Greater than 50.00% of mass 198	50.1
443	15.00 - 24.00% of mass 442	9.3 (18.5) 2

1-Value is % Mass 69 2-Value is % Mass 442

Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d
Injection Date: 06-Dec-2019 12:23:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 273

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	184	118.00	3978	191.00	1404	266.00	652
36.00	238	119.00	313	192.00	3751	267.00	202
37.00	1181	120.00	336	193.00	3483	269.00	134
38.00	2470	122.00	2517	194.00	929	272.00	333
39.00	6395	123.00	3106	195.00	190	273.00	3868
40.00	318	124.00	1394	196.00	4787	274.00	12166
44.00	61	125.00	1426	198.00	131136	275.00	40768
45.00	203	127.00	68536	199.00	8705	276.00	5181
47.00	283	128.00	5860	200.00	774	277.00	7576
48.00	207	129.00	33584	201.00	656	278.00	1448
49.00	80	130.00	3179	202.00	354	279.00	172
50.00	39408	131.00	866	203.00	1828	281.00	648
51.00	99784	132.00	325	204.00	9660	282.00	299
52.00	4829	133.00	399	205.00	14355	283.00	714
53.00	224	134.00	1597	206.00	45832	284.00	539
55.00	527	135.00	3648	207.00	6675	285.00	887
56.00	1650	136.00	1376	208.00	2882	290.00	50
57.00	3252	137.00	1857	209.00	776	292.00	190
58.00	197	138.00	243	210.00	1194	293.00	1213
59.00	108	139.00	136	211.00	2413	296.00	25328
61.00	1152	140.00	834	212.00	263	297.00	3329
62.00	1510	141.00	5950	213.00	85	303.00	1998
63.00	2841	142.00	1782	215.00	1368	304.00	256
64.00	366	143.00	1144	216.00	392	314.00	902
65.00	916	144.00	280	217.00	16408	315.00	2404
67.00	302	145.00	50	218.00	2186	316.00	1082
69.00	57320	146.00	1608	219.00	102	317.00	88
70.00	439	147.00	4976	220.00	135	321.00	89
71.00	75	148.00	13734	221.00	4513	322.00	150
72.00	219	149.00	2036	222.00	2415	323.00	3883
73.00	3552	150.00	515	223.00	4064	324.00	636
74.00	13016	151.00	864	224.00	30456	327.00	1331
75.00	12856	152.00	385	225.00	8406	328.00	353

Report Date: 06-Dec-2019 12:36:46 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d
Injection Date: 06-Dec-2019 12:23:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 273

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	106912	153.00	1839	226.00	165	333.00	523
78.00	7166	154.00	1365	227.00	20120	334.00	3249
79.00	7399	155.00	3135	228.00	2999	335.00	639
80.00	4429	156.00	4217	229.00	3396	340.00	73
81.00	5719	157.00	567	230.00	546	341.00	606
82.00	1337	158.00	1011	231.00	764	342.00	175
83.00	979	159.00	948	232.00	74	346.00	1461
85.00	959	160.00	1809	233.00	366	347.00	55
86.00	2421	161.00	2742	234.00	1073	352.00	1377
87.00	960	162.00	717	235.00	1206	353.00	801
88.00	480	164.00	253	236.00	1430	354.00	930
89.00	138	165.00	2569	237.00	850	355.00	396
91.00	1545	167.00	23184	238.00	196	365.00	9569
92.00	1743	168.00	11264	239.00	730	366.00	1153
93.00	14885	169.00	1361	240.00	576	371.00	176
94.00	816	170.00	451	241.00	1208	372.00	1675
95.00	290	171.00	559	242.00	1949	373.00	199
96.00	557	172.00	1410	244.00	24008	383.00	319
98.00	15552	173.00	1475	245.00	3580	390.00	192
99.00	7395	174.00	2517	246.00	8247	392.00	52
100.00	577	175.00	4661	247.00	1276	401.00	78
101.00	2854	176.00	1069	248.00	144	402.00	640
102.00	173	177.00	2495	249.00	606	403.00	842
103.00	1301	178.00	1120	250.00	138	421.00	563
104.00	2420	179.00	9239	251.00	293	422.00	686
105.00	2378	180.00	5422	252.00	230	423.00	3293
107.00	28128	181.00	2320	253.00	817	424.00	948
108.00	3481	182.00	393	254.00	92	438.00	257
110.00	38008	183.00	166	255.00	100248	439.00	418
111.00	6522	184.00	938	256.00	15489	441.00	11451
112.00	1090	185.00	4823	257.00	1574	442.00	65744
113.00	444	186.00	30448	258.00	11169	443.00	12180
114.00	64	187.00	7956	259.00	1479	444.00	1401
115.00	200	188.00	940	260.00	253		

Report Date: 06-Dec-2019 12:36:46 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d
Injection Date: 06-Dec-2019 12:23:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 273

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	66	189.00	2969	264.00	438		
117.00	60304	190.00	458	265.00	5207		

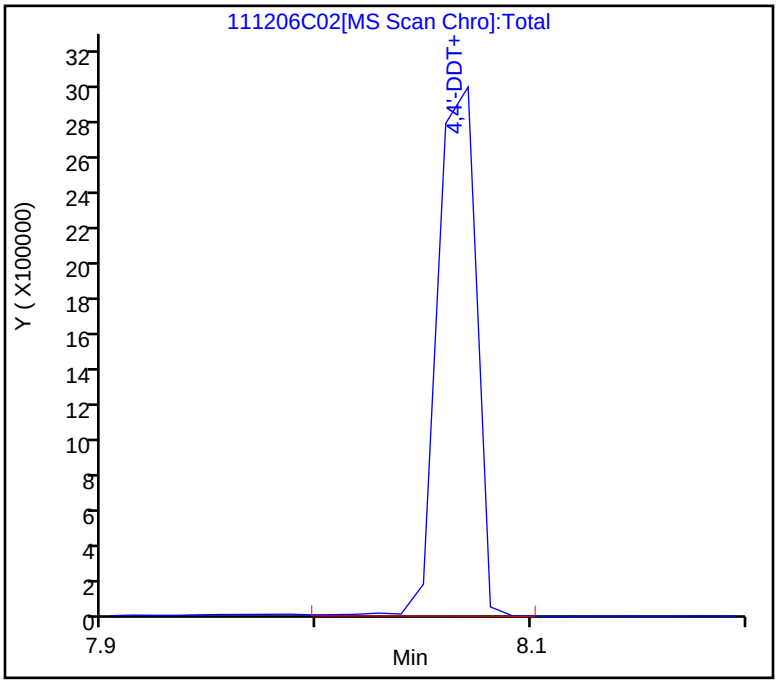
Report Date: 06-Dec-2019 12:36:46 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Breakdown Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d		
Injection Date:	06-Dec-2019 12:23:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120619C.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

5 4,4'-DDT



SW-846 Method

%Breakdown =
(Sum of Degrad. Peak Areas/
Total Area All Peaks) * 100

5 4,4'-DDT, Area = 378836 @ 8.07

6 4,4'-DDE, Area = 33526 @ 8.07
4 4,4'-DDD, Area = 588 @ 7.98

%Breakdown:8.26%, Max Limit:20%
Passed

Report Date: 06-Dec-2019 12:36:46 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Peak Tailing Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C02.d		
Injection Date:	06-Dec-2019 12:23:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120619C.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

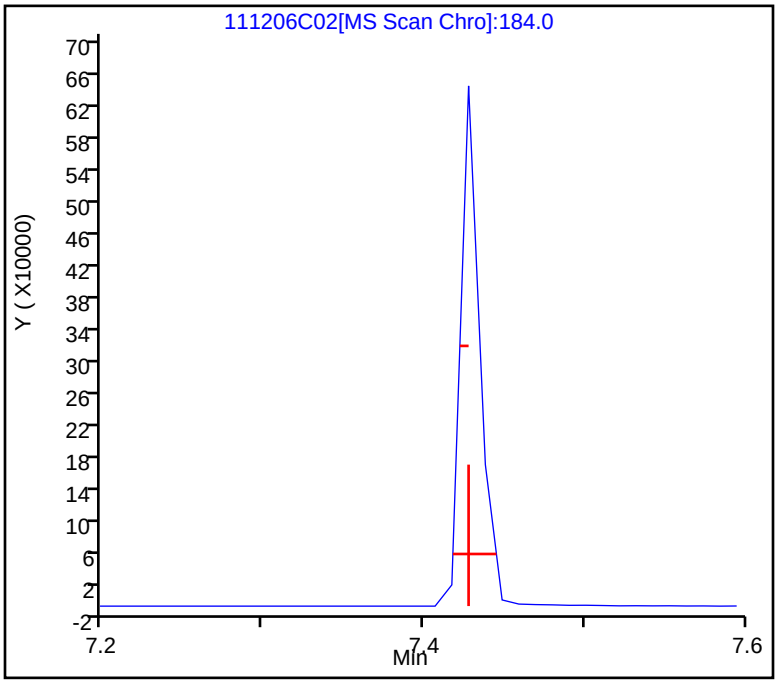
3 Benzidine

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.009 (min.)

Tailing Factor = 1.77, Max. Tailing < 2.00
Passed



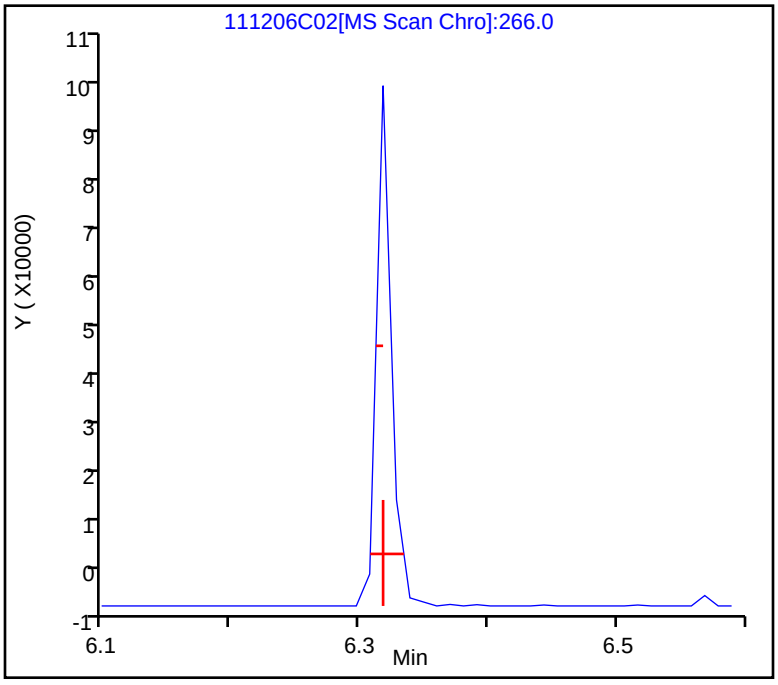
2 Pentachlorophenol

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.016 (min.)
Front Width = 0.009 (min.)

Tailing Factor = 1.62, Max. Tailing < 2.00
Passed



Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37759-001
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4,5-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4,6-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4-Dichlorophenol	ND		1	8.0	1.0	ug/L	12/06/2019 1334
2,4-Dimethylphenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
2,4-Dinitrophenol	ND		1	20	1.0	ug/L	12/06/2019 1334
2,4-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2,6-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2-Chloronaphthalene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2-Chlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2-Methylnaphthalene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
2-Methylphenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
2-Nitroaniline	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2-Nitrophenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
3,3'-Dichlorobenzidine	ND		1	4.0	1.8	ug/L	12/06/2019 1334
3+4-Methylphenol	ND		1	4.0	1.5	ug/L	12/06/2019 1334
3-Nitroaniline	ND		1	8.0	1.0	ug/L	12/06/2019 1334
4,6-Dinitro-2-methylphenol	ND		1	20	1.0	ug/L	12/06/2019 1334
4-Bromophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Chloro-3-methyl phenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Chloroaniline	ND		1	8.0	0.50	ug/L	12/06/2019 1334
4-Chlorophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Nitroaniline	ND		1	8.0	1.5	ug/L	12/06/2019 1334
4-Nitrophenol	ND		1	20	2.0	ug/L	12/06/2019 1334
Acenaphthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Acenaphthylene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Acetophenone	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Atrazine	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Benzaldehyde	ND		1	8.0	0.50	ug/L	12/06/2019 1334
Benzo(a)anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(a)pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(b)fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(g,h,i)perylene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(k)fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Chloroethoxy)methane	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Chloroethyl)ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Ethylhexyl)phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Butyl benzyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Caprolactam	ND		1	8.0	2.0	ug/L	12/06/2019 1334
Carbazole	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Chrysene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Dibenzo(a,h)anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37759-001
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Dibenzofuran	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Diethylphthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Dimethyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Di-n-butyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Di-n-octylphthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Fluorene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Hexachlorobenzene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Hexachlorobutadiene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Hexachlorocyclopentadiene	ND		1	20	2.0	ug/L	12/06/2019 1334
Hexachloroethane	ND		1	4.0	1.0	ug/L	12/06/2019 1334
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Isophorone	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Naphthalene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Nitrobenzene	ND		1	4.0	1.5	ug/L	12/06/2019 1334
N-Nitrosodi-n-propylamine	ND		1	4.0	0.50	ug/L	12/06/2019 1334
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Pentachlorophenol	ND		1	20	2.0	ug/L	12/06/2019 1334
Phenanthrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Phenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		32	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		41	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		38	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C05.d		
Lab Sample ID:	UQ37759-001	Client Sample ID:	SBLK59
Injection Date:	06-Dec-2019 13:34:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UQ37759-001		
Misc. Info:	37717		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	BLANK	ALS Bottle:	1
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	06-Dec-2019 17:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	98958	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	712588	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	386707	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	559228	20.000	80.000	
* 128 Chrysene-d12	240.0	12.249	12.249	0.000	417107	20.000	80.000	
* 136 Perylene-d12	264.0	14.405	14.405	0.000	411768	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.767	-0.011	22069	3.1899	12.759	e
199 Benzaldhyde	77.0		5.409		ND			
$ 9 Phenol-d5	99.0	5.409	5.414	-0.005	34636	4.1216	16.486	e
10 Phenol	94.0		5.425		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.008		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.018		ND			
24 Acetophenone	105.0		6.040		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	74970	5.0602	20.241	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.436		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.805		ND			
47 Hexachlorobutadiene	224.6		6.863		ND			
196 Caprolactam	113.0		7.077		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.575		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	106317	4.1283	16.513	e
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.265		ND			
70 4-Nitrophenol	109.0		8.297		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.666		ND			
83 4-Nitroaniline	138.0		8.693		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.714		ND			
86 n-Nitrosodiphenylamine	169.0		8.762		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	6240	4.0640	16.256	e
94 4-Bromophenylphenylether	248.0		9.083		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.179		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.516		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.896		ND			
114 Fluoranthene	202.0		10.575		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	96267	5.4521	21.808	
122 Butylbenzylphthalate	149.0		11.410		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.105		ND			
125 3,3'-Dichlorobenzidine	252.0		12.148		ND			
127 Benzo(a)Anthracene	228.0		12.228		ND			
129 Chrysene	228.0		12.282		ND			
131 Di-n-octylphthalate	149.0		13.036		ND			
132 Benzo(b)fluoranthene	252.0		13.801		ND			
134 Benzo(k)fluoranthene	252.0		13.843		ND			
135 Benzo(a)pyrene	252.0		14.314		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.298		ND			
139 Dibenzo(a,h)anthracene	278.0		16.304		ND			
140 Benzo(g,h,i)perylene	276.0		16.860		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

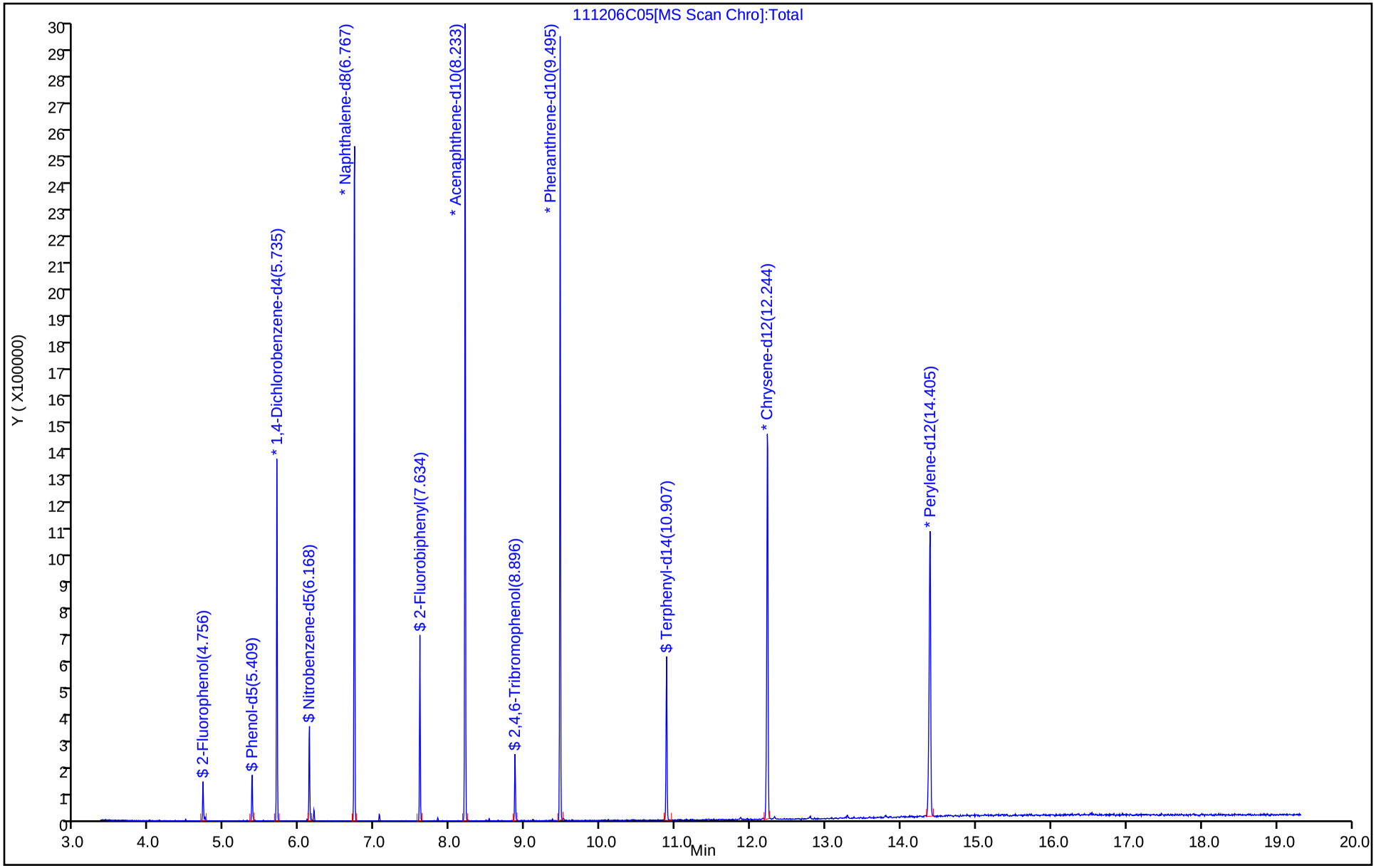
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 07-Dec-2019 14:42:45 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C05.d				
Injection Date:	06-Dec-2019 13:34:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	SBLK59	Lab ID:	UQ37759-001		
Sample Info:	11120619C.b, UQ37759-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37759-002
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	19		1	47	30-130	12/06/2019 1359
2,4,5-Trichlorophenol	40	17		1	41	30-123	12/06/2019 1359
2,4,6-Trichlorophenol	40	19		1	48	30-130	12/06/2019 1359
2,4-Dichlorophenol	40	20		1	51	30-121	12/06/2019 1359
2,4-Dimethylphenol	40	21		1	53	20-125	12/06/2019 1359
2,4-Dinitrophenol	80	39		1	49	11-126	12/06/2019 1359
2,4-Dinitrotoluene	40	19		1	47	30-130	12/06/2019 1359
2,6-Dinitrotoluene	40	18		1	44	30-130	12/06/2019 1359
2-Chloronaphthalene	40	18		1	45	30-130	12/06/2019 1359
2-Chlorophenol	40	20		1	49	30-130	12/06/2019 1359
2-Methylnaphthalene	40	21		1	51	40-132	12/06/2019 1359
2-Methylphenol	40	20		1	51	30-130	12/06/2019 1359
2-Nitroaniline	40	21		1	52	30-130	12/06/2019 1359
2-Nitrophenol	40	21		1	52	30-130	12/06/2019 1359
3,3'-Dichlorobenzidine	40	13		1	32	10-126	12/06/2019 1359
3+4-Methylphenol	40	21		1	53	30-130	12/06/2019 1359
3-Nitroaniline	40	17		1	42	30-130	12/06/2019 1359
4,6-Dinitro-2-methylphenol	40	22		1	55	30-130	12/06/2019 1359
4-Bromophenyl phenyl ether	40	17		1	42	30-124	12/06/2019 1359
4-Chloro-3-methyl phenol	40	22		1	55	30-123	12/06/2019 1359
4-Chloroaniline	40	18		1	45	12-157	12/06/2019 1359
4-Chlorophenyl phenyl ether	40	18		1	45	30-121	12/06/2019 1359
4-Nitroaniline	40	25		1	62	30-135	12/06/2019 1359
4-Nitrophenol	80	44		1	56	30-130	12/06/2019 1359
Acenaphthene	40	20		1	51	30-122	12/06/2019 1359
Acenaphthylene	40	20		1	49	30-130	12/06/2019 1359
Acetophenone	40	20		1	50	30-130	12/06/2019 1359
Anthracene	40	20		1	49	30-123	12/06/2019 1359
Atrazine	40	18		1	45	30-130	12/06/2019 1359
Benzaldehyde	40	14		1	34	20-115	12/06/2019 1359
Benzo(a)anthracene	40	19		1	48	40-125	12/06/2019 1359
Benzo(a)pyrene	40	17		1	43	40-128	12/06/2019 1359
Benzo(b)fluoranthene	40	19		1	47	30-130	12/06/2019 1359
Benzo(g,h,i)perylene	40	17		1	44	30-130	12/06/2019 1359
Benzo(k)fluoranthene	40	19		1	46	30-130	12/06/2019 1359
bis (2-Chloro-1-methylethyl) ether	40	21		1	54	30-130	12/06/2019 1359
bis(2-Chloroethoxy)methane	40	21		1	54	30-130	12/06/2019 1359
bis(2-Chloroethyl)ether	40	20		1	51	30-130	12/06/2019 1359
bis(2-Ethylhexyl)phthalate	40	18		1	44	30-130	12/06/2019 1359
Butyl benzyl phthalate	40	21		1	52	30-130	12/06/2019 1359
Caprolactam	40	22		1	56	30-130	12/06/2019 1359
Carbazole	40	17		1	42	30-130	12/06/2019 1359
Chrysene	40	19		1	48	30-130	12/06/2019 1359
Dibenzo(a,h)anthracene	40	18		1	45	30-130	12/06/2019 1359

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37759-002
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	18		1	46	30-118	12/06/2019 1359
Diethylphthalate	40	19		1	47	40-125	12/06/2019 1359
Dimethyl phthalate	40	19		1	48	40-127	12/06/2019 1359
Di-n-butyl phthalate	40	19		1	47	40-127	12/06/2019 1359
Di-n-octylphthalate	40	18		1	45	30-130	12/06/2019 1359
Fluoranthene	40	18		1	46	40-128	12/06/2019 1359
Fluorene	40	20		1	49	30-124	12/06/2019 1359
Hexachlorobenzene	40	16		1	39	30-125	12/06/2019 1359
Hexachlorobutadiene	40	16		1	40	24-110	12/06/2019 1359
Hexachlorocyclopentadiene	200	68		1	34	22-122	12/06/2019 1359
Hexachloroethane	40	23		1	58	30-130	12/06/2019 1359
Indeno(1,2,3-c,d)pyrene	40	17		1	42	30-130	12/06/2019 1359
Isophorone	40	23		1	58	30-130	12/06/2019 1359
Naphthalene	40	21		1	53	30-130	12/06/2019 1359
Nitrobenzene	40	23		1	58	30-130	12/06/2019 1359
N-Nitrosodi-n-propylamine	40	23		1	58	30-130	12/06/2019 1359
N-Nitrosodiphenylamine (Diphenylamine)	40	17		1	43	30-123	12/06/2019 1359
Pentachlorophenol	80	39		1	49	30-130	12/06/2019 1359
Phenanthrene	40	18		1	46	40-123	12/06/2019 1359
Phenol	40	21		1	52	30-130	12/06/2019 1359
Pyrene	40	20		1	51	40-126	12/06/2019 1359

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		45	37-129
2-Fluorophenol		47	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5		52	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		39	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C06.d		
Lab Sample ID:	UQ37759-002	Client Sample ID:	SLCS59
Injection Date:	06-Dec-2019 13:59:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120619C.b, UQ37759-002		
Misc. Info:	37759		
Method:	\\Organics\hh\chem\msd11.i\11120619C.b\8270DLVI-11.m		
Method Date:	06-Dec-2019 17:09:30	Quant Method:	ISTD
Calib Date:	05-Dec-2019 19:35:30	Calib File:	111205B20.d
Sample Type:	LCS	ALS Bottle:	2
Cpnd Sublist:	sample.sb	Spike List File:	8270water.spk
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	06-Dec-2019 17:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	178699	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	734903	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.238	8.233	0.005	412577	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	664488	20.000	80.000	
* 128 Chrysene-d12	240.0	12.250	12.249	0.001	491292	20.000	80.000	
* 136 Perylene-d12	264.0	14.405	14.405	0.000	475297	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.761	4.767	-0.006	59208	4.7391	18.956	e
199 Benzaldhyde	77.0	5.409	5.409	0.000	36213	3.4197	13.679	eR
$ 9 Phenol-d5	99.0	5.409	5.414	-0.005	78724	5.1877	20.751	
10 Phenol	94.0	5.419	5.425	-0.006	88226	5.1709	20.684	R
12 bis(2-Chloroethyl)ether	63.0	5.500	5.500	0.000	44508	5.0980	20.392	
13 2-Chlorophenol	128.0	5.580	5.585	-0.005	64727	4.8936	19.574	e
20 o-Cresol	108.0	5.890	5.890	0.000	59677	5.0650	20.260	
21 bis(2Chloro1methylethyl)ether	45.0	5.906	5.911	-0.005	39901	5.3575	21.430	
23 m+p-Cresol	107.0	6.002	6.008	-0.006	66674	5.2647	21.059	
26 n-Nitroso-di-n-propylamine	70.0	6.013	6.018	-0.005	60760	5.8179	23.272	
24 Acetophenone	105.0	6.034	6.040	-0.006	89703	5.0054	20.022	R
28 Hexachloroethane	117.0	6.152	6.152	0.000	33836	5.8098	23.239	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	86211	5.6423	22.569	
30 Nitrobenzene	77.0	6.184	6.184	0.000	92585	5.8220	23.288	
32 Isophorone	82.0	6.361	6.361	0.000	132487	5.7502	23.001	
34 2,4-Dimethylphenol	107.0	6.436	6.436	0.000	52577	5.2952	21.181	
33 2-Nitrophenol	139.0	6.441	6.441	0.000	32598	5.1916	20.766	e

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	74000	5.3653	21.461	
38 2,4-Dichlorophenol	162.0	6.634	6.633	0.001	43856	5.0905	20.362	
43 Naphthalene	128.0	6.783	6.783	0.000	193452	5.2879	21.152	
44 4-Chloroaniline	127.0	6.805	6.805	0.000	54338	4.4533	17.813	eR
47 Hexachlorobutadiene	224.6	6.858	6.863	-0.005	26498	3.9830	15.932	e
196 Caprolactam	113.0	7.083	7.077	0.006	16696	5.5773	22.309	R
49 4-Chloro-3-methylphenol	107.0	7.184	7.179	0.005	62630	5.4936	21.974	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	120132	5.1425	20.570	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	130511	17.027	68.108	e
54 2,4,6-Trichlorophenol	196.0	7.575	7.575	0.000	32392	4.8238	19.295	e
55 2,4,5-Trichlorophenol	196.0	7.618	7.612	0.006	27924	4.1483	16.593	eR
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	123594	4.4982	17.993	e
184 Biphenyl	154.0	7.725	7.725	0.000	137521	4.7090	18.836	eR
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	97946	4.4734	17.893	e
60 2-Nitroaniline	138.0	7.832	7.831	0.001	32707	5.2125	20.850	e
62 Dimethylphthalate	163.0	7.949	7.949	0.000	120166	4.7805	19.122	eR
65 2,6-Dinitrotoluene	165.0	8.019	8.019	0.000	23988	4.4187	17.675	eR
64 Acenaphthylene	152.0	8.120	8.120	0.000	157972	4.8763	19.505	
66 3-Nitroaniline	138.0	8.179	8.174	0.005	20346	4.1707	16.683	e
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	27241	9.8024	39.210	Qe
68 Acenaphthene	153.0	8.265	8.265	0.000	115208	5.1165	20.466	
70 4-Nitrophenol	109.0	8.297	8.297	0.000	67420	11.107	44.429	e
73 2,4-Dinitrotoluene	165.0	8.366	8.361	0.005	30779	4.6960	18.784	eR
71 Dibenzofuran	168.0	8.404	8.404	0.000	133915	4.6109	18.443	eR
78 Diethylphthalate	149.0	8.532	8.532	0.000	132380	4.6711	18.684	eR
80 4-Chlorophenylphenylether	204.0	8.666	8.666	0.000	48879	4.4568	17.827	eR
83 4-Nitroaniline	138.0	8.693	8.693	0.000	29025	6.2354	24.942	Qe
79 Fluorene	166.0	8.693	8.693	0.000	119846	4.9416	19.766	R
84 4,6-Dinitro-2-methylphenol	198.0	8.714	8.714	0.000	16613	5.4690	21.876	e
86 n-Nitrosodiphenylamine	169.0	8.762	8.762	0.000	73323	4.2606	17.042	eR
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	7686	4.1774	16.710	Qe
94 4-Bromophenylphenylether	248.0	9.083	9.083	0.000	23143	4.2471	16.989	eR
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	20551	3.9447	15.779	eR
200 Atrazine	200.0	9.179	9.179	0.000	29095	4.5408	18.163	QeR
99 Pentachlorophenol	266.0	9.324	9.324	0.000	25989	9.7639	39.055	e
103 Phenanthrene	178.0	9.516	9.516	0.000	161398	4.6231	18.493	R
104 Anthracene	178.0	9.559	9.559	0.000	145162	4.8764	19.505	R
106 Carbazole	167.0	9.677	9.677	0.000	121978	4.2148	16.859	e
109 Di-n-butylphthalate	149.0	9.896	9.896	0.000	212525	4.6955	18.782	eR
114 Fluoranthene	202.0	10.570	10.575	-0.005	146534	4.5800	18.320	R
116 Pyrene	202.0	10.811	10.811	0.000	151169	5.0804	20.322	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	108926	5.2375	20.950	
122 Butylbenzylphthalate	149.0	11.410	11.410	0.000	86910	5.1567	20.627	e
130 bis(2-Ethylhexyl)phthalate	149.0	12.100	12.105	-0.005	101056	4.4479	17.792	eR
125 3,3'-Dichlorobenzidine	252.0	12.148	12.148	0.000	25376	3.2262	12.905	eR
127 Benzo(a)Anthracene	228.0	12.228	12.228	0.000	135794	4.7890	19.156	R
129 Chrysene	228.0	12.282	12.282	0.000	126620	4.8442	19.377	R
131 Di-n-octylphthalate	149.0	13.036	13.036	0.000	174065	4.5153	18.061	eR
132 Benzo(b)fluoranthene	252.0	13.795	13.801	-0.006	113996	4.6974	18.790	
134 Benzo(k)fluoranthene	252.0	13.838	13.843	-0.005	122285	4.6498	18.599	QR
135 Benzo(a)pyrene	252.0	14.309	14.314	-0.005	94573	4.2542	17.017	R

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0	16.288	16.298	-0.010	142322	4.2374	16.949	R
139 Dibenzo(a,h)anthracene	278.0	16.293	16.304	-0.011	128974	4.5153	18.061	R
140 Benzo(g,h,i)perylene	276.0	16.860	16.860	0.000	109566	4.3636	17.454	

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

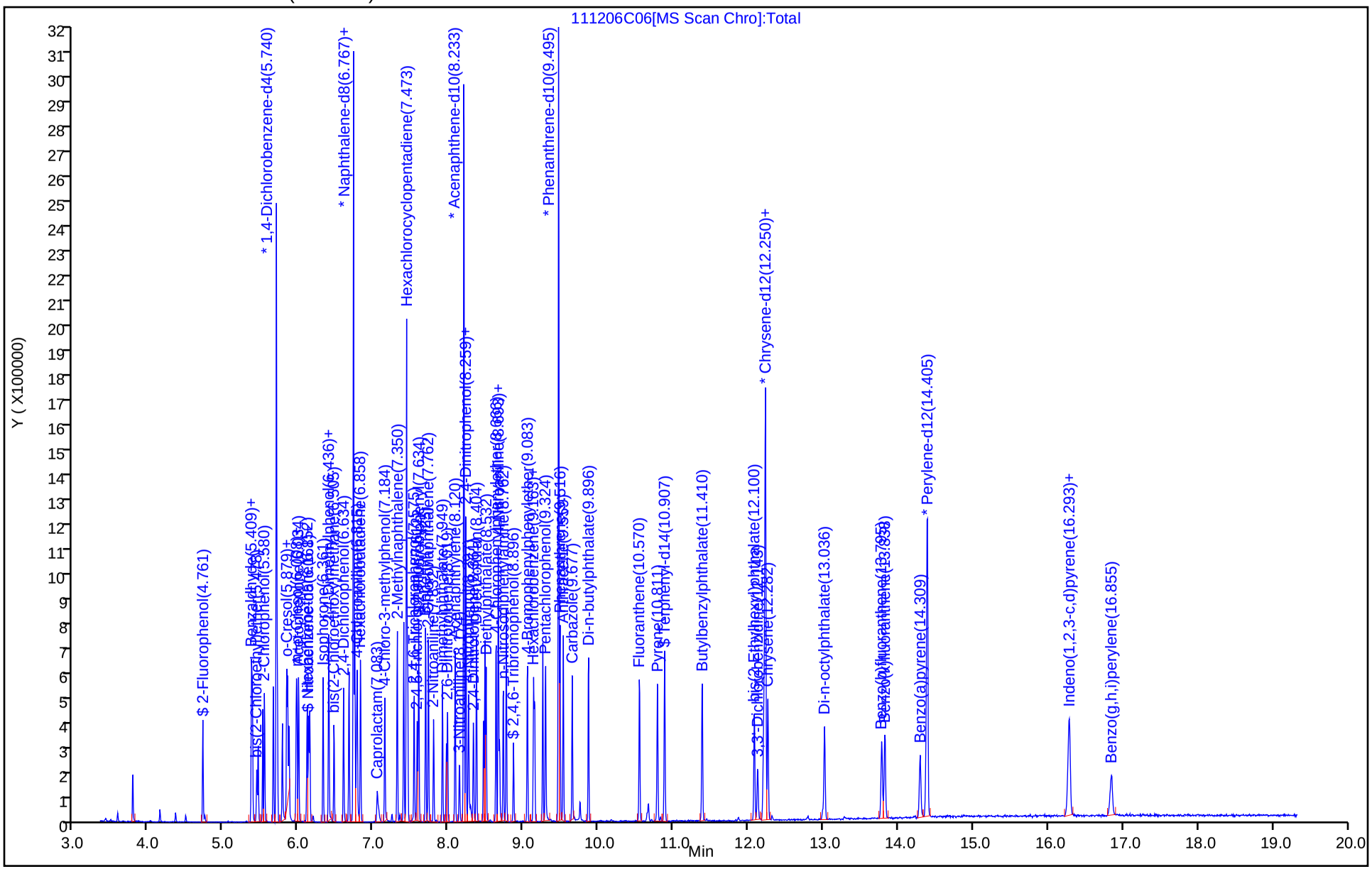
R - Spike/Surrogte Fails %Recovery Test

Review Flags

Report Date: 07-Dec-2019 14:42:46 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120619C.b\111206C06.d				
Injection Date:	06-Dec-2019 13:59:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	SLCS59	Lab ID:	UQ37759-002		
Sample Info:	11120619C.b, UQ37759-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



MISC. DATA

Report Date: 06-Dec-2019 14:07:37 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\hh\chem\msd11.i\11120519B.b
Inst. ID: msd11.i Method: 8270DLVI-11
Matrix: Water Operator: JCG
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
96	SVMS 4186	05-Dec-2019 11:42:30	111205B01.D	DFTPP		DFTPPBA	Water	1	all				Yes	Yes			IS:19-1800	8270D-tun
97	SVMS 4162	05-Dec-2019 12:00:30	111205B02.D	Client			Water	1	1STD									8270DLVI-11
100	IBLK	05-Dec-2019 12:27:30	111205B03.D	Client			Water	1	1STD									8270DLVI-11
1	SVMS 4157	05-Dec-2019 12:53:30	111205B04.D	Ical	1	1STD0.2BB	Water	1	PAH+								1STDICAL	8270DLVI-11
2	SVMS 4158	05-Dec-2019 13:18:30	111205B05.D	Ical	2	1STD001BB	Water	1	1STD									8270DLVI-11
3	SVMS 4159	05-Dec-2019 13:43:30	111205B06.D	Ical	3	1STD002BB	Water	1	1STD									8270DLVI-11
4	SVMS 4167	05-Dec-2019 14:08:30	111205B07.D	Ical	4	1STD005BB	Water	1	1STD									8270DLVI-11
5	SVMS 4281	05-Dec-2019 14:33:30	111205B08.D	Ical	5	1STD010BB	Water	1	1STD									8270DLVI-11
6	SVMS 4162	05-Dec-2019 14:58:30	111205B09.D	Ical	6	1STD015BB	Water	1	1STD									8270DLVI-11
7	SVMS 4168	05-Dec-2019 15:23:30	111205B10.D	Ical	7	1STD020BB	Water	1	1STD									8270DLVI-11
8	SVMS 4164	05-Dec-2019 15:49:30	111205B11.D	Ical	8	1STD025BB	Water	1	1STD									8270DLVI-11
9	SVMS 4165	05-Dec-2019 16:14:30	111205B12.D	Ical	9	1STD030BB	Water	1	1STD									8270DLVI-11
10	SVMS 4221	05-Dec-2019 16:39:30	111205B13.D	LCS		1STDICV	Water	1	1STD	ICV1								8270DLVI-11
11	SVMS 4212	05-Dec-2019 17:04:30	111205B14.D	Ical	2	3STD001BC	Water	1	3STD								3STDICAL	8270DLVI-11
12	SVMS 4213	05-Dec-2019 17:29:30	111205B15.D	Ical	3	3STD002BC	Water	1	3STD									8270DLVI-11
13	SVMS 4214	05-Dec-2019 17:54:30	111205B16.D	Ical	4	3STD005BC	Water	1	3STD									8270DLVI-11
14	SVMS 4215	05-Dec-2019 18:19:30	111205B17.D	Ical	5	3STD010BC	Water	1	3STD									8270DLVI-11
15	SVMS 4216	05-Dec-2019 18:44:30	111205B18.D	Ical	6	3STD015BC	Water	1	3STD									8270DLVI-11
16	SVMS 4217	05-Dec-2019 19:10:30	111205B19.D	Ical	7	3STD020BC	Water	1	3STD									8270DLVI-11
17	SVMS 4218	05-Dec-2019 19:35:30	111205B20.D	Ical	8	3STD025BC	Water	1	3STD									8270DLVI-11
18	SVMS 4220	05-Dec-2019 20:00:30	111205B21.D	LCS		3STDICV	Water	1	3STD	ICV2								8270DLVI-11
19	UQ37717-001	05-Dec-2019 20:25:30	111205B22.D	BLANK		SBLK17	Water	1	sample								IS,RR	8270DLVI-11
20	UQ37717-002	05-Dec-2019 20:50:30	111205B23.D	LCS		SLCS17	Water	1	sample	8270water								8270DLVI-11
21	UL03011-001	05-Dec-2019 21:15:30	111205B24.D	Client		MPG1-20-Water-RW-12	Water	1	sample									8270DLVI-11
22	UL03011-002	05-Dec-2019 21:41:30	111205B25.D	Client		MPG1-21-Water-RW-12	Water	1	sample									8270DLVI-11
23	UL03011-003	05-Dec-2019 22:06:30	111205B26.D	Client		MPG1-22-Water-RW-12	Water	1	sample									8270DLVI-11
24	UL03011-004	05-Dec-2019 22:31:30	111205B27.D	Client		MPG1-24-Water-RW-12	Water	1	sample									8270DLVI-11
25	UL03011-005	05-Dec-2019 22:56:30	111205B28.D	Client		MPG1-25-Water-RW-12	Water	1	sample									8270DLVI-11
26	UL03011-006	05-Dec-2019 23:21:30	111205B29.D	Client		MPG1-FB-120219	Water	1	sample									8270DLVI-11
27	UK22009-003	05-Dec-2019 23:46:30	111205B30.D	Client		Oak-mitsui Effluent	Water	1	sample									8270DLVI-11
100	IBLK	06-Dec-2019 00:11:30	111205B31.D	Client			Water	1	1STD									8270DLVI-11
100	IBLK	06-Dec-2019 00:36:30	111205B32.D	Client			Water	1	1STD									8270DLVI-11
100	IBLK	06-Dec-2019 01:01:30	111205B33.D	Client			Water	1	1STD									8270DLVI-11

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\hh\chem\msd11.i\11120619C.b
Inst. ID: msd11.i Method: 8270DLVI-11
Matrix: Water Operator: JCG
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
96	SVMS 4186	06-Dec-2019 12:02:30	111206C01.D	DFTPP		Water	1	all				Yes	Yes				8270D-tun
96	SVMS 4186	06-Dec-2019 12:23:30	111206C02.D	DFTPP	DFTPPBD	Water	1	all				Yes	Yes			IS:19-1800	8270D-tun
97	SVMS 4281	06-Dec-2019 12:42:30	111206C03.D	Ccv	1STD010BE	Water	1	1STD									8270DLVI-11
98	SVMS 4215	06-Dec-2019 13:07:30	111206C04.D	Ccv	3STD010BF	Water	1	3STD									8270DLVI-11
1	UQ37759-001	06-Dec-2019 13:34:30	111206C05.D	BLANK	SBLK59	Water	1	sample								38071	8270DLVI-11
2	UQ37759-002	06-Dec-2019 13:59:30	111206C06.D	LCS	SLCS59	Water	1	sample	8270water								8270DLVI-11
3	UL03011-001	06-Dec-2019 14:24:30	111206C07.D	Client	MPGI-20-Water-RW-12	Water	1	sample									8270DLVI-11
4	UL03011-002	06-Dec-2019 14:50:30	111206C08.D	Client	MPGI-21-Water-RW-12	Water	1	sample									8270DLVI-11
5	UL03011-003	06-Dec-2019 15:15:30	111206C09.D	Client	MPG1-22-Water-RW-12	Water	1	sample								SS,RR	8270DLVI-11
6	UL03011-004	06-Dec-2019 15:40:30	111206C10.D	Client	MPGI-24-Water-RW-12	Water	1	sample								SS,RR	8270DLVI-11
7	UL03011-005	06-Dec-2019 16:05:30	111206C11.D	Client	MPGI-25-Water-RW-12	Water	1	sample									8270DLVI-11
8	UL03011-006	06-Dec-2019 16:30:30	111206C12.D	Client	MPGI-FB-120219	Water	1	sample									8270DLVI-11
5	UL03011-003	06-Dec-2019 16:59:30	111206C13.D	Client	MPG1-22-Water-RW-12	Water	1	1STD								IS,RR	8270DLVI-11
6	UL03011-004	06-Dec-2019 17:25:30	111206C14.D	Client	MPGI-24-Water-RW-12	Water	1	sample								IS,RR	8270DLVI-11
8	UL03011-003	06-Dec-2019 17:50:30	111206C15.D	Client	MPG1-22-Water-RW-12	Water	1	sample									8270DLVI-11
9	UQ37996-001	06-Dec-2019 18:16:30	111206C16.D	Client		Water	1	1STD								IS,RR	8270DLVI-11
10	UQ37996-002	06-Dec-2019 18:41:30	111206C17.D	Client		Water	1	1STD									8270DLVI-11
18	UL03011-004	06-Dec-2019 19:06:30	111206C18.D	Client	MPGI-24-Water-RW-12	Water	1	sample									8270DLVI-11
11	UL04029-001	06-Dec-2019 19:31:30	111206C19.D	Client		Water	1	1STD									8270DLVI-11
12	UL04029-002	06-Dec-2019 19:57:30	111206C20.D	Client		Water	1	1STD									8270DLVI-11
13	UL04029-003	06-Dec-2019 20:22:30	111206C21.D	Client		Water	1	1STD									8270DLVI-11
14	UL04029-004	06-Dec-2019 20:47:30	111206C22.D	Client		Water	1	1STD									8270DLVI-11
15	UL04029-005	06-Dec-2019 21:13:30	111206C23.D	Client		Water	1	1STD									8270DLVI-11
16	UL04029-006	06-Dec-2019 21:38:30	111206C24.D	Client		Water	1	1STD									8270DLVI-11
17	UL04029-007	06-Dec-2019 22:03:30	111206C25.D	Client		Water	1	1STD									8270DLVI-11
19	UQ37784-002	06-Dec-2019 22:28:30	111206C26.D	LCS	SLCS84	Soil	1	sample	8270soil								8270DLVI-11
100	IBLK	06-Dec-2019 22:53:30	111206C27.D	Client		Water	1	1STD									8270DLVI-11
100	IBLK	06-Dec-2019 23:18:30	111206C28.D	Client		Water	1	1STD									8270DLVI-11
100	IBLK	06-Dec-2019 23:44:30	111206C29.D	Client		Water	1	1STD									8270DLVI-11

Analyst: NFB **Level 2 Analyst:** CRD

Status: Level 2 review released

Matrix: Aqueous

Printed: 12/09/19 0914

Prep Batch: 37759

3520C RVE (5.0 mL FV - Acid Only) - Continuous Liquid-Liquid Extraction

Start Date: 12/03/2019 1638
End Date: 12/04/2019 1055

Conc Analyst: BFP
Conc Start Date: 12/04/2019 1208
Conc End Date: 12/04/2019 1245

Ext Solvent: CH2Cl2 > CH2Cl2

Reagents Vol. (mL): 170

Chem ID: 19-2577>19-2577

Sodium Sulfate ID: extr-5439

Surrogate: extw-5527exp051820
Surrogate Vol. (mL): 0.5

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Adj. pH (SU)	Comments
UQ37759-001	MB		1	8270D	250		0.0	5.0	2	witness: JBK /QC shared with batch 37717
UQ37759-002	LCS		1	8270D	250	extw-5417exp011115	0.5	5.0	2	extw-5474exp031320/extw-5419exp011620/extw-5428exp012920
UL03011-001	Sample	MPG1-20-Water-RW-120219	1	8270D	250		0.0	5.0	2	glass wool: 19-668
UL03011-002	Sample	MPG1-21-Water-RW-120219	1	8270D	250		0.0	5.0	2	boiling chip: extr-5431
UL03011-003	Sample	MPG1-22-Water-RW-120219	1	8270D	250		0.0	5.0	2	1:1 sulfuric acid: extr-5459
UL03011-004	Sample	MPG1-24-Water-RW-120219	1	8270D	250		0.0	5.0	2	pH strip: 16-454
UL03011-005	Sample	MPG1-25-Water-RW-120219	1	8270D	250		0.0	5.0	2	
UL03011-006	Sample	MPG1-FB-120219	1	8270D	250		0.0	5.0	2	
UL03011-006MS	MS		1	8270D	250		0.0	5.0	0	MS associated w 37717
UL03011-006MD	MSD		1	8270D	250		0.0	5.0	0	MSD associated w 37717

(end of report) **Total Samples: 6**

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL03011**

Date Completed:12/08/2019
Revision Date: 02/21/2020

N. Saikaly

02/21/2020 10:58 AM
Approved and released by:
Project Manager: **Nisreen Saikaly**

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL03011

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Report Revision (02/21/2020)

This report supersedes and replaces any prior reports issued under this lot number. The details of the applicable revisions are detailed in a Report Revision Notice provided under separate cover.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL03011

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-20-Water-RW-120219	Aqueous	12/02/2019 1036	12/03/2019
002	MPGI-21-Water-RW-120219	Aqueous	12/02/2019 0951	12/03/2019
003	MPGI-22-Water-RW-120219	Aqueous	12/02/2019 1114	12/03/2019
004	MPGI-24-Water-RW-120219	Aqueous	12/02/2019 1327	12/03/2019
005	MPGI-25-Water-RW-120219	Aqueous	12/02/2019 1244	12/03/2019
006	MPGI-FB-120219	Aqueous	12/02/2019 1400	12/03/2019

(6 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL03011

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page

(0 detections)

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-001
Description: MPGI-20-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1424	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-001
Description: MPGI-20-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1036
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1424	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		50	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		36	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-002
Description: MPGI-21-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1450	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-002
Description: MPGI-21-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 0951
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1450	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		31	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		45	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		39	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-003
Description: MPGI-22-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1750	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-003
Description: MPGI-22-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1114
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1750	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		43	24-127
Nitrobenzene-d5		74	38-127
Phenol-d5		58	28-128
Terphenyl-d14		84	10-148
2,4,6-Tribromophenol		54	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-004
Description: MPGI-24-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1906	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-004
Description: MPGI-24-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1327
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1906	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		40	24-127
Nitrobenzene-d5		75	38-127
Phenol-d5		67	28-128
Terphenyl-d14		87	10-148
2,4,6-Tribromophenol		53	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-005
Description: MPGI-25-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1605	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-005
Description: MPGI-25-Water-RW-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1244
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1605	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		39	37-129
2-Fluorophenol		44	24-127
Nitrobenzene-d5		52	38-127
Phenol-d5		54	28-128
Terphenyl-d14		50	10-148
2,4,6-Tribromophenol		36	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-006
Description: MPGI-FB-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1630	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL03011-006
Description: MPGI-FB-120219
Matrix: Aqueous
Date Sampled: 12/02/2019 1400
Date Received: 12/03/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/06/2019 1630	SCD	12/03/2019 1638	37759

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		77	37-129
2-Fluorophenol		59	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		85	28-128
Terphenyl-d14		106	10-148
2,4,6-Tribromophenol		46	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

QC Summary

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37759-001
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4,5-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4,6-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2,4-Dichlorophenol	ND		1	8.0	1.0	ug/L	12/06/2019 1334
2,4-Dimethylphenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
2,4-Dinitrophenol	ND		1	20	1.0	ug/L	12/06/2019 1334
2,4-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2,6-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2-Chloronaphthalene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2-Chlorophenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
2-Methylnaphthalene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
2-Methylphenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
2-Nitroaniline	ND		1	8.0	0.50	ug/L	12/06/2019 1334
2-Nitrophenol	ND		1	4.0	1.0	ug/L	12/06/2019 1334
3,3'-Dichlorobenzidine	ND		1	4.0	1.8	ug/L	12/06/2019 1334
3+4-Methylphenol	ND		1	4.0	1.5	ug/L	12/06/2019 1334
3-Nitroaniline	ND		1	8.0	1.0	ug/L	12/06/2019 1334
4,6-Dinitro-2-methylphenol	ND		1	20	1.0	ug/L	12/06/2019 1334
4-Bromophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Chloro-3-methyl phenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Chloroaniline	ND		1	8.0	0.50	ug/L	12/06/2019 1334
4-Chlorophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
4-Nitroaniline	ND		1	8.0	1.5	ug/L	12/06/2019 1334
4-Nitrophenol	ND		1	20	2.0	ug/L	12/06/2019 1334
Acenaphthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Acenaphthylene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Acetophenone	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Atrazine	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Benzaldehyde	ND		1	8.0	0.50	ug/L	12/06/2019 1334
Benzo(a)anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(a)pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(b)fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(g,h,i)perylene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Benzo(k)fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Chloroethoxy)methane	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Chloroethyl)ether	ND		1	4.0	0.50	ug/L	12/06/2019 1334
bis(2-Ethylhexyl)phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Butyl benzyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Caprolactam	ND		1	8.0	2.0	ug/L	12/06/2019 1334
Carbazole	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Chrysene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Dibenzo(a,h)anthracene	ND		1	0.80	0.20	ug/L	12/06/2019 1334

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37759-001
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Dibenzofuran	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Diethylphthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Dimethyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Di-n-butyl phthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Di-n-octylphthalate	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Fluoranthene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Fluorene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Hexachlorobenzene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Hexachlorobutadiene	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Hexachlorocyclopentadiene	ND		1	20	2.0	ug/L	12/06/2019 1334
Hexachloroethane	ND		1	4.0	1.0	ug/L	12/06/2019 1334
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Isophorone	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Naphthalene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Nitrobenzene	ND		1	4.0	1.5	ug/L	12/06/2019 1334
N-Nitrosodi-n-propylamine	ND		1	4.0	0.50	ug/L	12/06/2019 1334
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Pentachlorophenol	ND		1	20	2.0	ug/L	12/06/2019 1334
Phenanthrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334
Phenol	ND		1	4.0	0.50	ug/L	12/06/2019 1334
Pyrene	ND		1	0.80	0.20	ug/L	12/06/2019 1334

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		41	37-129
2-Fluorophenol		32	24-127
Nitrobenzene-d5		51	38-127
Phenol-d5		41	28-128
Terphenyl-d14		55	10-148
2,4,6-Tribromophenol		38	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37759-002
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	19		1	47	30-130	12/06/2019 1359
2,4,5-Trichlorophenol	40	17		1	41	30-123	12/06/2019 1359
2,4,6-Trichlorophenol	40	19		1	48	30-130	12/06/2019 1359
2,4-Dichlorophenol	40	20		1	51	30-121	12/06/2019 1359
2,4-Dimethylphenol	40	21		1	53	20-125	12/06/2019 1359
2,4-Dinitrophenol	80	39		1	49	11-126	12/06/2019 1359
2,4-Dinitrotoluene	40	19		1	47	30-130	12/06/2019 1359
2,6-Dinitrotoluene	40	18		1	44	30-130	12/06/2019 1359
2-Chloronaphthalene	40	18		1	45	30-130	12/06/2019 1359
2-Chlorophenol	40	20		1	49	30-130	12/06/2019 1359
2-Methylnaphthalene	40	21		1	51	40-132	12/06/2019 1359
2-Methylphenol	40	20		1	51	30-130	12/06/2019 1359
2-Nitroaniline	40	21		1	52	30-130	12/06/2019 1359
2-Nitrophenol	40	21		1	52	30-130	12/06/2019 1359
3,3'-Dichlorobenzidine	40	13		1	32	10-126	12/06/2019 1359
3+4-Methylphenol	40	21		1	53	30-130	12/06/2019 1359
3-Nitroaniline	40	17		1	42	30-130	12/06/2019 1359
4,6-Dinitro-2-methylphenol	40	22		1	55	30-130	12/06/2019 1359
4-Bromophenyl phenyl ether	40	17		1	42	30-124	12/06/2019 1359
4-Chloro-3-methyl phenol	40	22		1	55	30-123	12/06/2019 1359
4-Chloroaniline	40	18		1	45	12-157	12/06/2019 1359
4-Chlorophenyl phenyl ether	40	18		1	45	30-121	12/06/2019 1359
4-Nitroaniline	40	25		1	62	30-135	12/06/2019 1359
4-Nitrophenol	80	44		1	56	30-130	12/06/2019 1359
Acenaphthene	40	20		1	51	30-122	12/06/2019 1359
Acenaphthylene	40	20		1	49	30-130	12/06/2019 1359
Acetophenone	40	20		1	50	30-130	12/06/2019 1359
Anthracene	40	20		1	49	30-123	12/06/2019 1359
Atrazine	40	18		1	45	30-130	12/06/2019 1359
Benzaldehyde	40	14		1	34	20-115	12/06/2019 1359
Benzo(a)anthracene	40	19		1	48	40-125	12/06/2019 1359
Benzo(a)pyrene	40	17		1	43	40-128	12/06/2019 1359
Benzo(b)fluoranthene	40	19		1	47	30-130	12/06/2019 1359
Benzo(g,h,i)perylene	40	17		1	44	30-130	12/06/2019 1359
Benzo(k)fluoranthene	40	19		1	46	30-130	12/06/2019 1359
bis (2-Chloro-1-methylethyl) ether	40	21		1	54	30-130	12/06/2019 1359
bis(2-Chloroethoxy)methane	40	21		1	54	30-130	12/06/2019 1359
bis(2-Chloroethyl)ether	40	20		1	51	30-130	12/06/2019 1359
bis(2-Ethylhexyl)phthalate	40	18		1	44	30-130	12/06/2019 1359
Butyl benzyl phthalate	40	21		1	52	30-130	12/06/2019 1359
Caprolactam	40	22		1	56	30-130	12/06/2019 1359
Carbazole	40	17		1	42	30-130	12/06/2019 1359
Chrysene	40	19		1	48	30-130	12/06/2019 1359
Dibenzo(a,h)anthracene	40	18		1	45	30-130	12/06/2019 1359

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37759-002
Batch: 37759
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/03/2019 1638

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	18		1	46	30-118	12/06/2019 1359
Diethylphthalate	40	19		1	47	40-125	12/06/2019 1359
Dimethyl phthalate	40	19		1	48	40-127	12/06/2019 1359
Di-n-butyl phthalate	40	19		1	47	40-127	12/06/2019 1359
Di-n-octylphthalate	40	18		1	45	30-130	12/06/2019 1359
Fluoranthene	40	18		1	46	40-128	12/06/2019 1359
Fluorene	40	20		1	49	30-124	12/06/2019 1359
Hexachlorobenzene	40	16		1	39	30-125	12/06/2019 1359
Hexachlorobutadiene	40	16		1	40	24-110	12/06/2019 1359
Hexachlorocyclopentadiene	200	68		1	34	22-122	12/06/2019 1359
Hexachloroethane	40	23		1	58	30-130	12/06/2019 1359
Indeno(1,2,3-c,d)pyrene	40	17		1	42	30-130	12/06/2019 1359
Isophorone	40	23		1	58	30-130	12/06/2019 1359
Naphthalene	40	21		1	53	30-130	12/06/2019 1359
Nitrobenzene	40	23		1	58	30-130	12/06/2019 1359
N-Nitrosodi-n-propylamine	40	23		1	58	30-130	12/06/2019 1359
N-Nitrosodiphenylamine (Diphenylamine)	40	17		1	43	30-123	12/06/2019 1359
Pentachlorophenol	80	39		1	49	30-130	12/06/2019 1359
Phenanthrene	40	18		1	46	40-123	12/06/2019 1359
Phenol	40	21		1	52	30-130	12/06/2019 1359
Pyrene	40	20		1	51	40-126	12/06/2019 1359

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		45	37-129
2-Fluorophenol		47	24-127
Nitrobenzene-d5		56	38-127
Phenol-d5		52	28-128
Terphenyl-d14		52	10-148
2,4,6-Tribromophenol		39	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody

and

Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Chain of Custody Record

Number

Client: Tetra Tech	Report to Contact: Andre Baker and Brendan Martin	Telephone No. / E-mail: andre.baker@contech.com, brendan.martin@tetratech.com	Quote No.
Address: 1 S. Wacker Drive Suite 3700	Sampler's Signature: x Brendan Martin	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Chicago / State: IL / Zip Code: 60606	Printed Name: Brendan Martin		
Project Name: Joliet Chemical Fire PRP Cleanup Site			
Project Number: 103X9U31200690002AJ001	P.O No.: SHLY-1		

UL03010

UL03011

NMS

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G-Grab C-Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	0035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	Remarks
MP61-20-Water-RW-120219	120219	~~1036~~ 1038		X			1			3			X	X	
MP61-21-Water-RW-120219	120219	0951		X			1			3			X	X	
MP61-22-Water-RW-120219	120219	1114		X			1			3			X	X	
MP61-24-Water-RW-120219	120219	1327		X			1			3			X	X	
MP61-25-Water-RW-120219	120219	1244		X			1			3			X	X	
MP61-FB-120219	120219	1400		X			1			3			X	X	Field Blank
MP61-TB-120219	120219	—		X						2			X		Trip Blank

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal
☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks)
☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements

	Date	Time		Date	Time
1. Relinquished by: Brendan Martin	120219	1500	1. Received by		
2. Relinquished by:			2. Received by		
3. Relinquished by:			3. Received by		
4. Relinquished by: Fed EX	12/03/19	0935	4. Laboratory Received by: L Hite	12/02/19	0935

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack
Receipt Temp. 1.5 °C

Document Number: ME002OW-01

PACE ANALYTICAL SERVICES, LLC

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: LKH / 12-03-2019 Lot #: UL03010/UL03010

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other:

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.5 / 1.5 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: LKH Date: 12-03-2019

Comments:

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL04029**

Date Completed:12/09/2019

N. Saikaly

12/09/2019 2:02 PM
Approved and released by:
Project Manager: Nisreen Saikaly

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL04029

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL04029

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-09-Water-RW-120319	Aqueous	12/03/2019 1138	12/04/2019
002	MPGI-11-Water-RW-120319	Aqueous	12/03/2019 1100	12/04/2019
003	MPGI-12-Water-RW-120319	Aqueous	12/03/2019 0817	12/04/2019
004	MPGI-13-Water-RW-120319	Aqueous	12/03/2019 1006	12/04/2019
005	MPGI-13-Water-RW-120319-D	Aqueous	12/03/2019 1008	12/04/2019
006	MPGI-26-Water-RW-120319	Aqueous	12/03/2019 0906	12/04/2019
007	MPGI-FB-120319	Aqueous	12/03/2019 0840	12/04/2019

(7 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL04029

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
006	MPGI-26-Water-RW-120319	Aqueous	2-Methylphenol	8270D	1.1	J	ug/L	15
006	MPGI-26-Water-RW-120319	Aqueous	3+4-Methylphenol	8270D	7.6		ug/L	15
006	MPGI-26-Water-RW-120319	Aqueous	bis(2-Ethylhexyl)phthalate	8270D	4.4		ug/L	15
006	MPGI-26-Water-RW-120319	Aqueous	Caprolactam	8270D	2.7	J	ug/L	15
006	MPGI-26-Water-RW-120319	Aqueous	Phenol	8270D	5.4		ug/L	16
007	MPGI-FB-120319	Aqueous	bis(2-Ethylhexyl)phthalate	8270D	3.0	J	ug/L	17

(6 detections)

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0440	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0440	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		55	24-127
Nitrobenzene-d5		87	38-127
Phenol-d5		78	28-128
Terphenyl-d14		102	10-148
2,4,6-Tribromophenol		78	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0505	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0505	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		83	37-129
2-Fluorophenol		37	24-127
Nitrobenzene-d5		88	38-127
Phenol-d5		82	28-128
Terphenyl-d14		105	10-148
2,4,6-Tribromophenol		77	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0530	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0530	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		37	24-127
Nitrobenzene-d5		88	38-127
Phenol-d5		73	28-128
Terphenyl-d14		103	10-148
2,4,6-Tribromophenol		77	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0556	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0556	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		77	37-129
2-Fluorophenol		44	24-127
Nitrobenzene-d5		82	38-127
Phenol-d5		62	28-128
Terphenyl-d14		100	10-148
2,4,6-Tribromophenol		71	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0621	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0621	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		76	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		81	38-127
Phenol-d5		84	28-128
Terphenyl-d14		103	10-148
2,4,6-Tribromophenol		73	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1600	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	1.1	J	4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	7.6		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	4.4		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	2.7	J	8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1600	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	5.4		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		56	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		88	28-128
Terphenyl-d14		107	10-148
2,4,6-Tribromophenol		97	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1651	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	3.0	J	4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1651	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		80	37-129
2-Fluorophenol		50	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		63	28-128
Terphenyl-d14		106	10-148
2,4,6-Tribromophenol		79	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Summary

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2,4,5-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2,4,6-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2,4-Dichlorophenol	ND		1	8.0	1.0	ug/L	12/08/2019 0350
2,4-Dimethylphenol	ND		1	4.0	1.0	ug/L	12/08/2019 0350
2,4-Dinitrophenol	ND		1	20	1.0	ug/L	12/08/2019 0350
2,4-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/08/2019 0350
2,6-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/08/2019 0350
2-Chloronaphthalene	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2-Chlorophenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2-Methylnaphthalene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
2-Methylphenol	ND		1	4.0	1.0	ug/L	12/08/2019 0350
2-Nitroaniline	ND		1	8.0	0.50	ug/L	12/08/2019 0350
2-Nitrophenol	ND		1	4.0	1.0	ug/L	12/08/2019 0350
3,3'-Dichlorobenzidine	ND		1	4.0	1.8	ug/L	12/08/2019 0350
3+4-Methylphenol	ND		1	4.0	1.5	ug/L	12/08/2019 0350
3-Nitroaniline	ND		1	8.0	1.0	ug/L	12/08/2019 0350
4,6-Dinitro-2-methylphenol	ND		1	20	1.0	ug/L	12/08/2019 0350
4-Bromophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
4-Chloro-3-methyl phenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
4-Chloroaniline	ND		1	8.0	0.50	ug/L	12/08/2019 0350
4-Chlorophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
4-Nitroaniline	ND		1	8.0	1.5	ug/L	12/08/2019 0350
4-Nitrophenol	ND		1	20	2.0	ug/L	12/08/2019 0350
Acenaphthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Acenaphthylene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Acetophenone	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Anthracene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Atrazine	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Benzaldehyde	ND		1	8.0	0.50	ug/L	12/08/2019 0350
Benzo(a)anthracene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(a)pyrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(b)fluoranthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(g,h,i)perylene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(k)fluoranthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
bis(2-Chloroethoxy)methane	ND		1	4.0	0.50	ug/L	12/08/2019 0350
bis(2-Chloroethyl)ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
bis(2-Ethylhexyl)phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Butyl benzyl phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Caprolactam	ND		1	8.0	2.0	ug/L	12/08/2019 0350
Carbazole	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Chrysene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Dibenzo(a,h)anthracene	ND		1	0.80	0.20	ug/L	12/08/2019 0350

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Dibenzofuran	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Diethylphthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Dimethyl phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Di-n-butyl phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Di-n-octylphthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Fluoranthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Fluorene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Hexachlorobenzene	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Hexachlorobutadiene	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Hexachlorocyclopentadiene	ND		1	20	2.0	ug/L	12/08/2019 0350
Hexachloroethane	ND		1	4.0	1.0	ug/L	12/08/2019 0350
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Isophorone	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Naphthalene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Nitrobenzene	ND		1	4.0	1.5	ug/L	12/08/2019 0350
N-Nitrosodi-n-propylamine	ND		1	4.0	0.50	ug/L	12/08/2019 0350
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Pentachlorophenol	ND		1	20	2.0	ug/L	12/08/2019 0350
Phenanthrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Phenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Pyrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		88	37-129
2-Fluorophenol		52	24-127
Nitrobenzene-d5		92	38-127
Phenol-d5		78	28-128
Terphenyl-d14		114	10-148
2,4,6-Tribromophenol		80	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	35		1	87	30-130	12/08/2019 0415
2,4,5-Trichlorophenol	40	35		1	88	30-123	12/08/2019 0415
2,4,6-Trichlorophenol	40	36		1	90	30-130	12/08/2019 0415
2,4-Dichlorophenol	40	35		1	88	30-121	12/08/2019 0415
2,4-Dimethylphenol	40	34		1	86	20-125	12/08/2019 0415
2,4-Dinitrophenol	80	72		1	90	11-126	12/08/2019 0415
2,4-Dinitrotoluene	40	38		1	96	30-130	12/08/2019 0415
2,6-Dinitrotoluene	40	37		1	91	30-130	12/08/2019 0415
2-Chloronaphthalene	40	35		1	87	30-130	12/08/2019 0415
2-Chlorophenol	40	34		1	86	30-130	12/08/2019 0415
2-Methylnaphthalene	40	33		1	83	40-132	12/08/2019 0415
2-Methylphenol	40	35		1	88	30-130	12/08/2019 0415
2-Nitroaniline	40	40		1	101	30-130	12/08/2019 0415
2-Nitrophenol	40	36		1	89	30-130	12/08/2019 0415
3,3'-Dichlorobenzidine	40	28		1	70	10-126	12/08/2019 0415
3+4-Methylphenol	40	36		1	89	30-130	12/08/2019 0415
3-Nitroaniline	40	28		1	71	30-130	12/08/2019 0415
4,6-Dinitro-2-methylphenol	40	41		1	101	30-130	12/08/2019 0415
4-Bromophenyl phenyl ether	40	35		1	87	30-124	12/08/2019 0415
4-Chloro-3-methyl phenol	40	37		1	93	30-123	12/08/2019 0415
4-Chloroaniline	40	29		1	72	12-157	12/08/2019 0415
4-Chlorophenyl phenyl ether	40	35		1	87	30-121	12/08/2019 0415
4-Nitroaniline	40	38		1	96	30-135	12/08/2019 0415
4-Nitrophenol	80	75		1	94	30-130	12/08/2019 0415
Acenaphthene	40	36		1	89	30-122	12/08/2019 0415
Acenaphthylene	40	36		1	89	30-130	12/08/2019 0415
Acetophenone	40	36		1	90	30-130	12/08/2019 0415
Anthracene	40	37		1	91	30-123	12/08/2019 0415
Atrazine	40	37		1	92	30-130	12/08/2019 0415
Benzaldehyde	40	22		1	55	20-115	12/08/2019 0415
Benzo(a)anthracene	40	36		1	90	40-125	12/08/2019 0415
Benzo(a)pyrene	40	35		1	87	40-128	12/08/2019 0415
Benzo(b)fluoranthene	40	35		1	88	30-130	12/08/2019 0415
Benzo(g,h,i)perylene	40	36		1	89	30-130	12/08/2019 0415
Benzo(k)fluoranthene	40	35		1	87	30-130	12/08/2019 0415
bis (2-Chloro-1-methylethyl) ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Chloroethoxy)methane	40	36		1	90	30-130	12/08/2019 0415
bis(2-Chloroethyl)ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Ethylhexyl)phthalate	40	32		1	81	30-130	12/08/2019 0415
Butyl benzyl phthalate	40	39		1	97	30-130	12/08/2019 0415
Caprolactam	40	39		1	97	30-130	12/08/2019 0415
Carbazole	40	35		1	88	30-130	12/08/2019 0415
Chrysene	40	36		1	91	30-130	12/08/2019 0415
Dibenzo(a,h)anthracene	40	35		1	88	30-130	12/08/2019 0415

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	35		1	88	30-118	12/08/2019 0415
Diethylphthalate	40	37		1	93	40-125	12/08/2019 0415
Dimethyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-butyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-octylphthalate	40	30		1	75	30-130	12/08/2019 0415
Fluoranthene	40	36		1	89	40-128	12/08/2019 0415
Fluorene	40	36		1	89	30-124	12/08/2019 0415
Hexachlorobenzene	40	36		1	90	30-125	12/08/2019 0415
Hexachlorobutadiene	40	31		1	78	24-110	12/08/2019 0415
Hexachlorocyclopentadiene	200	150		1	73	22-122	12/08/2019 0415
Hexachloroethane	40	32		1	79	30-130	12/08/2019 0415
Indeno(1,2,3-c,d)pyrene	40	35		1	87	30-130	12/08/2019 0415
Isophorone	40	38		1	95	30-130	12/08/2019 0415
Naphthalene	40	34		1	84	30-130	12/08/2019 0415
Nitrobenzene	40	39		1	98	30-130	12/08/2019 0415
N-Nitrosodi-n-propylamine	40	38		1	94	30-130	12/08/2019 0415
N-Nitrosodiphenylamine (Diphenylamine)	40	36		1	89	30-123	12/08/2019 0415
Pentachlorophenol	80	65		1	81	30-130	12/08/2019 0415
Phenanthrene	40	36		1	90	40-123	12/08/2019 0415
Phenol	40	36		1	89	30-130	12/08/2019 0415
Pyrene	40	37		1	93	40-126	12/08/2019 0415

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		86	37-129
2-Fluorophenol		82	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		87	28-128
Terphenyl-d14		101	10-148
2,4,6-Tribromophenol		90	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

SHEALY

Chain of Custody Record

Number

Client	Report to Contact	Telephone No. / E-mail	Quote No.
Tetra Tech	Andre Belser and Brendan Martin	andre.belser@tetratech.com, brendan.martin@tetratech.com	
Address	**Sampler's Signature**	**Analysis (Attach list if more space is needed)**	**Page**
1 S. Wacker Drive, Suite 3700	x Brendan Martin		___ of ___
City / State / Zip Code	**Printed Name**		
Chicago / IL / 60606	Brendan Martin		
Project Name			
Joliet Chemical Fire PRP Cleanup Site			
Project Number	**P.O No.**		
103X903100S90002AJ001	SHLY-1		

UL04029
NMS

UL04032
NMS

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	Remarks
MW61-09-Water-RW-120319	120319	1138		X			1			3			X	X	
MW61-11-Water-RW-120319	120319	1100		X			1			3			X	X	
MW61-12-Water-RW-120319	120319	0817		X			1			3			X	X	
MW61-13-Water-RW-120319	120319	1006		X			1			3			X	X	
MW61-13-Water-RW-120319-D	120319	1008		X			1			3			X	X	
MW61-26-Water-RW-120319	120319	0906		X			1			3			X	X	
MW61-FB-120319	120319	0840		X			1			3			X	X	Field Blank
MW61-TB-120319	120319	—		X			2						X		Trip Blank

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	Possible Hazard Identification (List any known hazards in the remarks)	QC Requirements
☐ Standard ☒ Rush (Please Specify) 2/3 day	☐ Return to Client ☒ Disposal by Lab	☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown	

	Date	Time		Date	Time
1. Relinquished by Brendan Martin Brendan Martin	120319	1300	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by FedEx	12.4.19	1106	4. Laboratory Received by L Hile	12/04/19	1106

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☒ Y ☐ N ☐ Ice Pack

Receipt Temp. 1.2 °C

Document Number: ME002OW-01

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: LKH / 12/4/19 Lot #: UL04029, UL04032

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.2 / 1.2 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☐ Yes	☑ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA _____ were received with bubbles >6 mm in diameter.

Samples(s) NA _____ were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: DMN Date: 12/4/19

Comments: -008 MPG1-TB-120319 received in HCl vials. COC says unpreserved.

SEMIVOLATILE

QC SUMMARY

FORM 2
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04029

Project No.: 103X9031006

AnalyticalMethod: 8270D-TCL Matrix: Water

CLIENT SAMPLE ID	DMC1	DMC2	DMC3	DMC4	DMC5	DMC6			TOT OUT
MPGI-09-Water-RW-12	81	55	87	78	102	78			0
MPGI-11-Water-RW-12	83	37	88	82	105	77			0
MPGI-12-Water-RW-12	81	37	88	73	103	77			0
MPGI-13-Water-RW-12	77	44	82	62	100	71			0
MPGI-13-Water-RW-12	76	35	81	84	103	73			0
MPGI-26-Water-RW-12	81	56	90	88	107	97			0
MPGI-FB-120319	80	50	90	63	106	79			0
SBLK96	88	52	92	78	114	80			0
SLCS96	86	82	89	87	101	90			0

	QC LIMITS
DMC1 = 2-Fluorobiphenyl	37-129
DMC2 = 2-Fluorophenol	24-127
DMC3 = Nitrobenzene-d5	38-127
DMC4 = Phenol-d5	28-128
DMC5 = Terphenyl-d14	10-148
DMC6 = 2,4,6-Tribromophenol	35-144

* Values outside of contract required QC limits
D DMC diluted out

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04029

Project No.: 103X9031006

Analytical Method: 8270D-TCL Matrix: Water

Client Sample ID: SLCS96 Lab Sample ID: UQ37996-002

Instrument ID: Agilent__MSD11

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
1,1'-Biphenyl	40	35	87	30-130
2,4,5-Trichlorophenol	40	35	88	30-123
2,4,6-Trichlorophenol	40	36	90	30-130
2,4-Dichlorophenol	40	35	88	30-121
2,4-Dimethylphenol	40	34	86	20-125
2,4-Dinitrophenol	80	72	90	11-126
2,4-Dinitrotoluene	40	38	96	30-130
2,6-Dinitrotoluene	40	37	91	30-130
2-Chloronaphthalene	40	35	87	30-130
2-Chlorophenol	40	34	86	30-130
2-Methylnaphthalene	40	33	83	40-132
2-Methylphenol	40	35	88	30-130
2-Nitroaniline	40	40	101	30-130
2-Nitrophenol	40	36	89	30-130
3+4-Methylphenol	40	36	89	30-130
3,3'-Dichlorobenzidine	40	28	70	10-126
3-Nitroaniline	40	28	71	30-130
4,6-Dinitro-2-methylphenol	40	41	101	30-130
4-Bromophenyl phenyl ether	40	35	87	30-124
4-Chloro-3-methyl phenol	40	37	93	30-123
4-Chloroaniline	40	29	72	12-157
4-Chlorophenyl phenyl ether	40	35	87	30-121
4-Nitroaniline	40	38	96	30-135
4-Nitrophenol	80	75	94	30-130
Acenaphthene	40	36	89	30-122
Acenaphthylene	40	36	89	30-130
Acetophenone	40	36	90	30-130
Anthracene	40	37	91	30-123
Atrazine	40	37	92	30-130
Benzaldehyde	40	22	55	20-115
Benzo(a)anthracene	40	36	90	40-125
Benzo(a)pyrene	40	35	87	40-128
Benzo(b)fluoranthene	40	35	88	30-130
Benzo(g,h,i)perylene	40	36	89	30-130
Benzo(k)fluoranthene	40	35	87	30-130
bis (2-Chloro-1-	40	37	92	30-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04029

Project No.: 103X9031006

Analytical Method: 8270D-TCL Matrix: Water

Client Sample ID: SLCS96 Lab Sample ID: UQ37996-002

Instrument ID: Agilent__MSD11

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
bis(2-Chloroethoxy)methane	40	36	90	30-130
bis(2-Chloroethyl)ether	40	37	92	30-130
bis(2-Ethylhexyl)phthalate	40	32	81	30-130
Butyl benzyl phthalate	40	39	97	30-130
Caprolactam	40	39	97	30-130
Carbazole	40	35	88	30-130
Chrysene	40	36	91	30-130
Di-n-butyl phthalate	40	37	93	40-127
Di-n-octylphthalate	40	30	75	30-130
Dibenzo(a,h)anthracene	40	35	88	30-130
Dibenzofuran	40	35	88	30-118
Diethylphthalate	40	37	93	40-125
Dimethyl phthalate	40	37	93	40-127
Fluoranthene	40	36	89	40-128
Fluorene	40	36	89	30-124
Hexachlorobenzene	40	36	90	30-125
Hexachlorobutadiene	40	31	78	24-110
Hexachlorocyclopentadiene	200	150	73	22-122
Hexachloroethane	40	32	79	30-130
Indeno(1,2,3-c,d)pyrene	40	35	87	30-130
Isophorone	40	38	95	30-130
N-Nitrosodi-n-propylamine	40	38	94	30-130
N-Nitrosodiphenylamine	40	36	89	30-123
Naphthalene	40	34	84	30-130
Nitrobenzene	40	39	98	30-130
Pentachlorophenol	80	65	81	30-130
Phenanthrene	40	36	90	40-123
Phenol	40	36	89	30-130
Pyrene	40	37	93	40-126

* Values outside of QC Limits

CLIENT SAMPLE ID

SBLK96

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04029

Project No.: 103X9031006 Lab Sample ID: UQ37996-001

Analytical Method: 8270D-TCL Matrix: Water

Instrument ID: Agilent MSD11 Lab File ID: 111207B22

Extraction Type: 3520C Date Extracted: 12/05/2019

GC Column(1): ZEBRON ZB-SV ID: 0.25 (mm) Date Analyzed: 12/08/2019

GC Column(2): _____ ID: _____ (mm) Time Analyzed: 03:50

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPGI-09-Water-RW-12	UL04029-001	111207B24	12/08/2019
MPGI-11-Water-RW-12	UL04029-002	111207B25	12/08/2019
MPGI-12-Water-RW-12	UL04029-003	111207B26	12/08/2019
MPGI-13-Water-RW-12	UL04029-004	111207B27	12/08/2019
MPGI-13-Water-RW-12	UL04029-005	111207B28	12/08/2019
MPGI-26-Water-RW-12	UL04029-006	11120810	12/08/2019
MPGI-FB-120319	UL04029-007	11120812	12/08/2019
SLCS96	UQ37996-002	111207B23	12/08/2019

Report Date: 08-Dec-2019 13:38:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d		
Injection Date:	07-Dec-2019 19:10:30	Inst. ID:	msd11.i
Method:	8270D-tun.m	Tune Type:	DFTPP
Client ID:	DFTPPCA	Lab ID:	SVMS 4186
Sample Info:	11120719B.b, SVMS 4186		
Injection Vol.		Dil. Factor:	1.0
Operator:	JCG		
Column:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	29.2
68	Less than 2.00% of mass 69	0.0 (0.0) 1
69	Present	63.0
70	Less than 2.00% of mass 69	0.3 (0.5) 1
127	10.00 - 80.00% of mass 198	63.0
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	6.6
275	10.00 - 60.00% of mass 198	44.5
365	Greater than 1.00% of mass 198	9.3
441	0.01 - 24.00% of mass 442	38.3 (15.5) 2
442	Greater than 50.00% of mass 198	247.0
443	15.00 - 24.00% of mass 442	48.8 (19.8) 2

1-Value is % Mass 69 2-Value is % Mass 442

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
DFTPP	111207B01.d	SVMS 4186	DFTPPCA	07-Dec-2019 19:10:30	00:00:00
Client	111207B02.d	IBLK		07-Dec-2019 19:28:30	00:18:00
Ical	111207B03.d	SVMS 4157	1STD0.2CB	07-Dec-2019 19:53:30	00:43:00
Ical	111207B04.d	SVMS 4158	1STD001CB	07-Dec-2019 20:19:30	01:09:00
Ical	111207B05.d	SVMS 4159	1STD002CB	07-Dec-2019 20:44:30	01:34:00
Ical	111207B06.d	SVMS 4167	1STD005CB	07-Dec-2019 21:09:30	01:59:00
Ical	111207B07.d	SVMS 4281	1STD010CB	07-Dec-2019 21:34:30	02:24:00
Ical	111207B08.d	SVMS 4162	1STD015CB	07-Dec-2019 21:59:30	02:49:00
Ical	111207B09.d	SVMS 4168	1STD020CB	07-Dec-2019 22:24:30	03:14:00
Ical	111207B10.d	SVMS 4164	1STD025CB	07-Dec-2019 22:49:30	03:39:00
Ical	111207B11.d	SVMS 4165	1STD030CB	07-Dec-2019 23:14:30	04:04:00
LCS	111207B12.d	SVMS 4221	1STDICV	07-Dec-2019 23:40:30	04:30:00
Ical	111207B13.d	SVMS 4212	3STD001CC	08-Dec-2019 00:05:30	04:55:00
Ical	111207B14.d	SVMS 4213	3STD002CC	08-Dec-2019 00:30:30	05:20:00
Ical	111207B15.d	SVMS 4214	3STD005CC	08-Dec-2019 00:55:30	05:45:00
Ical	111207B16.d	SVMS 4215	3STD010CC	08-Dec-2019 01:20:30	06:10:00
Ical	111207B17.d	SVMS 4216	3STD015CC	08-Dec-2019 01:45:30	06:35:00
Ical	111207B18.d	SVMS 4217	3STD020CC	08-Dec-2019 02:10:30	07:00:00
Ical	111207B19.d	SVMS 4218	3STD025CC	08-Dec-2019 02:35:30	07:25:00

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
Ical	111207B20.d	SVMS 4219	3STD030CC	08-Dec-2019 03:00:30	07:50:00
LCS	111207B21.d	SVMS 4220	3STDICV	08-Dec-2019 03:25:30	08:15:00
BLANK	111207B22.d	UQ37996-001	SBLK96	08-Dec-2019 03:50:30	08:40:00
LCS	111207B23.d	UQ37996-002	SLCS96	08-Dec-2019 04:15:30	09:05:00
Client	111207B24.d	UL04029-001	MPGI-09-Water-RW-12	08-Dec-2019 04:40:30	09:30:00
Client	111207B25.d	UL04029-002	MPGI-11-Water-RW-12	08-Dec-2019 05:05:30	09:55:00
Client	111207B26.d	UL04029-003	MPGI-12-Water-RW-12	08-Dec-2019 05:30:30	10:20:00
Client	111207B27.d	UL04029-004	MPGI-13-Water-RW-12	08-Dec-2019 05:56:30	10:46:00
Client	111207B28.d	UL04029-005	MPGI-13-Water-RW-12	08-Dec-2019 06:21:30	11:11:00
Client	111207B29.d	UL04029-006	MPGI-26-Water-RW-12	08-Dec-2019 06:46:30	11:36:00
Client	111207B30.d	UL04029-007	MPGI-FB-120319	08-Dec-2019 07:11:30	12:01:00
Client	111207B31.d	UK22009-003	Oak-mitsui Effluent	08-Dec-2019 07:36:30	12:26:00
Client	111207B32.d	IBLK		08-Dec-2019 08:01:30	12:51:00
Client	111207B33.d	IBLK		08-Dec-2019 08:26:30	13:16:00
Client	111207B34.d	IBLK		08-Dec-2019 08:51:30	13:41:00

Report Date: 09-Dec-2019 13:58:28 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120801.d		
Injection Date:	08-Dec-2019 12:06:30	Inst. ID:	msd11.i
Method:	8270D-tun.m	Tune Type:	DFTPP
Client ID:	DFTPPCD	Lab ID:	SVMS 4186
Sample Info:	11120819.b, SVMS 4186		
Injection Vol.		Dil. Factor:	1.0
Operator:	JCG		
Column:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	30.2
68	Less than 2.00% of mass 69	0.5 (0.8)
69	Present	57.2
70	Less than 2.00% of mass 69	0.3 (0.6)
127	10.00 - 80.00% of mass 198	58.7
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	6.6
275	10.00 - 60.00% of mass 198	46.0
365	Greater than 1.00% of mass 198	9.6
441	0.01 - 24.00% of mass 442	32.2 (15.2)
442	Greater than 50.00% of mass 198	212.1
443	15.00 - 24.00% of mass 442	41.4 (19.5)

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
DFTPP	11120801.d	SVMS 4186	DFTPPCD	08-Dec-2019 12:06:30	00:00:00
Ccv	11120802.d	SVMS 4281	1STD010CE	08-Dec-2019 12:31:30	00:25:00
Ccv	11120803.d	SVMS 4215	3STD010CF	08-Dec-2019 12:56:30	00:50:00
BLANK	11120804.d	UQ37873-001	SBLK73	08-Dec-2019 13:30:30	01:24:00
LCS	11120805.d	UQ37873-002	SLCS73	08-Dec-2019 13:55:30	01:49:00
BLANK	11120806.d	UQ37874-001	SBLK74	08-Dec-2019 14:20:30	02:14:00
Client	11120807.d	UQ37874-002		08-Dec-2019 14:45:30	02:39:00
BLANK	11120808.d	UQ37678-001	SBLK78	08-Dec-2019 15:10:30	03:04:00
LCS	11120809.d	UQ37678-002	SLCS78	08-Dec-2019 15:35:30	03:29:00
Client	11120810.d	UL04029-006	MPGI-26-Water-RW-12	08-Dec-2019 16:00:30	03:54:00
LCS	11120811.d	UQ37874-002	SLCS74	08-Dec-2019 16:25:30	04:19:00
Client	11120812.d	UL04029-007	MPGI-FB-120319	08-Dec-2019 16:51:30	04:45:00
Client	11120813.d	UL02023-008	EB-01-120219	08-Dec-2019 17:16:30	05:10:00
Client	11120814.d	UK20003-012	PAI10SB118-0103	08-Dec-2019 17:41:30	05:35:00
Client	11120815.d	UK20003-016	PAI10SB112-0103	08-Dec-2019 18:06:30	06:00:00
Client	11120816.d	UK25008-001	G+L-Tank Farm J	08-Dec-2019 18:31:30	06:25:00
Client	11120817.d	UK20003-018	PAI10IDWSB-1119	08-Dec-2019 18:56:30	06:50:00
Client	11120818.d	UK20003-018MS		08-Dec-2019 19:22:30	07:16:00
Client	11120819.d	UK27050-001	040-CPWC0001-WA-EF	08-Dec-2019 19:47:30	07:41:00
MS	11120820.d	UK27050-001MS		08-Dec-2019 20:12:30	08:06:00

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
Client	11120821.d	UK20005-003	PAI10SB123-0103	08-Dec-2019 20:37:30	08:31:00
MS	11120822.d	UK20005-003MS		08-Dec-2019 21:02:30	08:56:00
Client	11120823.d	UK20005-003MD		08-Dec-2019 21:27:30	09:21:00
Client	11120824.d	UK20005-008	PAI10SB111-0103	08-Dec-2019 21:52:30	09:46:00
Client	11120825.d	UK20005-009	PAI10SB110-0.502.5	08-Dec-2019 22:17:30	10:11:00
Client	11120826.d	UK20005-010	PAI10SB109-0103	08-Dec-2019 22:43:30	10:37:00
Client	11120827.d	UK20005-011	PAI10SB108-0103	08-Dec-2019 23:08:30	11:02:00
Client	11120828.d	UK20005-012	PAI10SB116-0103	08-Dec-2019 23:33:30	11:27:00
Ccv	11120829.d	SVMS 4281	1STD010CG	08-Dec-2019 23:58:30	11:52:00
Client	11120830.d	IBLK		09-Dec-2019 00:23:30	12:17:00
Client	11120831.d	IBLK		09-Dec-2019 00:48:30	12:42:00
Client	11120832.d	IBLK		09-Dec-2019 01:13:30	13:07:00

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\hh\chem\msd11.i\11120719B.b

Instrument: msd11.m Method: 8270DLVI-11.m

Column: ZebronZB-SV (0.25 mm) Detector: MS Scan

Initial Calibration Samples

Standard File: /chem/msd11.i/11120719B.b/111207B07.d.d

Injection Date: 07-Dec-2019 21:34:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: IcalIS, Level: 5

IS-1: * 16 1,4-Dichlorobenzene-d4 IS-4: * 102 Phenanthrene-d10

IS-2: * 41 Naphthalene-d8 IS-5: * 128 Chrysene-d12

IS-3: * 67 Acenaphthene-d10 IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	430444	5.74	1832714	6.76	862511	8.23	1323763	9.49	1244181	12.24	1386474	14.39
Upper Limit	860888	6.24	3665428	7.26	1725022	8.73	2647526	9.99	2488362	12.74	2772948	14.89
Lower Limit	215222	5.24	916357	6.26	431256	7.73	661882	8.99	622091	11.74	693237	13.89
SVMS 4157	414160	5.74	1937122	6.76	927296	8.23	1429973	9.49	1482584	12.23	1607697	14.39
SVMS 4158	391870	5.74	1768971	6.76	863842	8.23	1314915	9.49	1303994	12.23	1424940	14.39
SVMS 4159	381835	5.74	1730526	6.76	835955	8.23	1275756	9.49	1300516	12.23	1407371	14.39
SVMS 4167	399933	5.74	1776571	6.76	865838	8.23	1332645	9.49	1297220	12.23	1404137	14.39
SVMS 4281	430444	5.74	1832714	6.76	862511	8.23	1323763	9.49	1244181	12.24	1386474	14.39
SVMS 4162	476484	5.74	1897930	6.76	916582	8.23	1399709	9.49	1364404	12.24	1439033	14.39
SVMS 4168	481725	5.74	1889977	6.76	890213	8.23	1363265	9.49	1326667	12.24	1380587	14.39
SVMS 4164	517028	5.74	1980820	6.76	917096	8.23	1412114	9.49	1416442	12.24	1434912	14.39
SVMS 4165	510287	5.74	1940659	6.76	910628	8.23	1393789	9.49	1437772	12.24	1435589	14.39
SVMS 4212	398481	5.74	1859782	6.76	890410	8.23	1361527	9.48	1348197	12.23	1492034	14.39
SVMS 4213	383150	5.74	1915414	6.76	927018	8.23	1426232	9.49	1424200	12.23	1578085	14.39
SVMS 4214	400481	5.74	1886544	6.76	901075	8.23	1411534	9.48	1370237	12.23	1536804	14.38
SVMS 4215	423959	5.74	2050901	6.76	970488	8.23	1505854	9.49	1466488	12.23	1706688	14.39
SVMS 4216	411685	5.74	1956114	6.76	938721	8.23	1420604	9.48	1382640	12.23	1630375	14.39
SVMS 4217	410715	5.74	1958102	6.76	931408	8.23	1419911	9.49	1364059	12.23	1597433	14.39
SVMS 4218	447790	5.74	2010269	6.76	979705	8.23	1490883	9.48	1373422	12.23	1621276	14.39
SVMS 4219	447800	5.74	2116555	6.76	1001900	8.23	1564648	9.49	1432992	12.23	1708102	14.39

AREA UPPER LIMIT = +100% of internal standard area. AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT. RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

CCV and Non-CCV Samples

Standard File: /chem/msd11.i/11120719B.b/111207B07.d.d

Injection Date: 07-Dec-2019 21:34:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: Ical, Level: 5

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

IS-1: * 16 1,4-Dichlorobenzene-d4
IS-2: * 41 Naphthalene-d8
IS-3: * 67 Acenaphthene-d10
IS-4: * 102 Phenanthrene-d10
IS-5: * 128 Chrysene-d12
IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	430444	5.74	1832714	6.76	862511	8.23	1323763	9.49	1244181	12.24	1386474	14.39
Upper Limit	860888	6.24	3665428	7.26	1725022	8.73	2647526	9.99	2488362	12.74	2772948	14.89
Lower Limit	215222	5.24	916357	6.26	431256	7.73	661882	8.99	622091	11.74	693237	13.89
IBLK	463806	5.73	2677708	6.76	1274032	8.23	1834023	9.49	1720382	12.24	1905912	14.39
SVMS 4221	469388	5.74	2085172	6.76	1015935	8.23	1535591	9.49	1520984	12.23	1692120	14.39
SVMS 4220	408357	5.74	1956531	6.76	930678	8.23	1446640	9.48	1343904	12.23	1598480	14.39
UQ37996-001	288088	5.73	1805726	6.76	876110	8.23	1299123	9.48	1303434	12.23	1470139	14.39
UQ37996-002	456615	5.74	1893080	6.76	902479	8.23	1387690	9.49	1320294	12.24	1525606	14.39
UL04029-001	361278	5.73	1985857	6.76	970909	8.23	1417875	9.48	1423924	12.23	1645412	14.39
UL04029-002	245249	5.73	1844106	6.76	890710	8.23	1347720	9.48	1354128	12.23	1543309	14.39
UL04029-003	279571	5.73	1806118	6.76	883595	8.23	1283670	9.48	1341022	12.23	1528442	14.39
UL04029-004	320843	5.73	1774472	6.76	888030	8.23	1302513	9.48	1315461	12.23	1514288	14.39
UL04029-005	227059	5.73	1782239	6.76	879119	8.23	1279997	9.48	1295633	12.23	1479529	14.39
UL04029-006	272299	5.73	1720872	6.76	852046	8.23	1292532	9.49	1333403	12.23	1501399	14.38
UL04029-007	280296	5.73	1699532	6.76	845895	8.23	1237634	9.48	1260910	12.23	1441393	14.38
UK22009-003	342164	5.73	1700153	6.76	834006	8.23	1237039	9.48	1206649	12.23	1387327	14.38
IBLK	545602	5.73	2417460	6.76	1146207	8.23	1599744	9.48	1616069	12.23	1892840	14.39
IBLK	574942	5.73	2372977	6.76	1130834	8.23	1623421	9.48	1579668	12.23	1862191	14.39
IBLK	573494	5.73	2327848	6.76	1101996	8.23	1581806	9.49	1579986	12.23	1822921	14.39

AREA UPPER LIMIT = +100% of internal standard area.
RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

AREA LOWER LIMIT = - 50% of internal standard area.
RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Report Date: 09-Dec-2019 13:58:29 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\HH\chem\msd11.i\11120819.b

Instrument: msd11.m Method: 8270DLVI-11.m

Column: ZebronZB-SV (0.25 mm) Detector: MS Scan

CCV Samples

Standard File: /chem/msd11.i/11120719B.b/111207B07.d.d

Injection Date: 07-Dec-2019 21:34:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: Ical, Level: 5

IS-1: * 16 1,4-Dichlorobenzene-d4 IS-4: * 102 Phenanthrene-d10

IS-2: * 41 Naphthalene-d8 IS-5: * 128 Chrysene-d12

IS-3: * 67 Acenaphthene-d10 IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	430444	5.74	1832714	6.77	862511	8.23	1323763	9.49	1244181	12.24	1386474	14.39
Upper Limit	860888	6.24	3665428	7.27	1725022	8.73	2647526	9.99	2488362	12.74	2772948	14.89
Lower Limit	215222	5.24	916357	6.27	431256	7.73	661882	8.99	622091	11.74	693237	13.89
SVMS 4281	426491	5.74	1829890	6.76	850881	8.23	1300299	9.49	1288700	12.24	1482984	14.39
SVMS 4215	355056	5.74	1798242	6.76	844137	8.23	1262887	9.49	1201299	12.24	1406649	14.39
SVMS 4281	445617	5.74	1900198	6.77	868975	8.23	1264037	9.50	1260561	12.24	1292688	14.39

AREA UPPER LIMIT = + 50% of internal standard area. AREA LOWER LIMIT = -100% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT. RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd11.i/11120819.b/11120802.d.d

Injection Date: 08-Dec-2019 12:31:30 Lab ID: SVMS 4281

Sublist: 1STD.sub Sample Type: CCVIS

IS-1: * 16 1,4-Dichlorobenzene-d4 IS-4: * 102 Phenanthrene-d10

IS-2: * 41 Naphthalene-d8 IS-5: * 128 Chrysene-d12

IS-3: * 67 Acenaphthene-d10 IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
Std. Results	426491	5.74	1829890	6.76	850881	8.23	1300299	9.49	1288700	12.24	1482984	14.39
Upper Limit	852982	6.24	3659780	7.26	1701762	8.73	2600598	9.99	2577400	12.74	2965968	14.89
Lower Limit	213246	5.24	914945	6.26	425441	7.73	650150	8.99	644350	11.74	741492	13.89
UQ37873-001	276630	5.73	1658490	6.76	800385	8.23	1181585	9.49	1119285	12.24	1272465	14.39
UQ37873-002	230503	5.73	1591077	6.76	775842	8.23	1110112	9.49	1072277	12.24	1227019	14.39
UQ37874-001	238051	5.74	1629033	6.76	781378	8.23	1144387	9.49	1121281	12.24	1247170	14.39
UQ37874-002	*208661	5.73	1591824	6.76	766570	8.23	1085783	9.49	1057352	12.24	1216966	14.39
UQ37678-001	274122	5.75	1576753	6.76	764868	8.23	1133976	9.49	1100881	12.24	1212361	14.39
UQ37678-002	337937	5.75	1598153	6.76	771465	8.23	1140267	9.49	1113514	12.24	1138602	14.39
UL04029-006	313560	5.74	1607369	6.76	759394	8.23	1141948	9.50	1056756	12.23	1232808	14.39
UQ37874-002	235516	5.73	1577830	6.76	760694	8.23	1083027	9.49	1059188	12.24	1241867	14.39
UL04029-007	302557	5.73	1596411	6.76	767024	8.23	1116706	9.49	1098445	12.24	1231092	14.39
UL02023-008	298046	5.73	1580921	6.76	757537	8.23	1080139	9.49	1098221	12.24	1239209	14.39
UK20003-012	328404	5.75	1541815	6.76	733471	8.23	1132614	9.49	1045531	12.24	1259117	14.39
UK20003-016	346539	5.73	1596751	6.76	756049	8.23	1100729	9.49	1114184	12.24	1001630	14.39
UK25008-001	296185	5.74	1786793	6.76	853097	8.23	1190765	9.49	1209780	12.24	1488634	14.39
UK20003-018	252445	5.73	1657084	6.76	792249	8.23	1117757	9.49	1105370	12.24	1411618	14.39
UK20003-018MS	238382	5.73	1640437	6.76	785914	8.23	1111314	9.49	1138089	12.24	1447974	14.39
UK27050-001	236926	5.73	1603860	6.76	764243	8.23	1102927	9.49	1150077	12.24	1419899	14.39
UK27050-001MS	243821	5.73	1598203	6.76	768571	8.23	1100180	9.49	1109341	12.24	1395139	14.39
UK20005-003	305064	5.75	1635553	6.76	769879	8.23	1154997	9.49	1112085	12.24	1252572	14.39
UK20005-003MS	349802	5.75	1698370	6.76	797159	8.23	1143631	9.49	1144964	12.24	1221250	14.39

Report Date: 09-Dec-2019 13:58:29 AIM Revision: 1.0 27-Jun-2017 12:05:20

IS-1: * 16 1,4-Dichlorobenzene-d4
IS-2: * 41 Naphthalene-d8
IS-3: * 67 Acenaphthene-d10
IS-4: * 102 Phenanthrene-d10
IS-5: * 128 Chrysene-d12
IS-6: * 136 Perylene-d12

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT	IS-5 Area	RT	IS-6 Area	RT
UK20005-003MD	337264	5.75	1708508	6.76	797295	8.23	1162682	9.49	1143800	12.24	1179648	14.39
UK20005-008	377219	5.73	1764338	6.76	819258	8.23	1127473	9.49	1179165	12.24	1331186	14.39
UK20005-009	362000	5.74	1723274	6.76	804627	8.23	1132401	9.49	1184718	12.24	1278185	14.39
UK20005-010	351042	5.73	1674506	6.76	801425	8.23	1130555	9.49	1224137	12.24	1255957	14.39
UK20005-011	354390	5.73	1653247	6.76	788542	8.23	1070418	9.49	1214323	12.24	1114701	14.39
UK20005-012	291105	5.73	1678799	6.76	785257	8.23	1108329	9.49	1221911	12.24	1091734	14.39
IBLK	399684	5.73	2422182	6.76	1126028	8.23	1501864	9.49	1657098	12.24	1737496	14.39
IBLK	536451	5.73	2330805	6.76	1071038	8.23	1422318	9.49	1600859	12.24	1701910	14.39
IBLK	551245	5.74	2320645	6.76	1064608	8.23	1402049	9.49	1601744	12.24	1682552	14.39

AREA UPPER LIMIT = + 50% of internal standard area.
AREA LOWER LIMIT = -100% of internal standard area.
RT UPPER LIMIT = + 0.5 minutes of internal standard RT.
RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

RAW SAMPLE DATA

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0440	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0440	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		55	24-127
Nitrobenzene-d5		87	38-127
Phenol-d5		78	28-128
Terphenyl-d14		102	10-148
2,4,6-Tribromophenol		78	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B24.d
Lab Sample ID: UL04029-001 Client Sample ID: MPGI-09-Water-RW-12
Injection Date: 08-Dec-2019 04:40:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UL04029-001
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Client ALS Bottle: 22
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:58:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.734	5.740	-0.004	361278	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1985857	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	970909	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.489	9.495	-0.004	1417875	20.000	20.000	
* 128 Chrysene-d12	240.0	12.238	12.244	-0.004	1423924	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1645412	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.755	4.766	-0.010	153051	5.5302	22.121	
199 Benzaldhyde	77.0		5.408		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.010	277303	7.7873	31.149	
10 Phenol	94.0		5.424		ND			
12 bis(2-Chloroethyl)ether	63.0		5.499		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.039		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	357343	8.6860	34.744	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.360		ND			
34 2,4-Dimethylphenol	107.0		6.435		ND			
33 2-Nitrophenol	139.0		6.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	547906	8.1266	32.506	
184 Biphenyl	154.0		7.724		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.018		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.173		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.403		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.660		ND			
83 4-Nitroaniline	138.0		8.692		ND			
79 Fluorene	166.0		8.692		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.708		ND			
86 n-Nitrosodiphenylamine	169.0		8.756		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	92365	7.8292	31.317	
94 4-Bromophenylphenylether	248.0		9.077		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.318		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.553		ND			
106 Carbazole	167.0		9.676		ND			
109 Di-n-butylphthalate	149.0		9.890		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.810		ND			
$ 117 Terphenyl-d14	244.0	10.901	10.907	-0.004	688306	10.239	40.957	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.099		ND			
125 3,3'-Dichlorobenzidine	252.0		12.142		ND			
127 Benzo(a)Anthracene	228.0		12.222		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.282		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.849		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

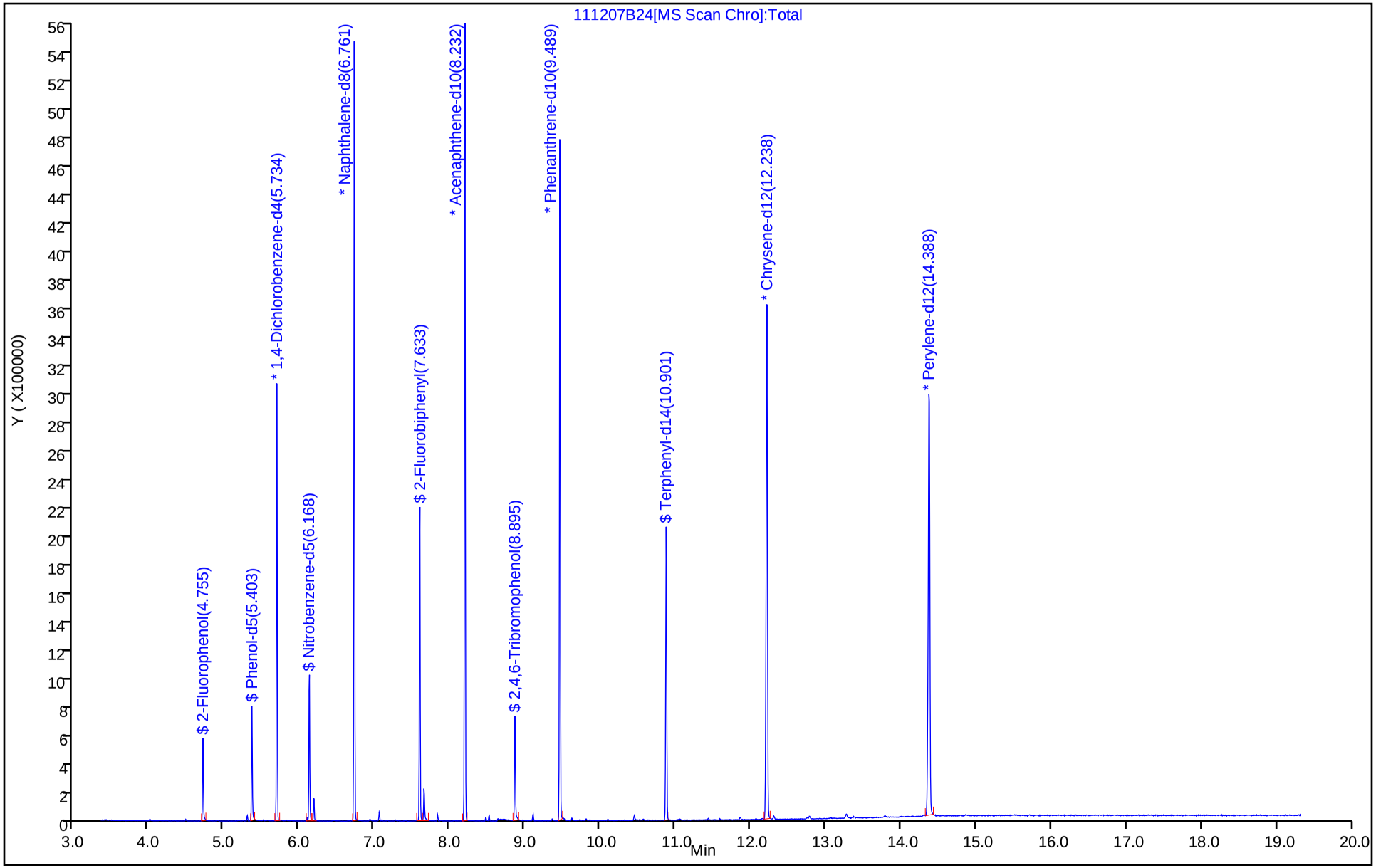
Processing Flags

Review Flags

Report Date: 08-Dec-2019 13:08:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B24.d				
Injection Date:	08-Dec-2019 04:40:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-09-Water-RW-12	Lab ID:	UL04029-001		
Sample Info:	11120719B.b, UL04029-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0505	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0505	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		83	37-129
2-Fluorophenol		37	24-127
Nitrobenzene-d5		88	38-127
Phenol-d5		82	28-128
Terphenyl-d14		105	10-148
2,4,6-Tribromophenol		77	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B25.d
Lab Sample ID: UL04029-002 Client Sample ID: MPGI-11-Water-RW-12
Injection Date: 08-Dec-2019 05:05:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UL04029-002
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Client ALS Bottle: 23
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:58:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.734	5.740	-0.004	245249	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1844106	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	890710	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.489	9.495	-0.004	1347720	20.000	20.000	
* 128 Chrysene-d12	240.0	12.238	12.244	-0.004	1354128	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1543309	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.756	4.766	-0.010	70024	3.7272	14.909	e
199 Benzaldhyde	77.0		5.408		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.010	198511	8.2121	32.848	
10 Phenol	94.0		5.424		ND			
12 bis(2-Chloroethyl)ether	63.0		5.499		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.039		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.162	6.168	-0.004	334921	8.7655	35.062	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.360		ND			
34 2,4-Dimethylphenol	107.0		6.435		ND			
33 2-Nitrophenol	139.0		6.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	513583	8.3034	33.214	
184 Biphenyl	154.0		7.724		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.018		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.173		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.403		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.660		ND			
83 4-Nitroaniline	138.0		8.692		ND			
79 Fluorene	166.0		8.692		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.708		ND			
86 n-Nitrosodiphenylamine	169.0		8.756		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	85638	7.6531	30.612	
94 4-Bromophenylphenylether	248.0		9.077		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.318		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.553		ND			
106 Carbazole	167.0		9.676		ND			
109 Di-n-butylphthalate	149.0		9.890		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.810		ND			
$ 117 Terphenyl-d14	244.0	10.906	10.907	0.000	670173	10.483	41.933	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.099		ND			
125 3,3'-Dichlorobenzidine	252.0		12.142		ND			
127 Benzo(a)Anthracene	228.0		12.222		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.282		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.849		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

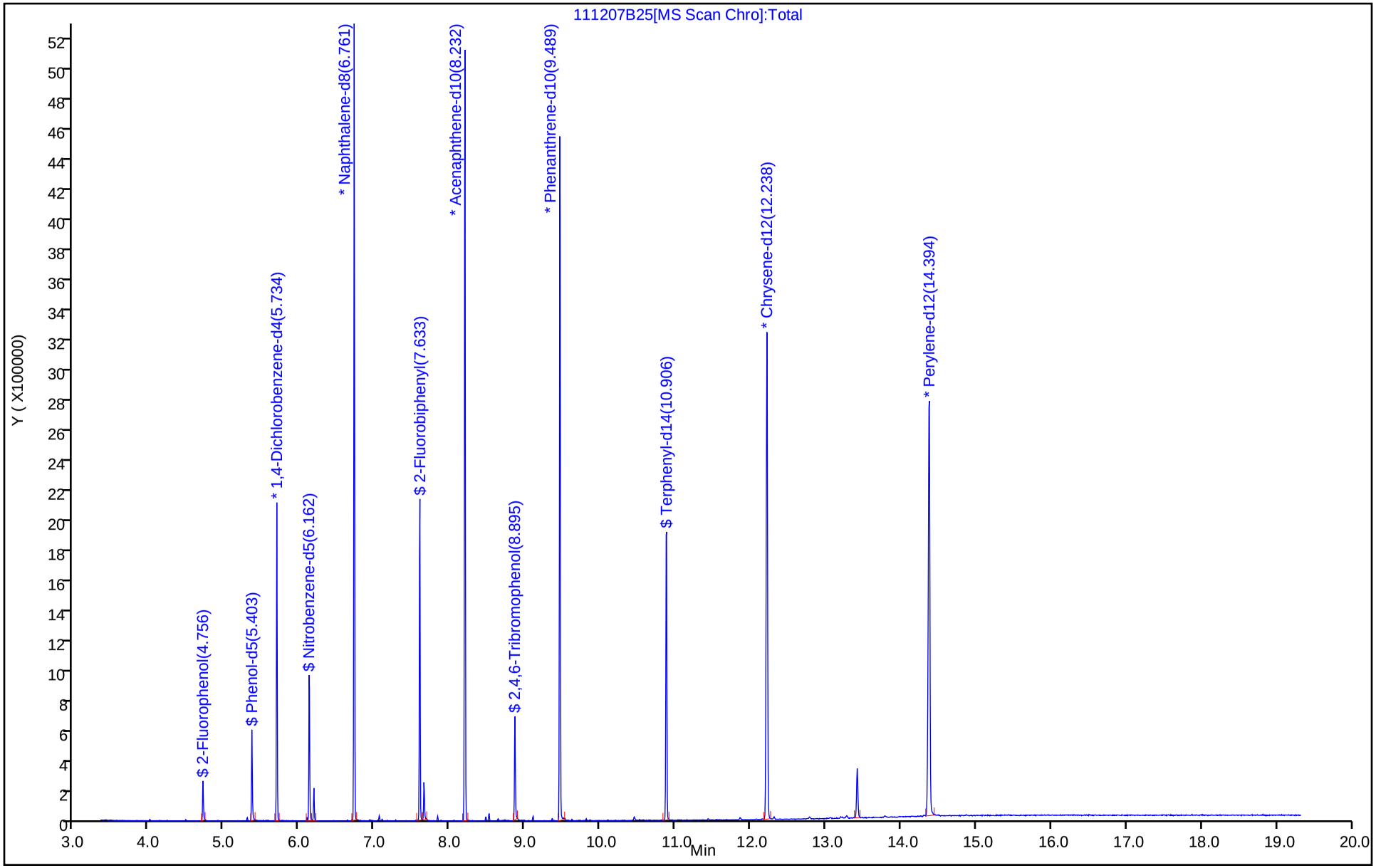
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 08-Dec-2019 13:08:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B25.d				
Injection Date:	08-Dec-2019 05:05:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-11-Water-RW-12	Lab ID:	UL04029-002		
Sample Info:	11120719B.b, UL04029-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0530	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0530	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		37	24-127
Nitrobenzene-d5		88	38-127
Phenol-d5		73	28-128
Terphenyl-d14		103	10-148
2,4,6-Tribromophenol		77	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B26.d
Lab Sample ID: UL04029-003 Client Sample ID: MPGI-12-Water-RW-12
Injection Date: 08-Dec-2019 05:30:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UL04029-003
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Client ALS Bottle: 24
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:58:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.004	279571	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1806118	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	883595	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.489	9.495	-0.004	1283670	20.000	20.000	
* 128 Chrysene-d12	240.0	12.238	12.244	-0.004	1341022	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1528442	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.756	4.766	-0.010	79820	3.7271	14.908	e
199 Benzaldhyde	77.0		5.408		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.010	199812	7.2511	29.004	
10 Phenol	94.0		5.424		ND			
12 bis(2-Chloroethyl)ether	63.0		5.499		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.039		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.162	6.168	-0.004	328909	8.7888	35.155	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.360		ND			
34 2,4-Dimethylphenol	107.0		6.435		ND			
33 2-Nitrophenol	139.0		6.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	498021	8.1166	32.467	
184 Biphenyl	154.0		7.724		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.018		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.173		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.403		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.660		ND			
83 4-Nitroaniline	138.0		8.692		ND			
79 Fluorene	166.0		8.692		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.708		ND			
86 n-Nitrosodiphenylamine	169.0		8.756		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.895	0.000	82561	7.7382	30.953	
94 4-Bromophenylphenylether	248.0		9.077		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.318		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.553		ND			
106 Carbazole	167.0		9.676		ND			
109 Di-n-butylphthalate	149.0		9.890		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.810		ND			
$ 117 Terphenyl-d14	244.0	10.901	10.907	-0.004	651159	10.285	41.142	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.099		ND			
125 3,3'-Dichlorobenzidine	252.0		12.142		ND			
127 Benzo(a)Anthracene	228.0		12.222		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.282		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.849		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

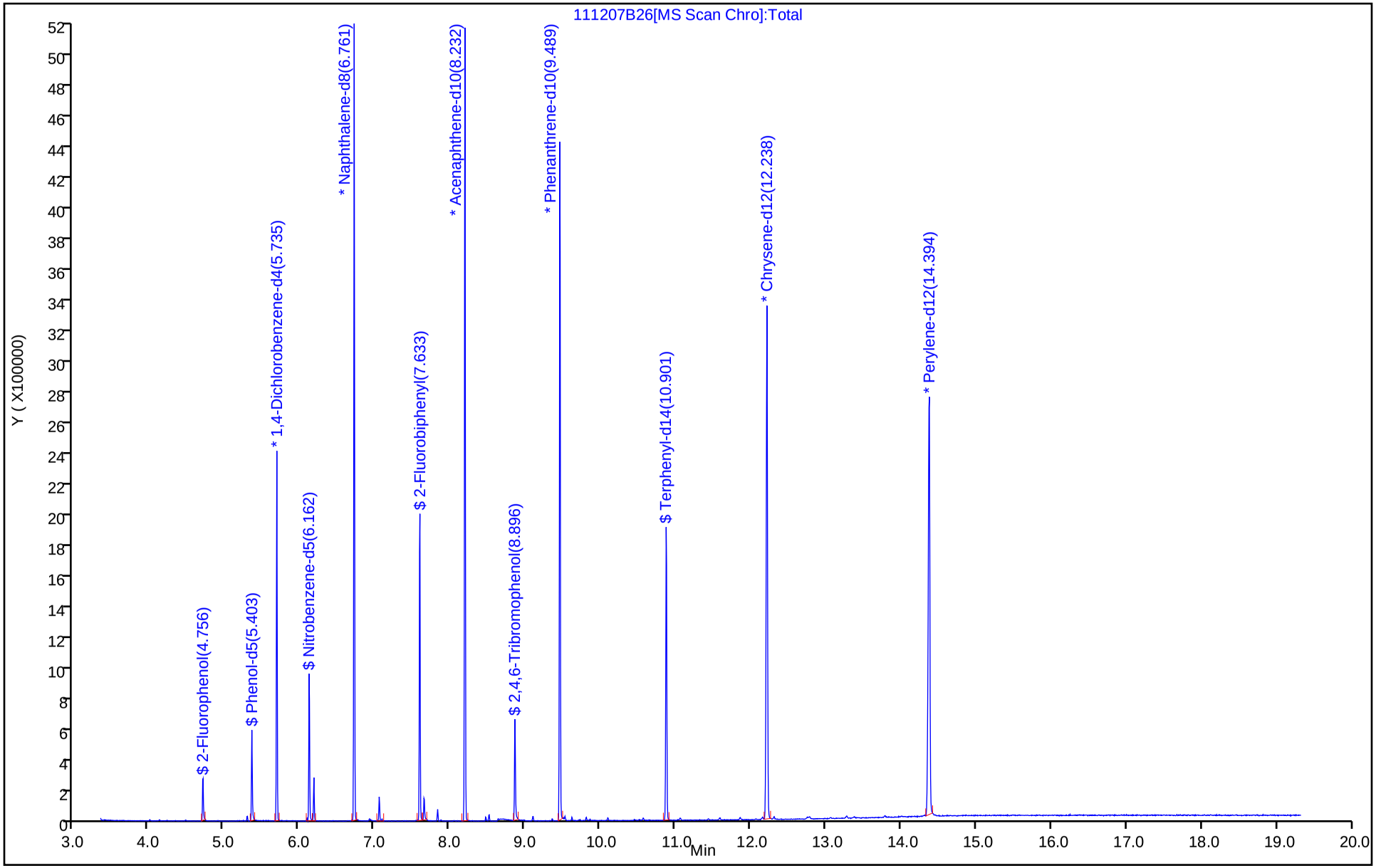
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 08-Dec-2019 13:08:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B26.d				
Injection Date:	08-Dec-2019 05:30:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-12-Water-RW-12	Lab ID:	UL04029-003		
Sample Info:	11120719B.b, UL04029-003				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0556	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0556	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		77	37-129
2-Fluorophenol		44	24-127
Nitrobenzene-d5		82	38-127
Phenol-d5		62	28-128
Terphenyl-d14		100	10-148
2,4,6-Tribromophenol		71	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B27.d
Lab Sample ID: UL04029-004 Client Sample ID: MPGI-13-Water-RW-12
Injection Date: 08-Dec-2019 05:56:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UL04029-004
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Client ALS Bottle: 25
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:59:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.734	5.740	-0.004	320843	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1774472	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	888030	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.489	9.495	-0.004	1302513	20.000	20.000	
* 128 Chrysene-d12	240.0	12.238	12.244	-0.004	1315461	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1514288	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.756	4.766	-0.010	108392	4.4101	17.641	e
199 Benzaldhyde	77.0		5.408		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.010	197139	6.2338	24.935	
10 Phenol	94.0		5.424		ND			
12 bis(2-Chloroethyl)ether	63.0		5.499		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.039		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.162	6.168	-0.004	302166	8.2271	32.908	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.360		ND			
34 2,4-Dimethylphenol	107.0		6.435		ND			
33 2-Nitrophenol	139.0		6.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	475591	7.7124	30.849	
184 Biphenyl	154.0		7.724		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.018		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.173		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.403		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.660		ND			
83 4-Nitroaniline	138.0		8.692		ND			
79 Fluorene	166.0		8.692		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.708		ND			
86 n-Nitrosodiphenylamine	169.0		8.756		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	75830	7.0671	28.269	
94 4-Bromophenylphenylether	248.0		9.077		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.318		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.553		ND			
106 Carbazole	167.0		9.676		ND			
109 Di-n-butylphthalate	149.0		9.890		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.810		ND			
$ 117 Terphenyl-d14	244.0	10.901	10.907	-0.004	619069	9.9686	39.874	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.099		ND			
125 3,3'-Dichlorobenzidine	252.0		12.142		ND			
127 Benzo(a)Anthracene	228.0		12.222		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.282		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.849		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

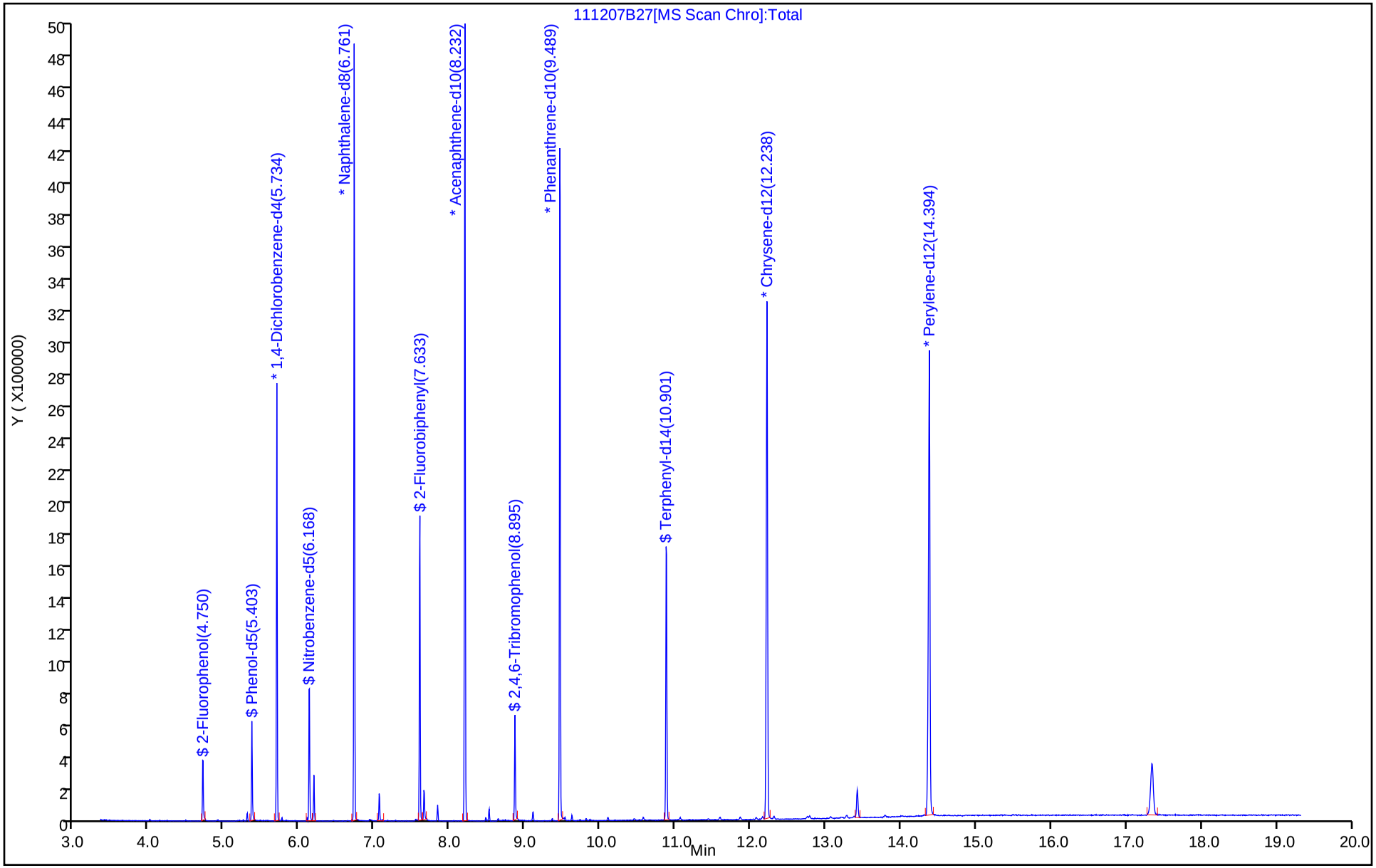
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 08-Dec-2019 13:08:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B27.d				
Injection Date:	08-Dec-2019 05:56:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-13-Water-RW-12	Lab ID:	UL04029-004		
Sample Info:	11120719B.b, UL04029-004				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0621	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 0621	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		76	37-129
2-Fluorophenol		35	24-127
Nitrobenzene-d5		81	38-127
Phenol-d5		84	28-128
Terphenyl-d14		103	10-148
2,4,6-Tribromophenol		73	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B28.d
Lab Sample ID: UL04029-005 Client Sample ID: MPGI-13-Water-RW-12
Injection Date: 08-Dec-2019 06:21:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UL04029-005
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Client ALS Bottle: 26
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:59:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.734	5.740	-0.004	227059	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1782239	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	879119	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.489	9.495	-0.004	1279997	20.000	20.000	
* 128 Chrysene-d12	240.0	12.238	12.244	-0.004	1295633	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1479529	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.756	4.766	-0.010	60823	3.4968	13.987	e
199 Benzaldhyde	77.0		5.408		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.010	186907	8.3515	33.406	
10 Phenol	94.0		5.424		ND			
12 bis(2-Chloroethyl)ether	63.0		5.499		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.039		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.162	6.168	-0.004	297762	8.0744	32.298	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.360		ND			
34 2,4-Dimethylphenol	107.0		6.435		ND			
33 2-Nitrophenol	139.0		6.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	462546	7.5769	30.307	
184 Biphenyl	154.0		7.724		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.018		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.173		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.403		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.660		ND			
83 4-Nitroaniline	138.0		8.692		ND			
79 Fluorene	166.0		8.692		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.708		ND			
86 n-Nitrosodiphenylamine	169.0		8.756		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	77179	7.2958	29.183	
94 4-Bromophenylphenylether	248.0		9.077		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.318		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.553		ND			
106 Carbazole	167.0		9.676		ND			
109 Di-n-butylphthalate	149.0		9.890		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.810		ND			
$ 117 Terphenyl-d14	244.0	10.901	10.907	-0.004	630191	10.303	41.212	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.099		ND			
125 3,3'-Dichlorobenzidine	252.0		12.142		ND			
127 Benzo(a)Anthracene	228.0		12.222		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.282		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.849		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

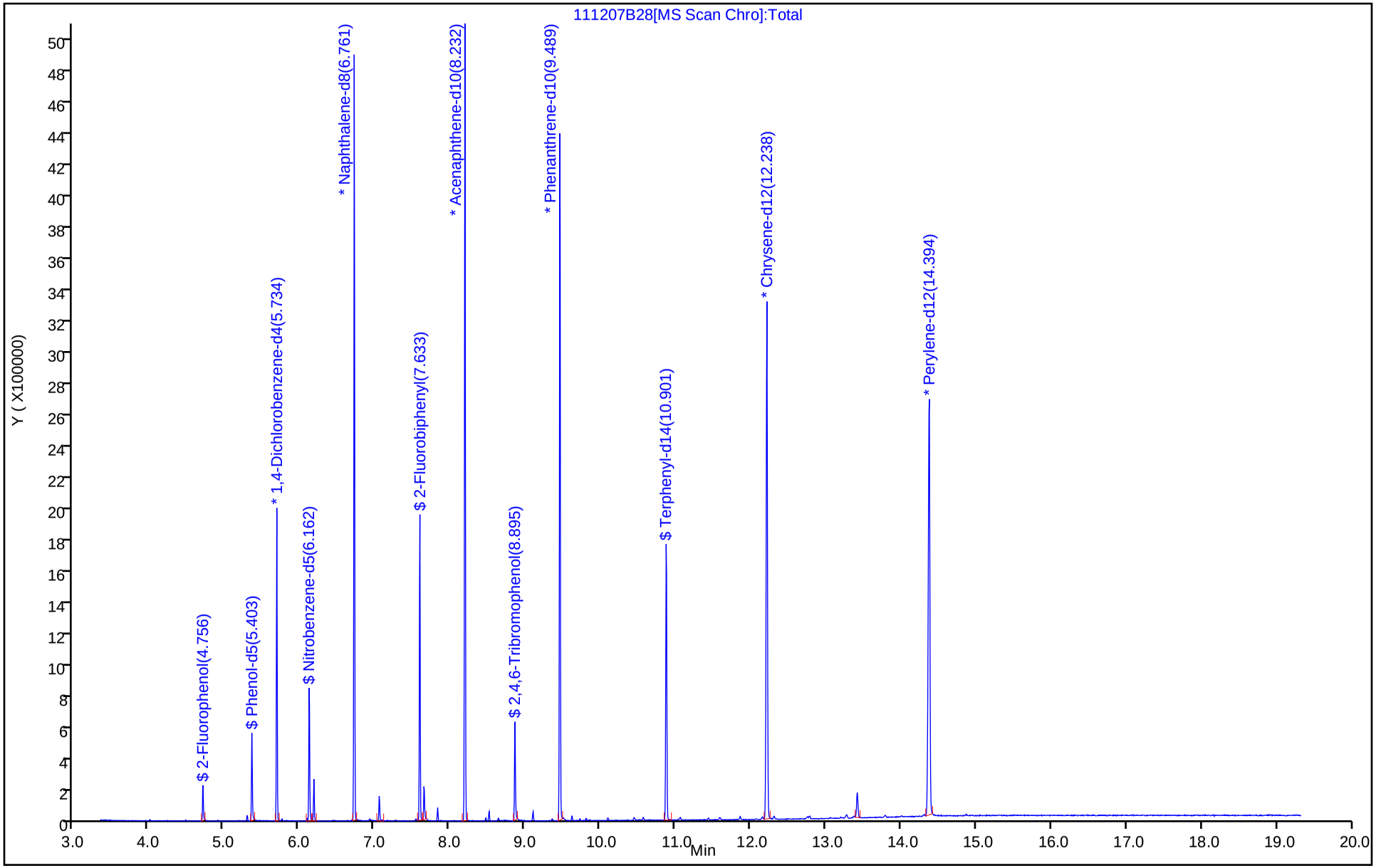
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 08-Dec-2019 13:09:00 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B28.d				
Injection Date:	08-Dec-2019 06:21:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-13-Water-RW-12	Lab ID:	UL04029-005		
Sample Info:	11120719B.b, UL04029-005				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1600	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	1.1	J	4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	7.6		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	4.4		4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	2.7	J	8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1600	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	5.4		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		56	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		88	28-128
Terphenyl-d14		107	10-148
2,4,6-Tribromophenol		97	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120810.d
Lab Sample ID: UL04029-006 Client Sample ID: MPGI-26-Water-RW-12
Injection Date: 08-Dec-2019 16:00:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120819.b, UL04029-006
Misc. Info: 37996
Method: \\Organics\HH\chem\msd11.i\11120819.b\8270DLVI-11.m
Method Date: 09-Dec-2019 12:31:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Client ALS Bottle: 7
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: jcg Review Date: 09-Dec-2019 08:50:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	313560	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.762	6.762	0.000	1607369	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	759394	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1141948	20.000	80.000	
* 128 Chrysene-d12	240.0	12.234	12.244	-0.010	1056756	20.000	80.000	
* 136 Perylene-d12	264.0	14.389	14.394	-0.005	1232808	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.756	4.761	-0.005	134652	5.6058	22.423	
$ 9 Phenol-d5	99.0	5.409	5.409	0.000	272390	8.8134	35.254	
199 Benzaldhyde	77.0		5.409		ND			
10 Phenol	94.0	5.419	5.419	0.000	45827	1.3445	5.3779	Qe
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.580		ND			
20 o-Cresol	108.0	5.895	5.890	0.005	6574	0.27951	1.1180	e
21 bis(2Chloro1methylethyl)ether	45.0		5.906		ND			
23 m+p-Cresol	107.0	6.008	6.002	0.006	46828	1.8907	7.5628	e
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.034		ND			
28 Hexachloroethane	117.0		6.147		ND			
$ 29 Nitrobenzene-d5	82.0	6.163	6.168	-0.005	300465	9.0179	36.072	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.430		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0	7.099	7.072	0.027	5063	0.67050	2.6820	e
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.345		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	429708	8.1487	32.595	
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.832		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.115		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.661		ND			
83 4-Nitroaniline	138.0		8.687		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.709		ND			
86 n-Nitrosodiphenylamine	169.0		8.757		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	93426	9.6636	38.654	
94 4-Bromophenylphenylether	248.0		9.078		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.891		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.902	10.907	-0.005	531702	10.658	42.631	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0	12.095	12.100	-0.005	22740	1.0992	4.3967	e
125 3,3'-Dichlorobenzidine	252.0		12.137		ND			
127 Benzo(a)Anthracene	228.0		12.223		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.288		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.855		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

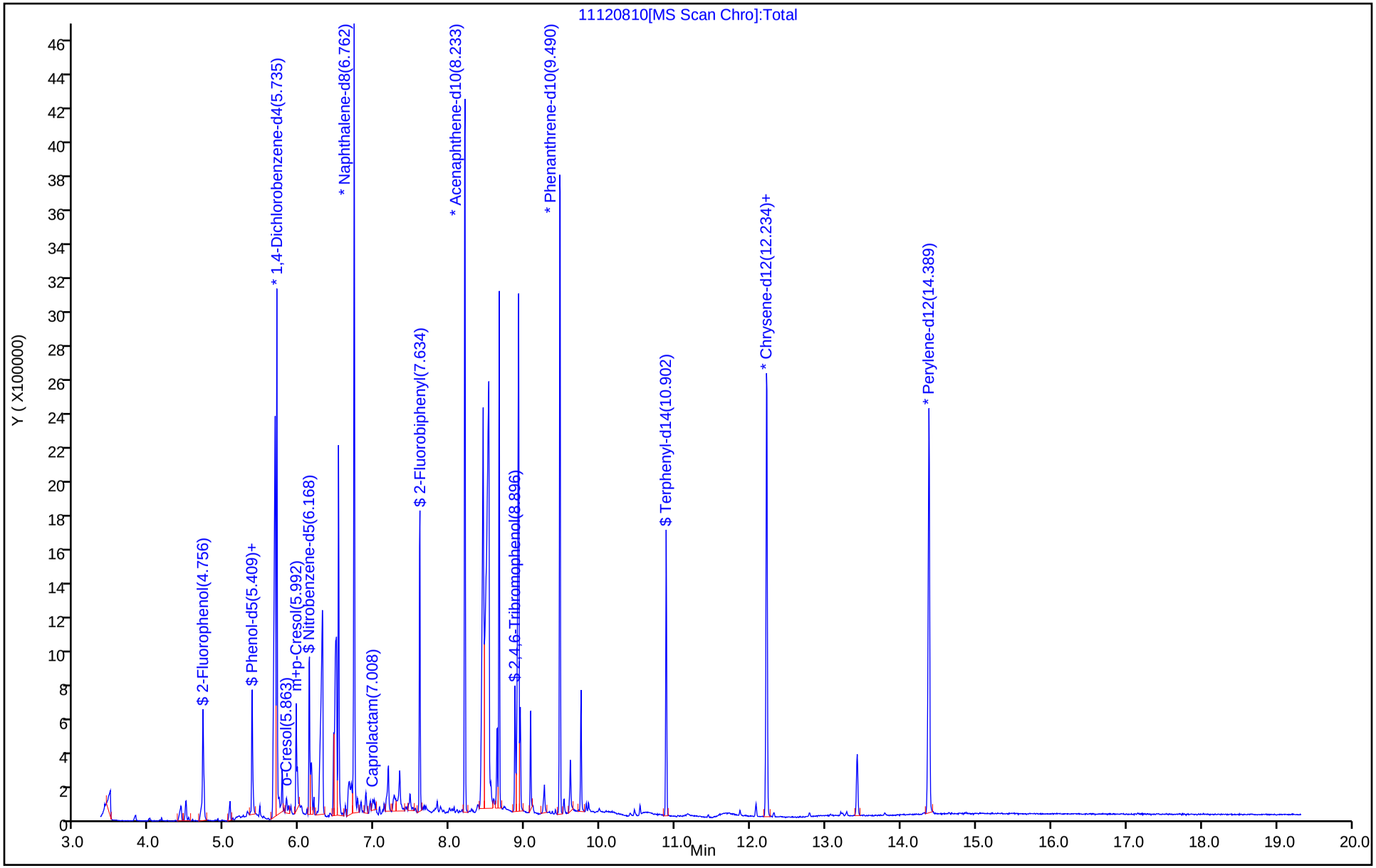
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

Report Date: 09-Dec-2019 12:32:15 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120810.d				
Injection Date:	08-Dec-2019 16:00:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04029-006		
Sample Info:	11120819.b, UL04029-006				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		

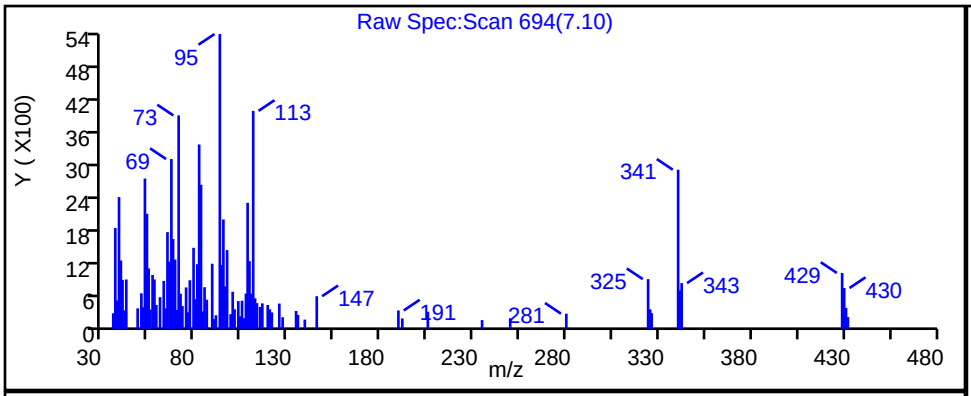


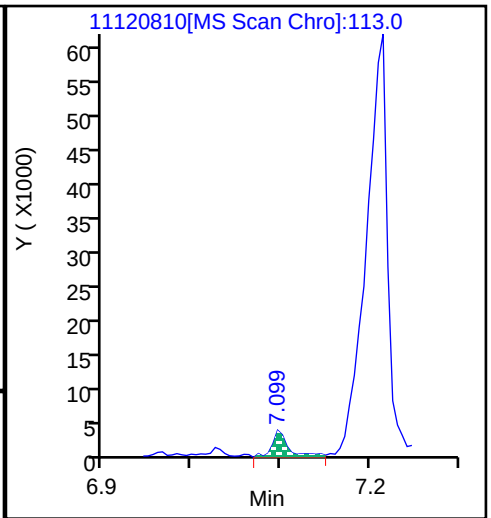
Report Date: 09-Dec-2019 12:32:15 AIM Revision: 1.0 27-Jun-2017 12:05:20

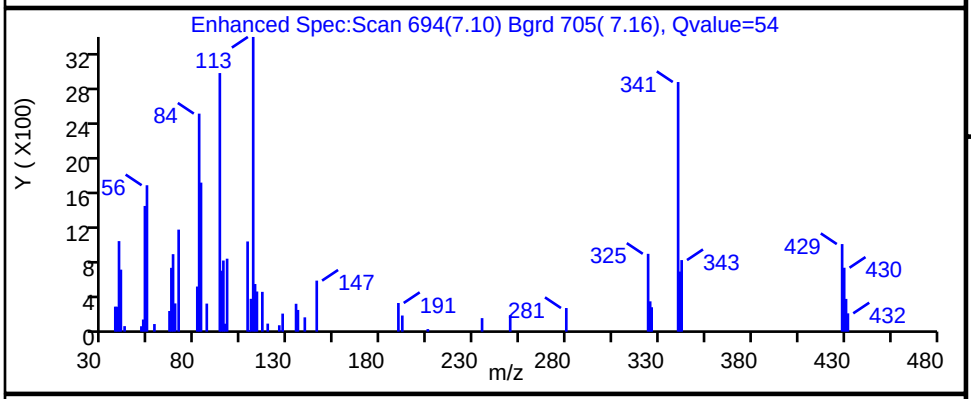
Shealy Environmental Services

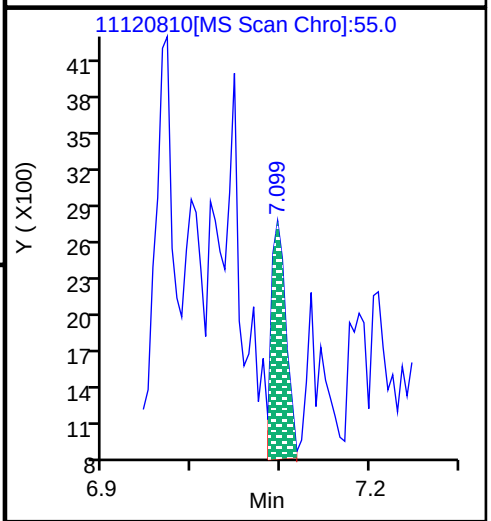
Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120810.d		
Injection Date:	08-Dec-2019 16:00:30	Inst. ID:	msd11.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04029-006
Sample Info:	11120819.b, UL04029-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

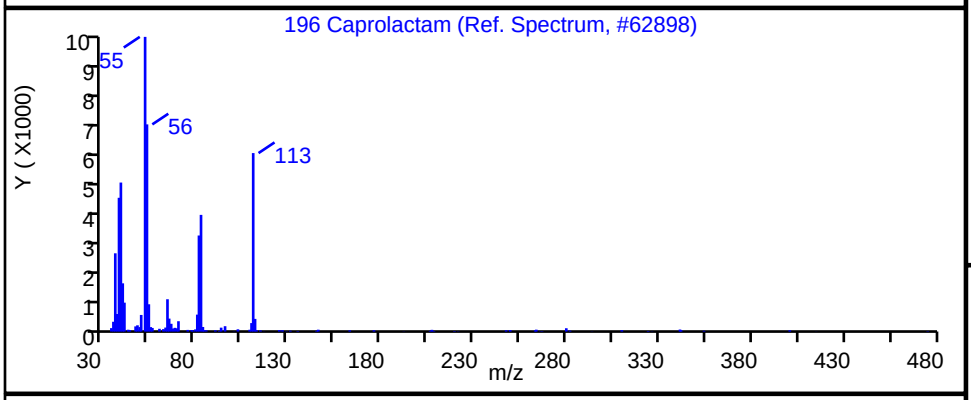
196 Caprolactam

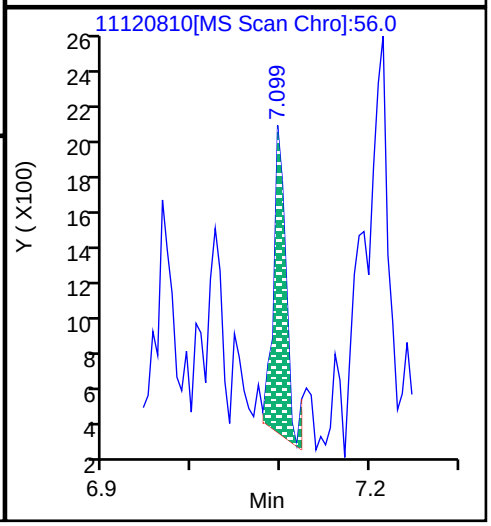


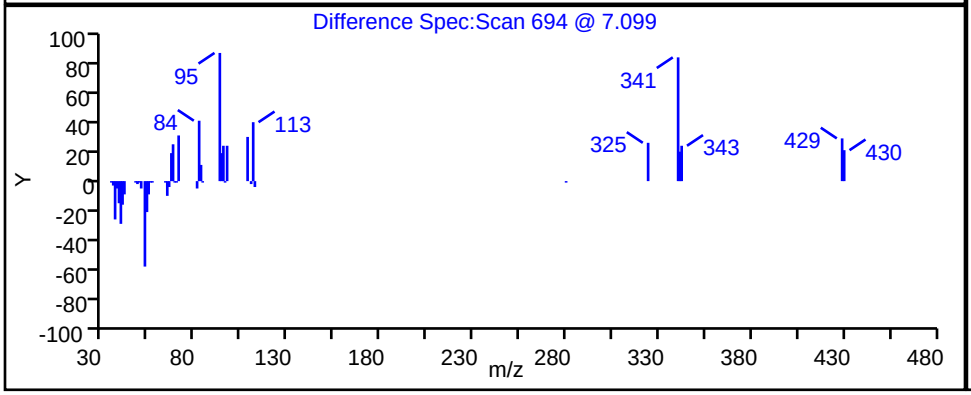










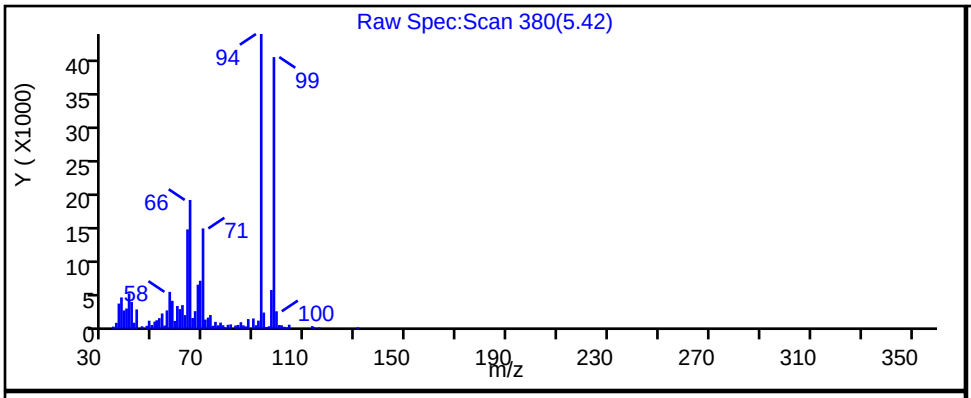


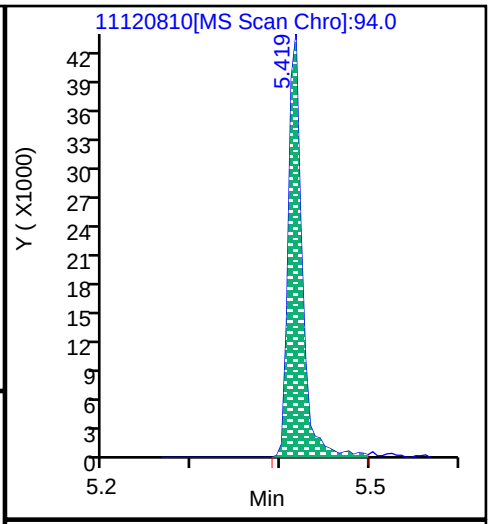
Report Date: 09-Dec-2019 12:32:15 AIM Revision: 1.0 27-Jun-2017 12:05:20

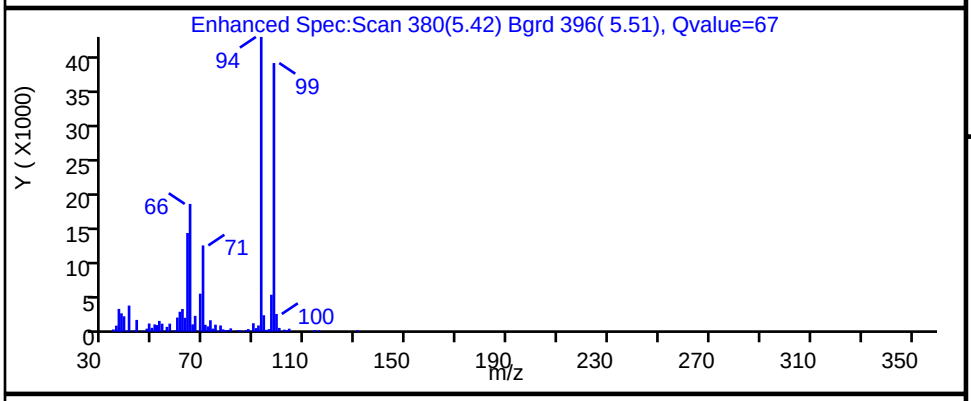
Shealy Environmental Services

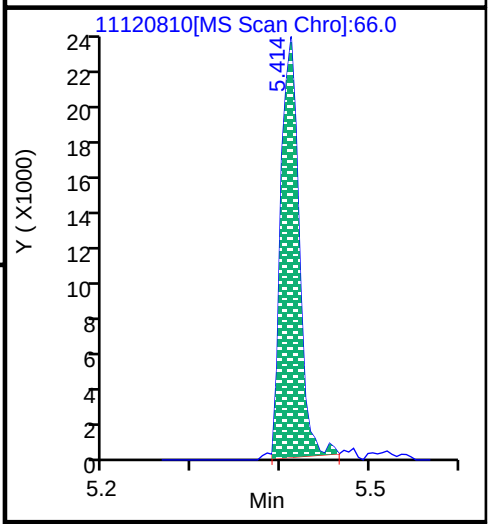
Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120810.d		
Injection Date:	08-Dec-2019 16:00:30	Inst. ID:	msd11.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04029-006
Sample Info:	11120819.b, UL04029-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

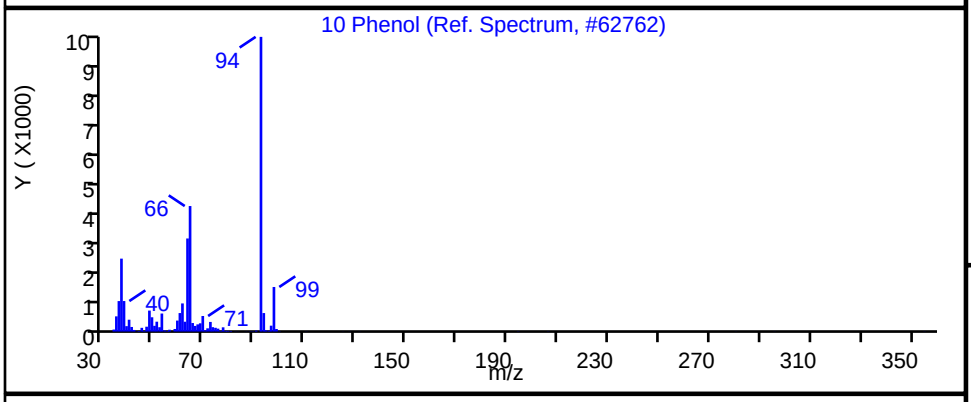
10 Phenol

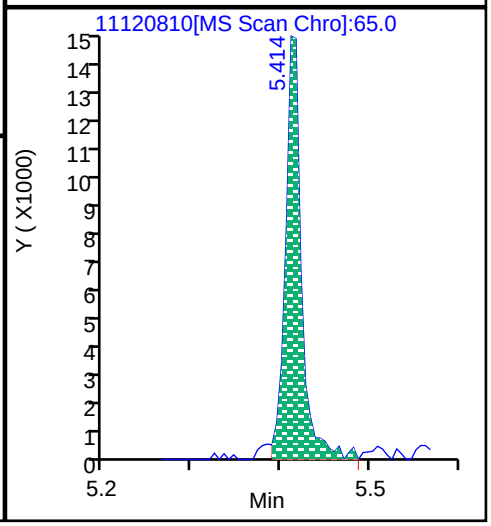


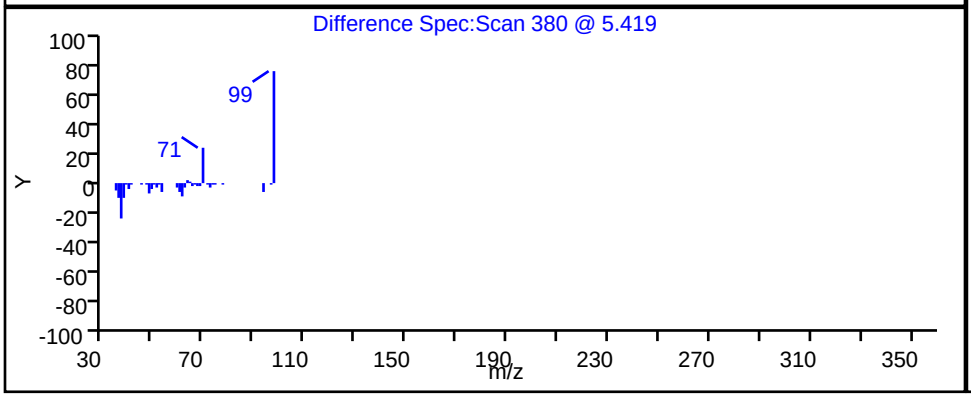








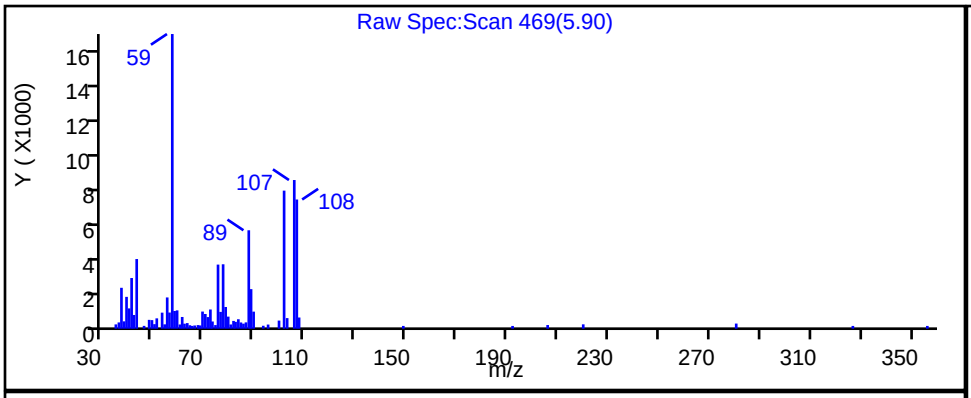


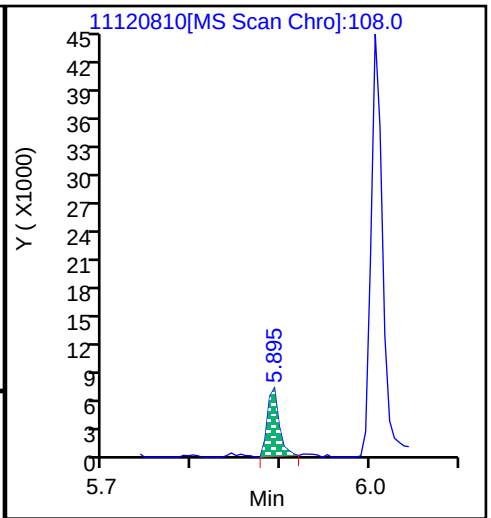


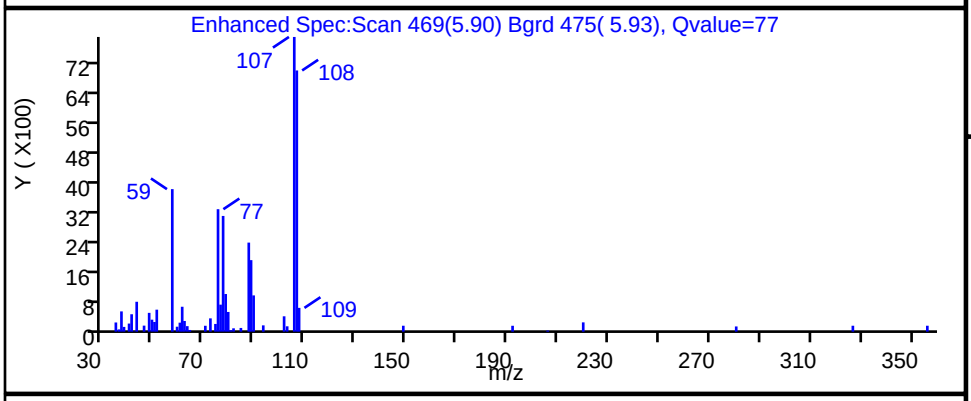
Shealy Environmental Services

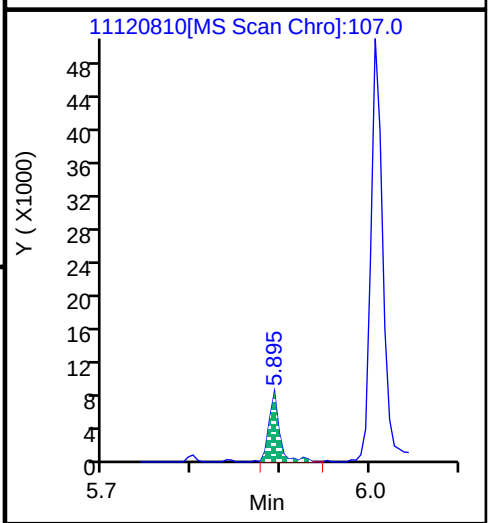
Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120810.d		
Injection Date:	08-Dec-2019 16:00:30	Inst. ID:	msd11.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04029-006
Sample Info:	11120819.b, UL04029-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

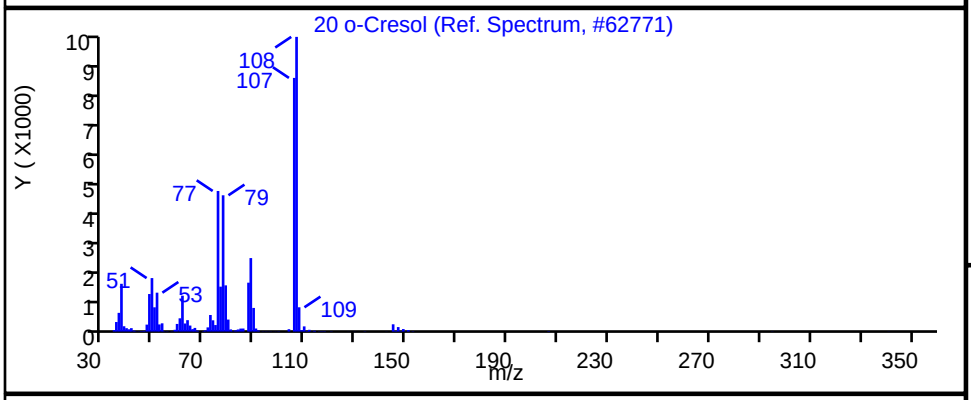
20 o-Cresol

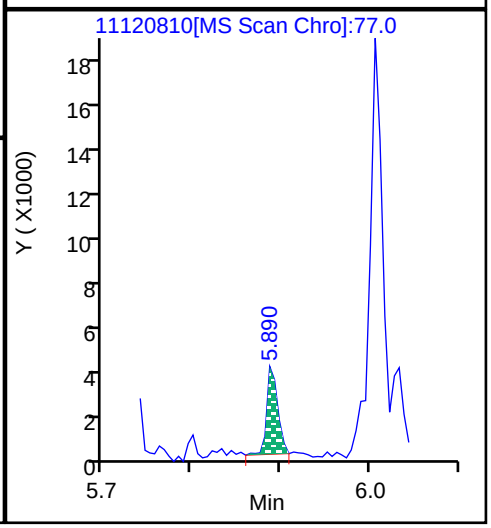


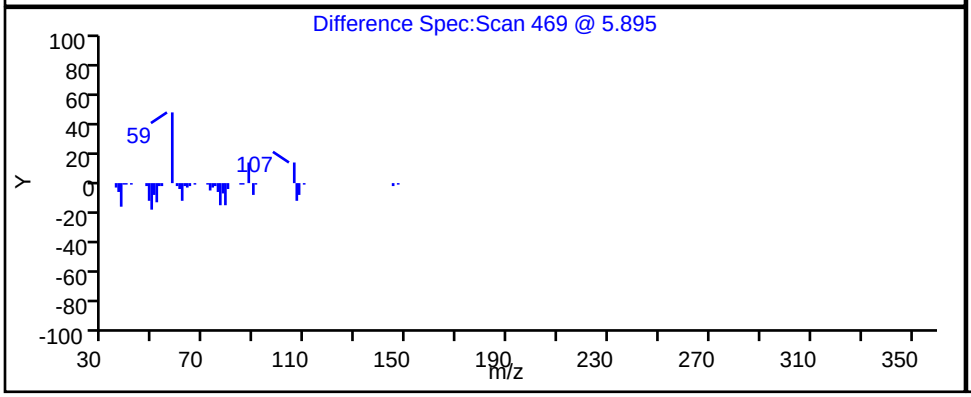










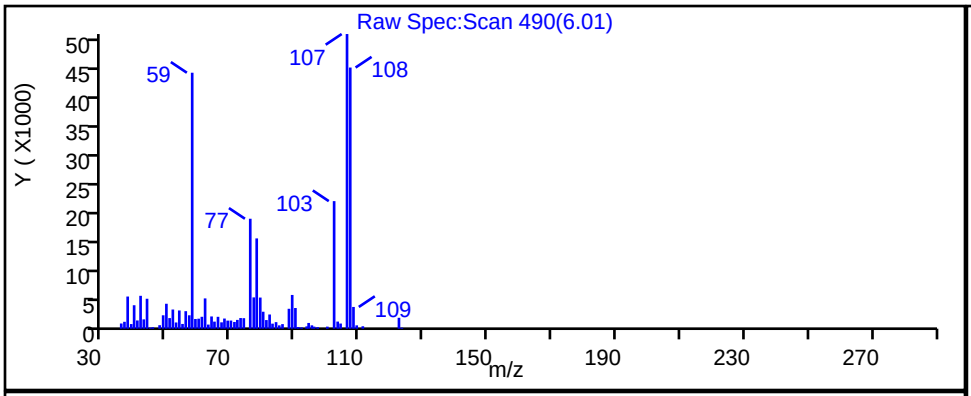


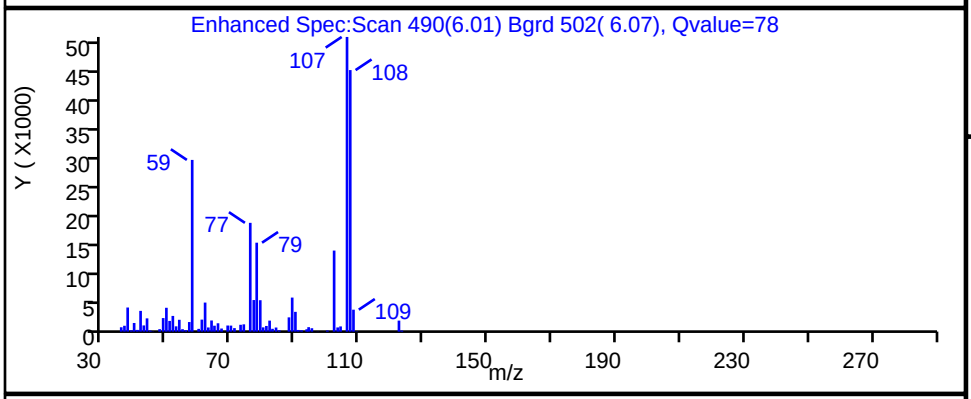
Report Date: 09-Dec-2019 12:32:16 AIM Revision: 1.0 27-Jun-2017 12:05:20

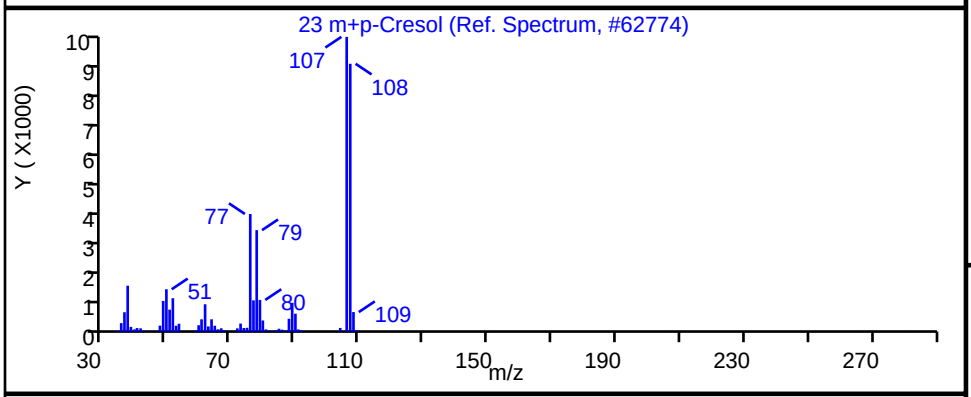
Shealy Environmental Services

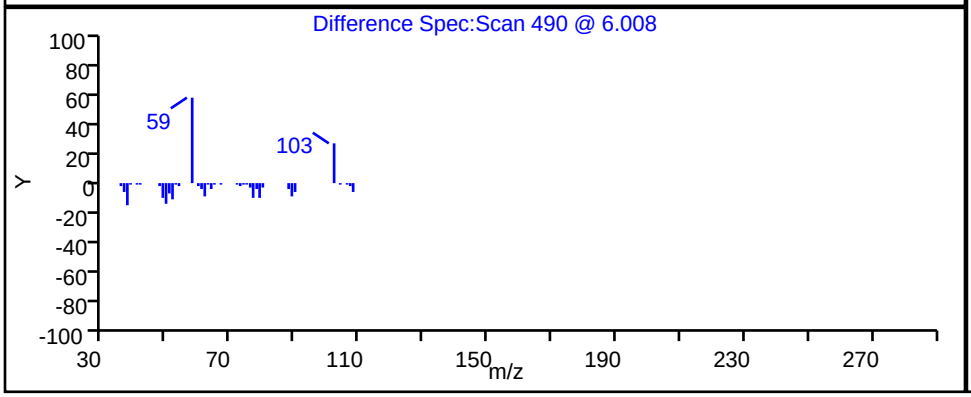
Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120810.d		
Injection Date:	08-Dec-2019 16:00:30	Inst. ID:	msd11.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04029-006
Sample Info:	11120819.b, UL04029-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

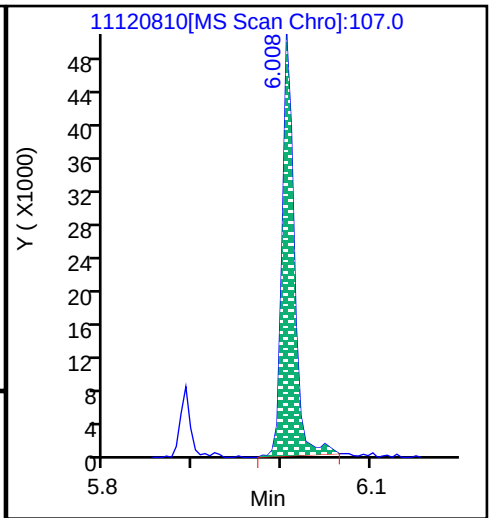
23 m+p-Cresol

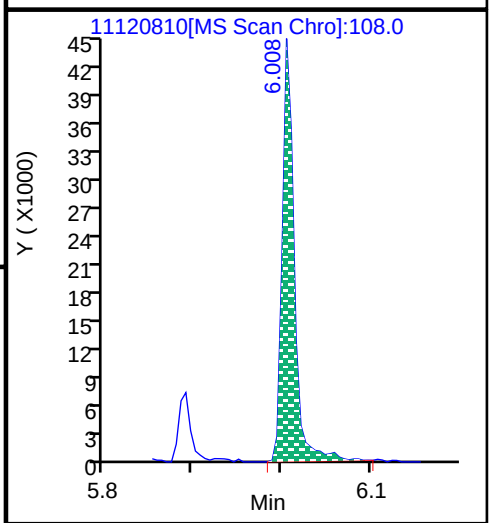


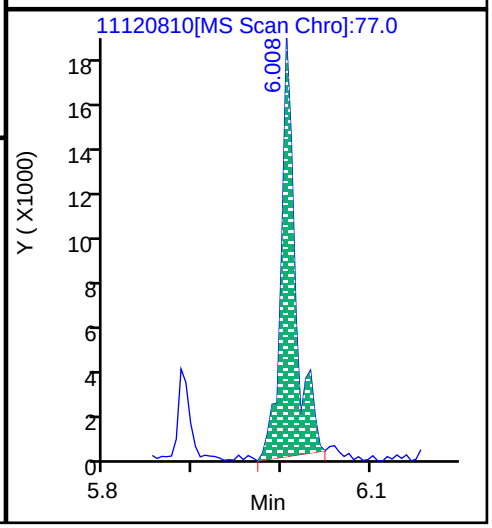










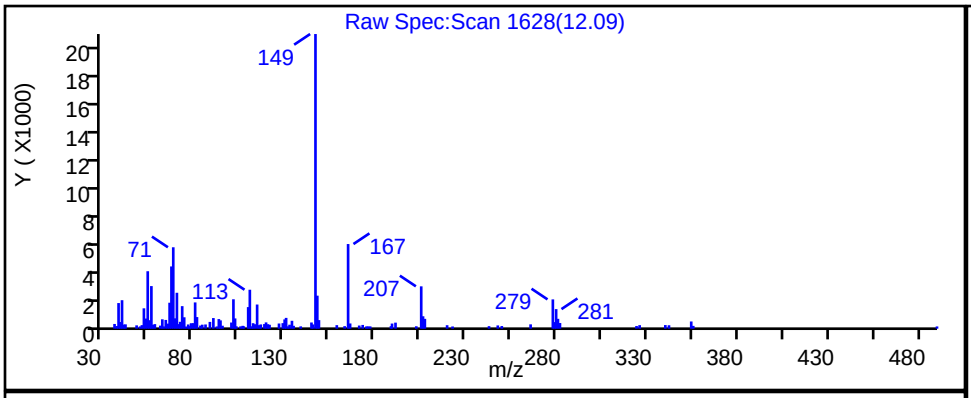


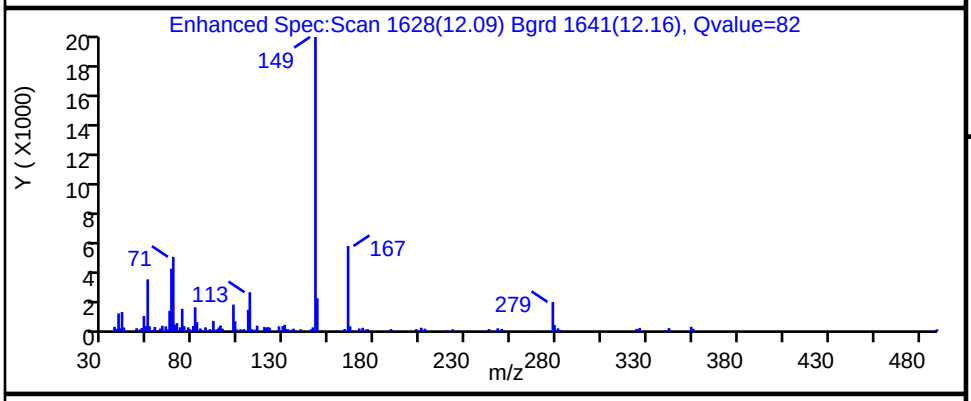
Report Date: 09-Dec-2019 12:32:16 AIM Revision: 1.0 27-Jun-2017 12:05:20

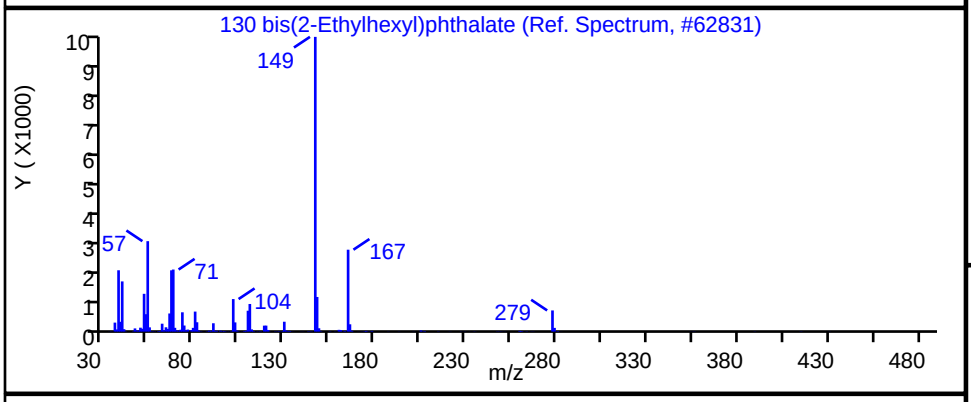
Shealy Environmental Services

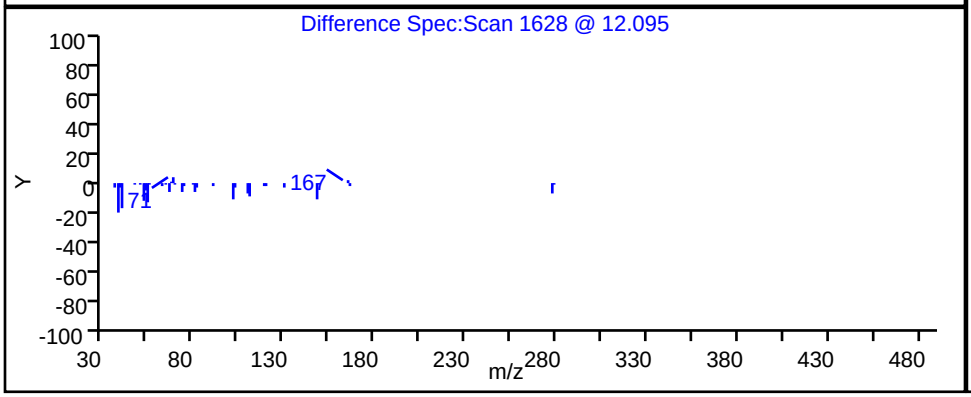
Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120810.d		
Injection Date:	08-Dec-2019 16:00:30	Inst. ID:	msd11.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04029-006
Sample Info:	11120819.b, UL04029-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

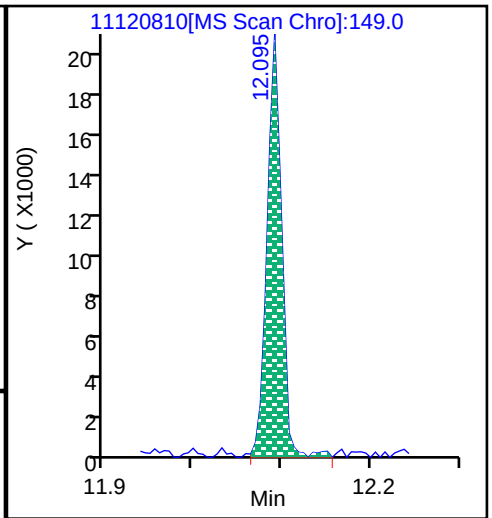
130 bis(2-Ethylhexyl)phthalate

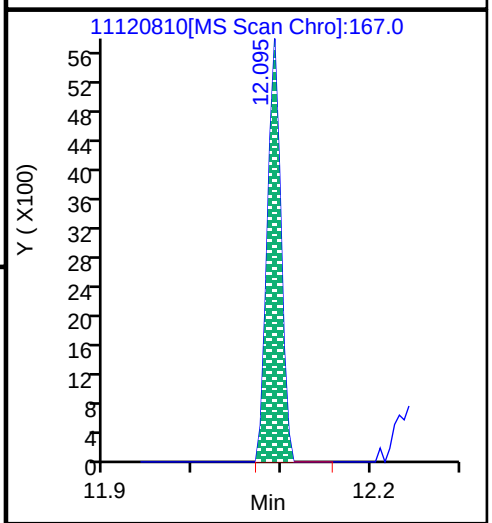


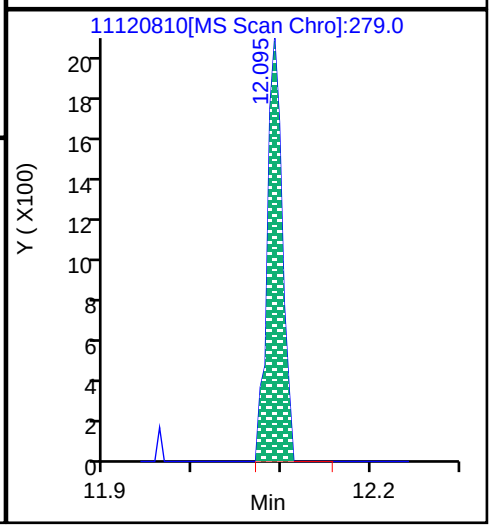












Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1651	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	0.50	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	0.50	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	0.50	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	1.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	1.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	1.0	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	0.50	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	0.50	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	0.50	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	0.50	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	0.20	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	1.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	0.50	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	1.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	1.8	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	1.5	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	1.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	1.0	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	0.50	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	0.50	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	0.50	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	0.50	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	1.5	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	2.0	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	0.20	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	0.20	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	0.50	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	0.20	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	0.50	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	0.50	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	0.20	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	0.20	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	0.20	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	0.20	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	0.50	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	0.50	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	3.0	J	4.0	0.50	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	0.50	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	2.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	0.50	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	0.20	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	0.20	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Semivolatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04029-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1651	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	0.50	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	0.50	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	0.50	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	0.50	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	0.50	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	0.20	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	0.20	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	0.50	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	0.50	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	2.0	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	1.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	0.20	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	0.50	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	0.20	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	1.5	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	0.50	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	0.50	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	2.0	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	0.20	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	0.50	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	0.20	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		80	37-129
2-Fluorophenol		50	24-127
Nitrobenzene-d5		90	38-127
Phenol-d5		63	28-128
Terphenyl-d14		106	10-148
2,4,6-Tribromophenol		79	35-144

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120812.d		
Lab Sample ID:	UL04029-007	Client Sample ID:	MPGI-FB-120319
Injection Date:	08-Dec-2019 16:51:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120819.b, UL04029-007		
Misc. Info:	37996		
Method:	\\Organics\HH\chem\msd11.i\11120819.b\8270DLVI-11.m		
Method Date:	09-Dec-2019 12:31:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	Client	ALS Bottle:	8
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	jcg	Review Date:	09-Dec-2019 08:51:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.735	5.740	-0.005	302557	20.000	80.000	
* 41 Naphthalene-d8	136.0	6.762	6.762	0.000	1596411	20.000	80.000	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	767024	20.000	80.000	
* 102 Phenanthrene-d10	188.0	9.490	9.495	-0.005	1116706	20.000	80.000	
* 128 Chrysene-d12	240.0	12.239	12.244	-0.005	1098445	20.000	80.000	
* 136 Perylene-d12	264.0	14.389	14.394	-0.005	1231092	20.000	80.000	
$ 6 2-Fluorophenol	112.0	4.751	4.761	-0.010	114785	4.9525	19.810	e
$ 9 Phenol-d5	99.0	5.403	5.409	-0.006	189009	6.3380	25.352	
199 Benzaldhyde	77.0		5.409		ND			
10 Phenol	94.0		5.419		ND			
12 bis(2-Chloroethyl)ether	63.0		5.500		ND			
13 2-Chlorophenol	128.0		5.580		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.906		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.034		ND			
28 Hexachloroethane	117.0		6.147		ND			
$ 29 Nitrobenzene-d5	82.0	6.163	6.168	-0.005	298149	9.0099	36.040	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.361		ND			
34 2,4-Dimethylphenol	107.0		6.430		ND			
33 2-Nitrophenol	139.0		6.441		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.345		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	427665	8.0293	32.117	
184 Biphenyl	154.0		7.725		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.832		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.019		ND			
64 Acenaphthylene	152.0		8.115		ND			
66 3-Nitroaniline	138.0		8.174		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.404		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.661		ND			
83 4-Nitroaniline	138.0		8.687		ND			
79 Fluorene	166.0		8.693		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.709		ND			
86 n-Nitrosodiphenylamine	169.0		8.757		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	73851	7.9381	31.752	
94 4-Bromophenylphenylether	248.0		9.078		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.324		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.559		ND			
106 Carbazole	167.0		9.677		ND			
109 Di-n-butylphthalate	149.0		9.891		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.811		ND			
$ 117 Terphenyl-d14	244.0	10.902	10.907	-0.005	550668	10.619	42.476	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0	12.095	12.100	-0.006	8322	0.75996	3.0398	e
125 3,3'-Dichlorobenzidine	252.0		12.137		ND			
127 Benzo(a)Anthracene	228.0		12.223		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.288		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.855		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

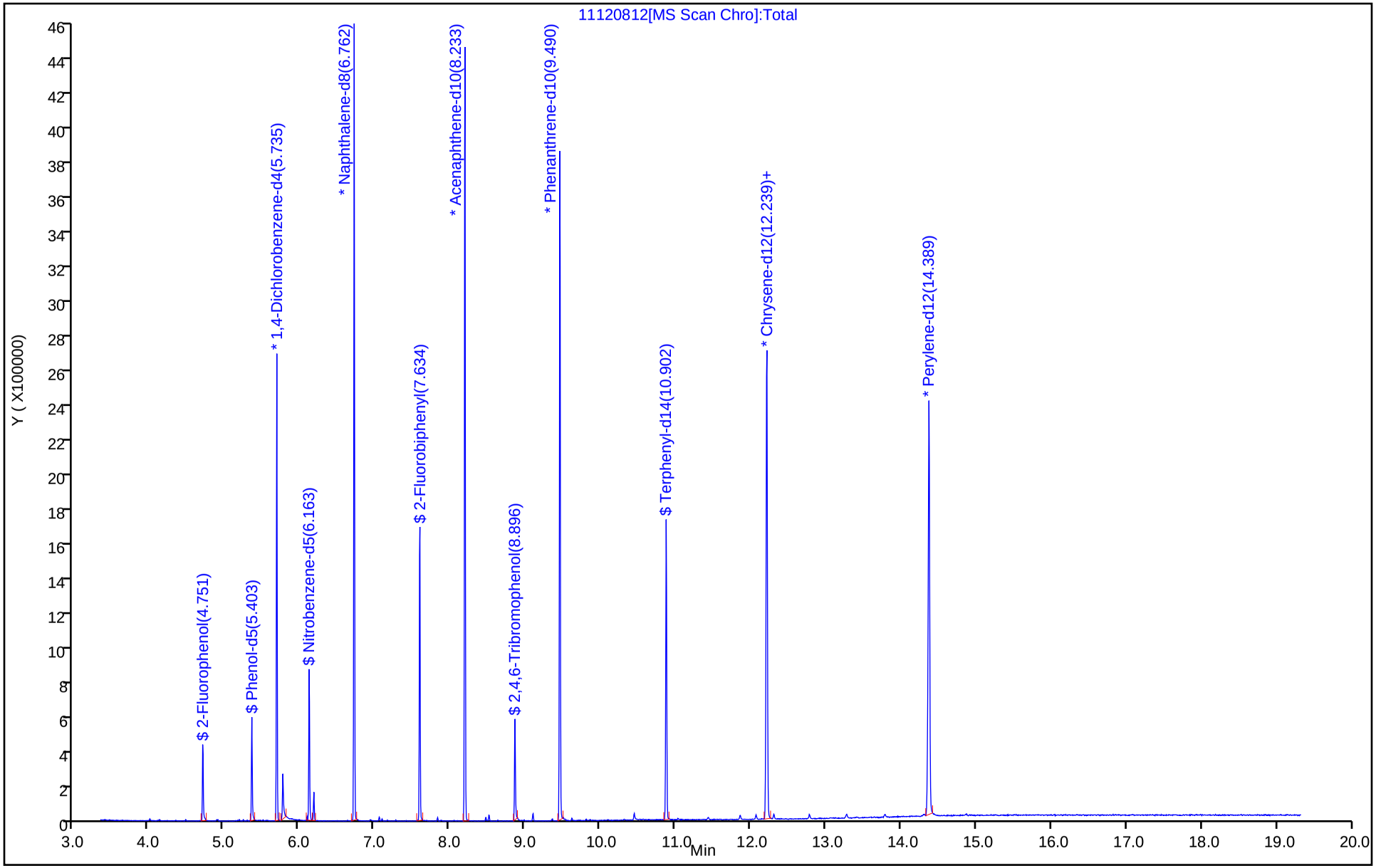
e - Compound Concentration Below Quantitation Limit

Review Flags

Report Date: 09-Dec-2019 12:32:17 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120812.d				
Injection Date:	08-Dec-2019 16:51:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	MPGI-FB-120319	Lab ID:	UL04029-007		
Sample Info:	11120819.b, UL04029-007				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		

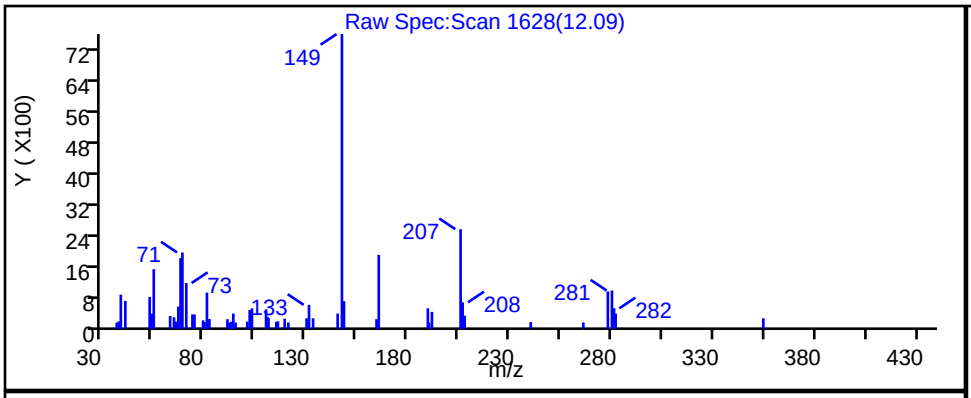


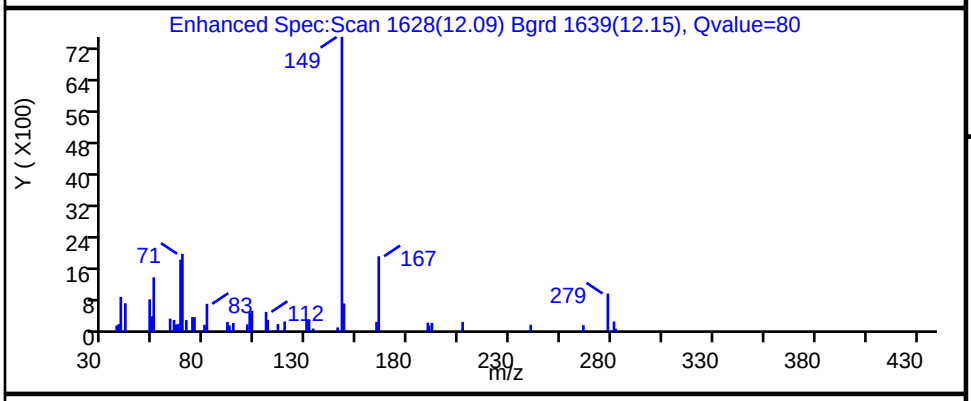
Report Date: 09-Dec-2019 12:32:17 AIM Revision: 1.0 27-Jun-2017 12:05:20

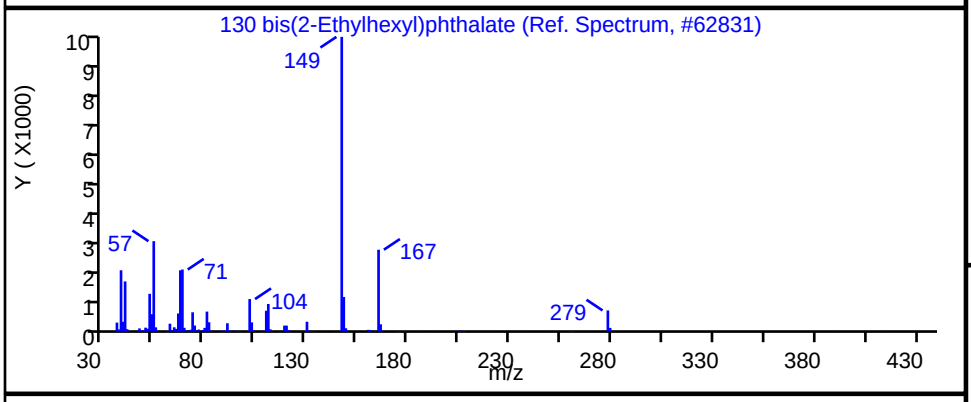
Shealy Environmental Services

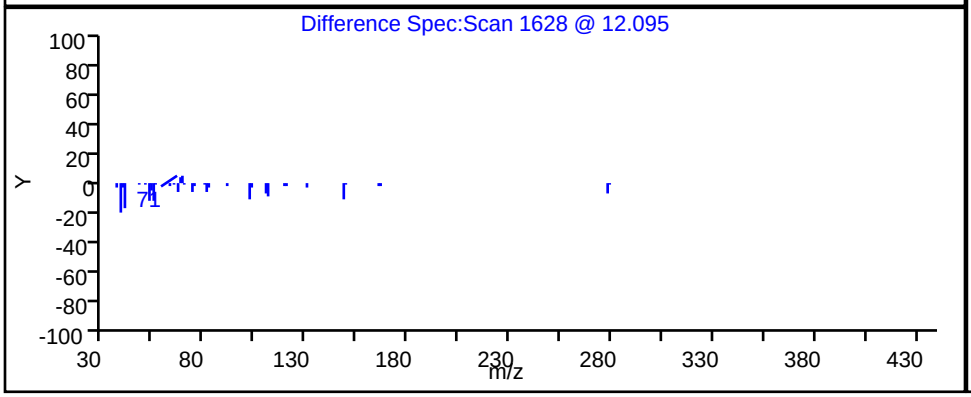
Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120812.d		
Injection Date:	08-Dec-2019 16:51:30	Inst. ID:	msd11.i
Client ID:	MPGI-FB-120319	Lab ID:	UL04029-007
Sample Info:	11120819.b, UL04029-007		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

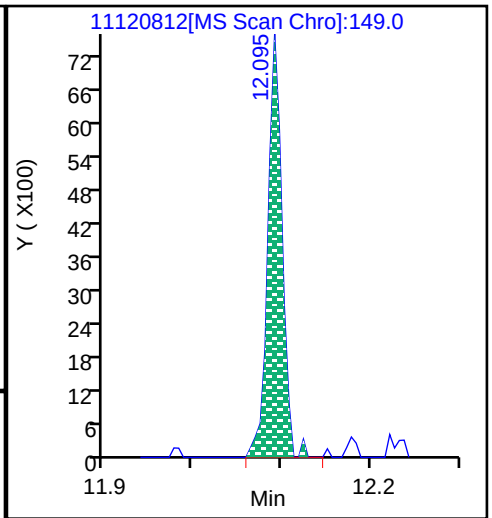
130 bis(2-Ethylhexyl)phthalate

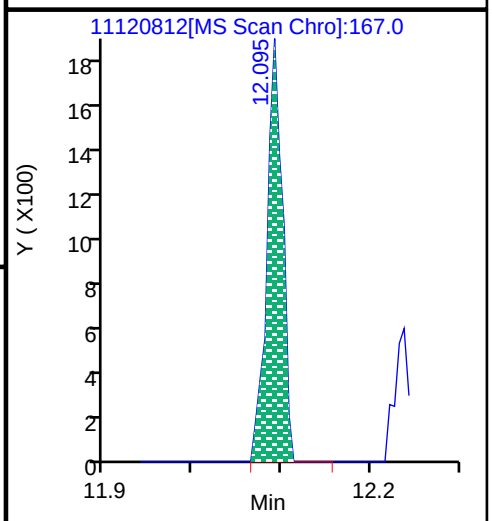


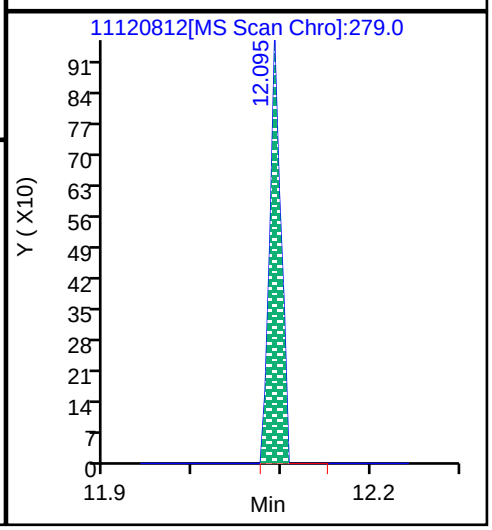












CALIBRATION DATA

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Form 6

Batch: \\Organics\hh\chem\msd11.i\11120719B.b
Method: 8270DLVI-11.M Instrument: msd11
Cal Start Date: 07-Dec-2019 19:53:30 Cal End Date: 08-Dec-2019 03:00:30
Last Modified: 08-Dec-2019 13:04:30
No.Compounds: 178 Integrator: falcon

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
S 214 Total PAHs	70.5619										70.5619		Avg	0.0		
193 1,4-Dioxane		0.071861	0.068223	0.074713	0.072186	0.060107	0.057321	0.060685	0.062797		0.065987		Avg	10.0		
		8.9	3.4	13.2	9.4	-8.9	-13.1	-8	-4.8							
2 N-Nitrosodimethylamine		0.302396	0.294839	0.319033	0.310489	0.309131	0.298079	0.304890	0.299445		0.304788		Avg	2.6		
		-0.8	-3.3	4.7	1.9	1.4	-2.2	0	-1.8							
1 pyridine		0.421160	0.454332	0.465648	0.457788	0.493742	0.501232	0.597229	0.562418		0.494194		Avg	11.9		
		-14.8	-8.1	-5.8	-7.4	-0.1	1.4	20.8	13.8							
$ 6 2-Fluorophenol	1.607833	1.346365	1.536501	1.570813	1.556360	1.567163	1.523863	1.540893	1.538976		1.532085		Avg	4.8		
	4.9	-12.1	0.3	2.5	1.6	2.3	-0.5	0.6	0.4							
199 Benzaldhyde		1.330603	1.321180	1.305101	1.315811	1.275953	1.287701	1.228860	1.221233		1.285805		Avg	3.2		
		3.5	2.8	1.5	2.3	-0.8	0.1	-4.4	-5							
$ 9 Phenol-d5	1.809687	1.817848	2.070266	2.078438	2.055013	2.009704	1.960139	1.979302	1.961385		1.971309		Avg	5.1		
	-8.2	-7.8	5	5.4	4.2	1.9	-0.6	0.4	-0.5							
10 Phenol		2.168576	2.189349	2.240065	2.254481	2.181994	2.145361	2.120526	2.092353		2.174088		Avg	2.6		
		-0.3	0.7	3	3.7	0.4	-1.3	-2.5	-3.8							
11 Aniline		0.339602	0.350413	0.341237	* 0.044717	0.138131	0.091519	0.072281	0.068750		0.180831		Avg	*76.0		Cf
		*87.8	*93.8	*88.7	*-75.3	-23.6	*-49.4	*-60	*-62							
12 bis(2-Chloroethyl)ethe		1.074897	1.036521	1.009519	0.936600	0.889734	0.818162	0.811035	0.788709		0.920647		Avg	12.1		
		16.8	12.6	9.7	1.7	-3.4	-11.1	-11.9	-14.3							
201 n-Decane		0.430755	0.438043	0.425251	0.434393	0.423642	0.425328	0.433187	0.438897		0.431187		Avg	1.4		
		-0.1	1.6	-1.4	0.7	-1.7	-1.4	0.5	1.8							
13 2-Chlorophenol		1.540715	1.567300	1.638835	1.592486	1.569838	1.542341	1.583187	1.576816		1.576440		Avg	2.0		
		-2.3	-0.6	4	1	-0.4	-2.2	0.4	0							
14 1,3-Dichlorobenzene		1.430168	1.457645	1.431200	1.487943	1.525018	1.515172	1.574517	1.550254		1.496490		Avg	3.6		
		-4.4	-2.6	-4.4	-0.6	1.9	1.2	5.2	3.6							
17 1,4-Dichlorobenzene		1.515349	1.511464	1.571033	1.593912	1.612036	1.570143	1.610670	1.586694		1.571413		Avg	2.5		
		-3.6	-3.8	0	1.4	2.6	-0.1	2.5	1							
18 Benzyl alcohol		0.879731	1.106787	1.233367	1.279363	1.242345	1.191533	1.206192	1.185168		1.165561		Avg	10.8		
		-24.5	-5	5.8	9.8	6.6	2.2	3.5	1.7							
19 1,2-Dichlorobenzene		1.420165	1.458641	1.493890	1.501524	1.520191	1.492827	1.520414	1.494076		1.487716		Avg	2.2		
		-4.5	-2	0.4	0.9	2.2	0.3	2.2	0.4							

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
20 o-Cresol		1.517034	1.535270	1.549910	1.446581	1.494811	1.461550	1.500010	1.496124		1.500161		Avg	2.3		
		1.1	2.3	3.3	-3.6	-0.4	-2.6	0	-0.3							
21 bis(2Chloro1methylethy		0.257585	0.270379	0.241680	0.215814	0.196791	0.172158	0.166201	0.160967		0.210197		Avg	20.4		
		22.5	28.6	15	2.7	-6.4	-18.1	-20.9	-23.4							
23 m+p-Cresol		1.497384	1.556196	1.646816	1.573914	1.623215	1.545087	1.596218	1.599202		1.579754		Avg	3.0		
		-5.2	-1.5	4.2	-0.4	2.8	-2.2	1	1.2							
26 n-Nitroso-di-n-propyla		1.415725	1.380151	1.330143	1.267356	1.189390	1.125468	1.106797	1.095798		1.238853		Avg	10.3		
		14.3	11.4	7.4	2.3	-4	-9.2	-10.7	-11.5							
24 Acetophenone		2.303672	2.344075	2.292014	2.227677	2.167096	2.092968	2.104035	2.043014		2.196819		Avg	5.1		
		4.9	6.7	4.3	1.4	-1.4	-4.7	-4.2	-7							
28 Hexachloroethane		0.598566	0.591879	0.606482	0.623440	0.645235	0.629068	0.653925	0.641528		0.623765		Avg	3.7		
		-4	-5.1	-2.8	-0.1	3.4	0.9	4.8	2.8							
$ 29 Nitrobenzene-d5	0.257702	0.311865	0.347293	0.365833	0.385171	0.416981	0.417357	0.433837	0.430146	0.006821	0.420942		WLn	13.7	0.997	
	29.4	-12.3	-10.7	-10.4	-7.1	0	-0.2	3.6	2.6							
30 Nitrobenzene		0.301282	0.344837	0.388605	0.418574	0.440729	0.426687	0.442007	0.437127		0.399981		Avg	12.9		
		-24.7	-13.8	-2.8	4.6	10.2	6.7	10.5	9.3							
32 Isophorone		0.682148	0.719683	0.740404	0.735595	0.755836	0.731249	0.736087	0.729813		0.728852		Avg	2.9		
		-6.4	-1.3	1.6	0.9	3.7	0.3	1	0.1							
34 2,4-Dimethylphenol		0.236940	0.217333	0.231518	0.237625	0.269633	0.283192	0.318575	0.324401		0.264902		Avg	15.4		
		-10.6	-18	-12.6	-10.3	1.8	6.9	20.3	22.5							
33 2-Nitrophenol			0.096612	0.128682	0.154397	0.176666	0.185021	0.198031	0.202406	0.064793	0.201477		WLn	9.2	0.994	
			12.7	-10.2	-10.4	-3.7	-1.7	3.5	4.8							
35 bis(2-Chloroethoxy)met		0.434829	0.466581	0.447439	0.457978	0.469658	0.455283	0.457577	0.452361		0.455213		Avg	2.4		
		-4.5	2.5	-1.7	0.6	3.2	0	0.5	-0.6							
36 Benzoic acid			0.090028	0.138109	0.179423	0.208417	0.220717	0.233569	0.237218	0.148205	0.239402		WLn	9.4	0.994	
			11.7	-12.7	-10.2	-3.1	-0.4	3.5	4							
38 2,4-Dichlorophenol		0.207477	0.213507	0.239457	0.249098	0.265288	0.263179	0.278409	0.280520		0.249617		Avg	11.1		
		-16.9	-14.5	-4.1	-0.2	6.3	5.4	11.5	12.4							
40 1,2,4-Trichlorobenzene		0.267511	0.279528	0.273466	0.282215	0.296645	0.289839	0.300779	0.297334		0.285915		Avg	4.2		
		-6.4	-2.2	-4.4	-1.3	3.8	1.4	5.2	4							
43 Naphthalene	1.153619	1.027818	1.017662	1.022565	1.028451	1.076318	1.066514	1.063507	1.064445		1.057878		Avg	4.0		
	9.1	-2.8	-3.8	-3.3	-2.8	1.7	0.8	0.5	0.6							
44 4-Chloroaniline		0.329953	0.356894	0.373805	0.393931	0.411900	0.395315	0.415905	0.399393		0.384637		Avg	7.6		
		-14.2	-7.2	-2.8	2.4	7.1	2.8	8.1	3.8							
45 2,6-Dichlorophenol		0.217358	0.213403	0.232655	0.241492	0.251566	0.252648	0.267763	0.269052		0.243242		Avg	8.7		
		-10.6	-12.3	-4.4	-0.7	3.4	3.9	10.1	10.6							
47 Hexachlorobutadiene		0.168765	0.162610	0.170013	0.170579	0.178572	0.173123	0.176574	0.175388		0.171953		Avg	3.0		
		-1.9	-5.4	-1.1	-0.8	3.8	0.7	2.7	2							
196 Caprolactam		0.076514	0.079716	0.088749	0.096960	0.101462	0.101011	0.105793	0.101437		0.093955		Avg	11.7		
		-18.6	-15.2	-5.5	3.2	8	7.5	12.6	8							
49 4-Chloro-3-methylpheno		0.227850	0.270010	0.284602	0.294912	0.307450	0.306860	0.312252	0.314756		0.289837		Avg	10.1		
		-21.4	-6.8	-1.8	1.8	6.1	5.9	7.7	8.6							

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
51 2-Methylnaphthalene	0.756793	0.638202	0.669455	0.651682	0.663348	0.706930	0.683811	0.716024	0.712302		0.688728		Avg	5.4		
	9.9	-7.3	-2.8	-5.4	-3.7	2.6	-0.7	4	3.4							
204 1-Methylnaphthalene	0.711416	0.615307	0.629462	0.628008	0.640557	0.660793	0.648685	0.677891	0.675264		0.654154		Avg	4.6		
	8.8	-5.9	-3.8	-4	-2.1	1	-0.8	3.6	3.2							
53 Hexachlorocyclopentadi		0.259557	0.310737	0.371006	0.398960	0.389273	0.363595	0.348323	0.327165		0.346077		Avg	13.2		
		-25	-10.2	7.2	15.3	12.5	5.1	0.6	-5.5							
52 1,2,4,5-Tetrachloroben		0.525374	0.528904	0.545502	0.567137	0.559695	0.562619	0.590058	0.571305		0.556324		Avg	3.9		
		-5.6	-4.9	-1.9	1.9	0.6	1.1	6.1	2.7							
54 2,4,6-Trichlorophenol		0.262641	0.276678	0.321021	0.343836	0.350563	0.358530	0.384271	0.382525		0.335008		Avg	13.5		
		-21.6	-17.4	-4.2	2.6	4.6	7	14.7	14.2							
55 2,4,5-Trichlorophenol		0.255301	0.289166	0.331268	0.355794	0.356765	0.369326	0.392175	0.387116		0.342114		Avg	14.0		
		-25.4	-15.5	-3.2	4	4.3	8	14.6	13.2							
$ 56 2-Fluorobiphenyl	1.348652	1.292042	1.328947	1.348802	1.392019	1.403223	1.432740	1.483131	1.469884		1.388827		Avg	4.7		
	-2.9	-7	-4.3	-2.9	0.2	1	3.2	6.8	5.8							
184 Biphenyl		1.457790	1.515955	1.489558	1.588216	1.611363	1.622217	1.666936	1.663375		1.576926		Avg	5.1		
		-7.6	-3.9	-5.5	0.7	2.2	2.9	5.7	5.5							
58 2-Chloronaphthalene		1.141065	1.152706	1.148344	1.180201	1.180841	1.190076	1.266605	1.232516		1.186544		Avg	3.7		
		-3.8	-2.9	-3.2	-0.5	-0.5	0.3	6.7	3.9							
60 2-Nitroaniline		0.229467	0.240125	0.290338	0.346152	0.359976	0.367784	0.374270	0.382100		0.323776		Avg	19.1		
		-29.1	-25.8	-10.3	6.9	11.2	13.6	15.6	18							
62 Dimethylphthalate		1.170561	1.194155	1.192454	1.247873	1.239678	1.267325	1.307178	1.292664		1.238986		Avg	4.0		
		-5.5	-3.6	-3.8	0.7	0.1	2.3	5.5	4.3							
65 2,6-Dinitrotoluene		0.116920	0.146431	0.208256	0.251348	0.268889	0.281658	0.306603	0.310641	0.040725	0.301356		WLn	12.3	0.993	
		20.2	-10.7	-14.6	-8.4	-5.3	-2.5	5	5.8							
64 Acenaphthylene	1.820562	1.681164	1.721492	1.759618	1.789269	1.842371	1.864735	1.920229	1.907524		1.811885		Avg	4.5		
	0.5	-7.2	-5	-2.9	-1.2	1.7	2.9	6	5.3							
66 3-Nitroaniline			0.205875	0.240397	0.278314	0.291814	0.292985	0.307881	0.310438		0.275386		Avg	14.0		
			-25.2	-12.7	1.1	6	6.4	11.8	12.7							
68 Acenaphthene	1.313173	1.129350	1.157491	1.206383	1.268311	1.292668	1.319377	1.355339	1.344500		1.265177		Avg	6.5		
	3.8	-10.7	-8.5	-4.6	0.2	2.2	4.3	7.1	6.3							
70 4-Nitrophenol			0.089831	0.133669	0.158878	0.165484	0.170181	0.185325	0.185245	0.116088	0.187164		WLn	5	0.998	
			6	-5.4	-3.5	-3.8	-3.3	3.7	2.8							
73 2,4-Dinitrotoluene		0.109140	0.169256	0.239481	0.297262	0.323790	0.339745	0.363625	0.369839	0.043010	0.360127		WLn	11.4	0.993	
		16.3	-10	-16.3	-8.9	-4.4	-1.4	4.4	5.6							
71 Dibenzofuran	1.740652	1.487425	1.527391	1.564537	1.604991	1.609612	1.642957	1.706711	1.680120		1.618266		Avg	5.2		
	7.6	-8.1	-5.6	-3.3	-0.8	-0.5	1.5	5.5	3.8							
76 2,3,4,6-Tetrachlorophe		0.200801	0.215586	0.252352	0.270304	0.276932	0.296307	0.326061	0.329759		0.271013		Avg	17.4		
		-25.9	-20.5	-6.9	-0.3	2.2	9.3	20.3	21.7							
78 Diethylphthalate		1.171441	1.185913	1.243720	1.276188	1.294120	1.298371	1.359693	1.348860		1.272288		Avg	5.4		
		-7.9	-6.8	-2.2	0.3	1.7	2.1	6.9	6							
80 4-Chlorophenylphenylet		0.569271	0.605068	0.572301	0.602538	0.588575	0.612332	0.641054	0.637747		0.603611		Avg	4.4		
		-5.7	0.2	-5.2	-0.2	-2.5	1.4	6.2	5.7							

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
83 4-Nitroaniline		0.170214	0.170482	0.222783	0.275262	0.293969	0.296729	0.303128	0.309308	0.033167	0.307281		WLn	11.7	0.996	
		21.7	-11.4	-14.2	-3.8	0.1	-0.1	1.3	2.9							
79 Fluorene	1.379926	1.213046	1.214910	1.255325	1.303717	1.306089	1.336670	1.411028	1.381790		1.311389		Avg	5.6		
	5.2	-7.5	-7.4	-4.3	-0.6	-0.4	1.9	7.6	5.4							
84 4,6-Dinitro-2-methylph				0.062264	0.087136	0.102957	0.113455	0.124250	0.131701	0.155062	0.139463		WLn	6.2	0.994	
				6.7	-6.5	-5.5	-3.1	1.5	4.8							
86 n-Nitrosodiphenylamine		0.514315	0.550905	0.533048	0.545412	0.567175	0.574172	0.599611	0.598311		0.560369		Avg	5.4		
		-8.2	-1.7	-4.9	-2.7	1.2	2.5	7	6.8							
87 Azobenzene		1.082534	1.125333	1.123591	1.112182	1.058552	1.035214	1.031858	0.996252		1.070690		Avg	4.5		
		1.1	5.1	4.9	3.9	-1.1	-3.3	-3.6	-7							
$ 88 2,4,6-Tribromophenol		0.099368	0.106188	0.132575	0.155868	0.169669	0.178254	0.188333		0.033025	0.181743		WLn	12.6	0.993	
		20.7	-8.5	-13.8	-7.6	-2.2	1.4	6.3								
94 4-Bromophenylphenyleth		0.241582	0.239740	0.241589	0.246553	0.252976	0.258188	0.268922	0.267443		0.252124		Avg	4.6		
		-4.2	-4.9	-4.2	-2.2	0.3	2.4	6.7	6.1							
96 Hexachlorobenzene		0.292201	0.291270	0.306866	0.329060	0.338434	0.344543	0.362949	0.362887		0.328526		Avg	8.8		
		-11.1	-11.3	-6.6	0.2	3	4.9	10.5	10.5							
200 Atrazine		0.170749	0.170099	0.190697	0.200377	0.216412	0.214095	0.217026	0.209814		0.198659		Avg	9.8		
		-14	-14.4	-4	0.9	8.9	7.8	9.2	5.6							
202 Octadecane		0.213930	0.222268	0.202953	0.190895	0.172045	0.161462	0.164782	0.172936		0.187659		Avg	12.4		
		14	18.4	8.1	1.7	-8.3	-14	-12.2	-7.8							
99 Pentachlorophenol			0.095978	0.116538	0.147933	0.157371	0.169028	0.183857		0.118027	0.179946		WLn	9.9	0.992	
			12.4	-11.6	-6	-4.7	-0.2	6.9								
103 Phenanthrene	1.191631	1.024599	1.055406	1.059910	1.129184	1.139033	1.172408	1.198559	1.200280		1.130112		Avg	6.0		
	5.4	-9.3	-6.6	-6.2	-0.1	0.8	3.7	6.1	6.2							
104 Anthracene	1.072328	0.953872	0.963311	0.986498	1.005305	1.057491	1.070928	1.121739	1.112752		1.038247		Avg	6.1		
	3.3	-8.1	-7.2	-5	-3.2	1.9	3.1	8	7.2							
106 Carbazole		0.896043	0.908230	0.955552	1.003512	1.004347	0.987341	1.032152	1.045394		0.979071		Avg	5.6		
		-8.5	-7.2	-2.4	2.5	2.6	0.8	5.4	6.8							
109 Di-n-butylphthalate		1.081773	1.167347	1.221042	1.283047	1.330677	1.369789	1.405635	1.426085		1.285674		Avg	9.4		
		-15.9	-9.2	-5	-0.2	3.5	6.5	9.3	10.9							
114 Fluoranthene	1.173309	1.048600	1.062006	1.104894	1.135146	1.171510	1.183655	1.246935	1.254650		1.153412		Avg	6.3		
	1.7	-9.1	-7.9	-4.2	-1.6	1.6	2.6	8.1	8.8							
115 Benzidine		0.398066	0.474655	0.621198	0.692947	0.746403	0.732011	0.730406	0.678175	0.132021	0.731177		WLn	6.1	0.997	
		7.3	-8.7	-4.5	0.1	5.6	2.8	2	-5.5							
116 Pyrene	1.107054	1.098901	1.087707	1.164848	1.236198	1.218986	1.238854	1.243548	1.218314		1.179379		Avg	5.6		
	-6.1	-6.8	-7.8	-1.2	4.8	3.4	5	5.4	3.3							
$ 117 Terphenyl-d14	0.934112	0.861139	0.873961	0.919135	1.005765	0.964145	0.974038	0.998101	0.967273		0.944185		Avg	5.4		
	-1.1	-8.8	-7.4	-2.7	6.5	2.1	3.2	5.7	2.4							
122 Butylbenzylphthalate		0.374496	0.421717	0.496156	0.547345	0.560398	0.576775	0.603987	0.601772		0.522831		Avg	16.3		
		-28.4	-19.3	-5.1	4.7	7.2	10.3	15.5	15.1							
130 bis(2-Ethylhexyl)phtha		0.472778	0.528882	0.652617	0.742530	0.760337	0.782764	0.833162	0.833825	0.028782	0.822033		WLn	8.3	0.997	
		15.1	-6.9	-9.1	-3.9	-3.7	-1.9	3.7	3.4							

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	Level 8 / %Drift	Level 9 / %Drift	B	M1	M2	Curve	RSD/RSE	R^2	Flags
125 3,3'-Dichlorobenzidine		0.325190	0.285114	0.311774	0.386489	0.424078	0.456062	0.474251	0.479709		0.392833		Avg	19.7		
		-17.2	-27.4	-20.6	-1.6	8	16.1	20.7	22.1							
127 Benzo(a)Anthracene	1.385756	1.098487	1.110421	1.114229	1.159417	1.154694	1.153239	1.186660	1.175408		1.170923		Avg	7.3		
	18.3	-6.2	-5.2	-4.8	-1	-1.4	-1.5	1.3	0.4							
129 Chrysene	1.098083	1.050864	1.023040	1.057267	1.130929	1.083957	1.085088	1.129798	1.111110		1.085571		Avg	3.4		
	1.2	-3.2	-5.8	-2.6	4.2	-0.1	0	4.1	2.4							
131 Di-n-octylphthalate		0.656575	0.795803	0.975460	1.089081	1.195865	1.245777	1.351723	1.384121	0.034826	1.328631		WLn	11.3	0.993	
		19.1	-5.3	-12.7	-11.1	-5.3	-2.8	4.5	6.5							
132 Benzo(b)fluoranthene	0.929528	0.903126	0.965403	1.065252	1.133328	1.172788	1.176798	1.257834	1.279015		1.098119		Avg	12.7		
	-15.4	-17.8	-12.1	-3	3.2	6.8	7.2	14.5	16.5							
134 Benzo(k)fluoranthene	1.083413	0.954272	0.983351	1.072907	1.097979	1.183129	1.221306	1.271526	1.224709		1.121399		Avg	9.9		
	-3.4	-14.9	-12.3	-4.3	-2.1	5.5	8.9	13.4	9.2							
135 Benzo(a)pyrene	0.832868	0.814280	0.856462	0.923414	0.907860	1.017699	1.008163	1.078972	1.074594		0.946035		Avg	10.8		
	-12	-13.9	-9.5	-2.4	-4	7.6	6.6	14.1	13.6							
138 Indeno(1,2,3-c,d)pyren	1.166016	1.173790	1.215792	1.351090	1.437304	1.535569	1.573070	1.635947	1.615015		1.411510		Avg	13.6		
	-17.4	-16.8	-13.9	-4.3	1.8	8.8	11.4	15.9	14.4							
139 Dibenzo(a,h)anthracene	1.033279	0.978329	1.029423	1.151788	1.226373	1.328346	1.376880	1.448954	1.436342		1.223301		Avg	15.0		
	-15.5	-20	-15.8	-5.8	0.3	8.6	12.6	18.4	17.4							
140 Benzo(g,h,i)perylene	1.001184	0.943956	0.939155	1.052880	1.095671	1.135036	1.143870	1.165219	1.149524		1.069611		Avg	8.3		
	-6.4	-11.7	-12.2	-1.6	2.4	6.1	6.9	8.9	7.5							

QC Flag Legend

C - Fails Curve Fit Error Test
f - Fails Minmum RF Test

Shealy Environmental Services
Initial Calibration RT Report

Batch: \\Organics\hh\chem\msd11.i\11120719B.b
Method: 8270DLVI-11.M Instrument: msd11
Cal Start Date: 07-Dec-2019 19:53:30 Cal End Date: 08-Dec-2019 03:00:30
Last Modified: 08-Dec-2019 13:04:30
No.Compounds: 178 Integrator: falcon

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Avg. RRT	%Rsd RT	Flags
S 214 Total PAHs										1.000	0.000	
193 1,4-Dioxane		3.659	3.659	3.654	3.654	3.654	3.654	3.654	3.648	3.654	0.094	
2 N-Nitrosodimethylamine		3.857	3.852	3.852	3.852	3.852	3.852	3.857	3.852	3.853	0.065	
1 pyridine		3.921	3.910	3.905	3.905	3.911	3.905	3.911	3.905	3.909	0.142	
$ 6 2-Fluorophenol	4.772	4.772	4.766	4.766	4.766	4.766	4.766	4.766	4.766	4.768	0.050	
199 Benzaldhyde		5.408	5.408	5.408	5.408	5.408	5.408	5.408	5.408	5.408	0.001	
$ 9 Phenol-d5	5.414	5.414	5.408	5.408	5.414	5.414	5.414	5.419	5.419	5.414	0.070	
10 Phenol		5.424	5.419	5.419	5.424	5.424	5.424	5.430	5.430	5.424	0.075	
11 Aniline		5.483	5.483	5.478	5.483	5.483	5.483	5.483	5.483	5.482	0.035	
12 bis(2-Chloroethyl)ethe		5.499	5.499	5.499	5.499	5.499	5.499	5.504	5.504	5.500	0.045	
201 n-Decane		5.558	5.558	5.558	5.558	5.558	5.558	5.563	5.563	5.559	0.044	
13 2-Chlorophenol		5.585	5.585	5.585	5.585	5.585	5.585	5.585	5.585	5.585	0.000	
14 1,3-Dichlorobenzene		5.702	5.702	5.702	5.702	5.702	5.702	5.702	5.702	5.702	0.000	
17 1,4-Dichlorobenzene		5.756	5.756	5.756	5.756	5.756	5.756	5.756	5.756	5.756	0.001	
18 Benzyl alcohol		5.820	5.820	5.820	5.820	5.820	5.825	5.825	5.825	5.822	0.047	
19 1,2-Dichlorobenzene		5.879	5.879	5.879	5.879	5.879	5.879	5.879	5.879	5.879	0.001	
20 o-Cresol		5.890	5.889	5.889	5.890	5.890	5.895	5.895	5.895	5.892	0.047	
21 bis(2Chloro1methylethy		5.906	5.906	5.905	5.911	5.911	5.911	5.911	5.911	5.909	0.047	
23 m+p-Cresol		6.002	6.002	6.002	6.002	6.007	6.007	6.013	6.013	6.006	0.079	
26 n-Nitroso-di-n-propyla		6.013	6.012	6.012	6.013	6.018	6.018	6.023	6.023	6.017	0.078	
24 Acetophenone		6.034	6.034	6.034	6.039	6.039	6.039	6.039	6.045	6.038	0.062	
28 Hexachloroethane		6.152	6.152	6.152	6.152	6.152	6.152	6.152	6.152	6.152	0.000	
$ 29 Nitrobenzene-d5	6.168	6.168	6.168	6.168	6.168	6.173	6.173	6.173	6.173	6.170	0.045	
30 Nitrobenzene		6.184	6.184	6.184	6.184	6.189	6.189	6.189	6.189	6.186	0.046	
32 Isophorone		6.360	6.360	6.360	6.360	6.366	6.366	6.366	6.371	6.364	0.062	
33 2-Nitrophenol			6.440	6.440	6.440	6.440	6.440	6.440	6.440	6.440	0.000	
34 2,4-Dimethylphenol		6.430	6.435	6.430	6.435	6.435	6.435	6.435	6.440	6.434	0.053	
35 bis(2-Chloroethoxy)met		6.505	6.505	6.505	6.505	6.505	6.510	6.510	6.510	6.507	0.042	
36 Benzoic acid			6.478	6.494	6.510	6.526	6.537	6.547	6.553	6.521	0.429	
38 2,4-Dichlorophenol		6.633	6.633	6.633	6.633	6.633	6.633	6.638	6.638	6.634	0.037	
40 1,2,4-Trichlorobenzene		6.703	6.702	6.708	6.708	6.708	6.708	6.708	6.708	6.707	0.036	
43 Naphthalene	6.783	6.783	6.783	6.783	6.783	6.783	6.783	6.783	6.788	6.783	0.026	
44 4-Chloroaniline		6.804	6.804	6.799	6.799	6.799	6.799	6.804	6.804	6.801	0.042	
45 2,6-Dichlorophenol		6.815	6.815	6.815	6.815	6.815	6.815	6.815	6.815	6.815	0.000	
47 Hexachlorobutadiene		6.858	6.858	6.858	6.858	6.858	6.858	6.863	6.863	6.859	0.036	
196 Caprolactam		7.066	7.066	7.066	7.072	7.072	7.082	7.082	7.088	7.074	0.120	
49 4-Chloro-3-methylpheno		7.184	7.178	7.178	7.179	7.179	7.179	7.179	7.179	7.179	0.026	
51 2-Methylnaphthalene	7.350	7.344	7.344	7.344	7.350	7.350	7.350	7.350	7.350	7.348	0.036	
204 1-Methylnaphthalene	7.435	7.430	7.435	7.435	7.435	7.435	7.435	7.435	7.435	7.435	0.023	
53 Hexachlorocyclopentadi		7.467	7.467	7.473	7.473	7.473	7.473	7.478	7.478	7.473	0.054	
52 1,2,4,5-Tetrachloroben		7.483	7.483	7.483	7.489	7.489	7.489	7.494	7.494	7.488	0.059	
54 2,4,6-Trichlorophenol		7.574	7.569	7.569	7.569	7.574	7.574	7.574	7.574	7.572	0.037	
55 2,4,5-Trichlorophenol		7.617	7.617	7.612	7.612	7.612	7.612	7.612	7.612	7.613	0.032	
$ 56 2-Fluorobiphenyl	7.633	7.633	7.633	7.633	7.633	7.633	7.633	7.633	7.638	7.634	0.023	
184 Biphenyl		7.724	7.724	7.724	7.724	7.724	7.729	7.730	7.729	7.726	0.035	
58 2-Chloronaphthalene		7.762	7.761	7.761	7.762	7.762	7.762	7.767	7.767	7.763	0.031	
60 2-Nitroaniline		7.837	7.831	7.831	7.831	7.831	7.831	7.831	7.836	7.832	0.031	
62 Dimethylphthalate		7.943	7.943	7.949	7.949	7.954	7.954	7.954	7.959	7.951	0.071	

Report Date: 08-Dec-2019 13:38:52 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Avg. RRT	%Rsd RT	Flags
65 2,6-Dinitrotoluene		8.013	8.013	8.013	8.018	8.018	8.018	8.024	8.024	8.018	0.055	
64 Acenaphthylene	8.115	8.115	8.114	8.114	8.120	8.120	8.120	8.120	8.120	8.118	0.034	
66 3-Nitroaniline			8.179	8.174	8.173	8.173	8.173	8.173	8.179	8.175	0.031	
68 Acenaphthene	8.259	8.259	8.259	8.259	8.259	8.259	8.259	8.264	8.264	8.260	0.028	
70 4-Nitrophenol			8.302	8.296	8.291	8.296	8.296	8.302	8.302	8.298	0.048	
73 2,4-Dinitrotoluene		8.361	8.361	8.361	8.361	8.361	8.366	8.366	8.366	8.363	0.033	
71 Dibenzofuran	8.403	8.398	8.398	8.398	8.403	8.403	8.403	8.403	8.403	8.402	0.032	
76 2,3,4,6-Tetrachlorophe		8.500	8.494	8.494	8.494	8.494	8.500	8.500	8.500	8.497	0.034	
78 Diethylphthalate		8.526	8.526	8.526	8.532	8.532	8.532	8.537	8.537	8.531	0.052	
80 4-Chlorophenylphenylet		8.660	8.660	8.660	8.660	8.665	8.665	8.666	8.665	8.663	0.033	
83 4-Nitroaniline		8.708	8.703	8.692	8.692	8.692	8.692	8.698	8.697	8.697	0.069	
79 Fluorene	8.692	8.692	8.692	8.692	8.692	8.692	8.692	8.698	8.698	8.693	0.027	
84 4,6-Dinitro-2-methylph				8.708	8.708	8.714	8.714	8.714	8.714	8.712	0.031	
86 n-Nitrosodiphenylamine		8.756	8.756	8.756	8.756	8.762	8.762	8.762	8.762	8.759	0.032	
87 Azobenzene		8.799	8.799	8.799	8.799	8.799	8.799	8.799	8.799	8.799	0.000	
$ 88 2,4,6-Tribromophenol		8.896	8.895	8.895	8.895	8.895	8.895	8.901		8.896	0.022	
94 4-Bromophenylphenyleth		9.077	9.077	9.077	9.077	9.083	9.083	9.083	9.083	9.080	0.031	
96 Hexachlorobenzene		9.163	9.163	9.163	9.163	9.163	9.163	9.163	9.168	9.164	0.020	
200 Atrazine		9.174	9.174	9.174	9.174	9.174	9.179	9.179	9.179	9.176	0.029	
202 Octadecane		9.281	9.280	9.280	9.281	9.286	9.286	9.286	9.286	9.283	0.031	
99 Pentachlorophenol			9.323	9.318	9.318	9.323	9.323	9.323		9.322	0.029	
103 Phenanthrene	9.511	9.511	9.510	9.510	9.511	9.516	9.516	9.516	9.516	9.513	0.029	
104 Anthracene	9.553	9.553	9.553	9.553	9.553	9.559	9.559	9.559	9.559	9.556	0.029	
106 Carbazole		9.676	9.676	9.676	9.676	9.676	9.676	9.676	9.682	9.677	0.019	
109 Di-n-butylphthalate		9.890	9.890	9.890	9.890	9.890	9.890	9.896	9.896	9.892	0.025	
114 Fluoranthene	10.570	10.570	10.570	10.570	10.570	10.570	10.575	10.575	10.575	10.571	0.025	
115 Benzidine		10.661	10.661	10.661	10.666	10.666	10.671	10.677	10.676	10.667	0.063	
116 Pyrene	10.810	10.810	10.805	10.810	10.810	10.810	10.810	10.816	10.816	10.811	0.029	
$ 117 Terphenyl-d14	10.907	10.901	10.906	10.901	10.907	10.907	10.907	10.907	10.907	10.905	0.021	
122 Butylbenzylphthalate		11.404	11.404	11.404	11.404	11.404	11.404	11.409	11.409	11.405	0.021	
130 bis(2-Ethylhexyl)phtha		12.094	12.094	12.094	12.099	12.099	12.099	12.099	12.099	12.097	0.023	
125 3,3'-Dichlorobenzidine		12.148	12.142	12.142	12.142	12.142	12.142	12.142	12.147	12.143	0.020	
127 Benzo(a)Anthracene	12.222	12.222	12.222	12.222	12.222	12.222	12.228	12.228	12.228	12.224	0.021	
129 Chrysene	12.271	12.271	12.270	12.276	12.276	12.281	12.281	12.287	12.286	12.278	0.053	
131 Di-n-octylphthalate		13.030	13.030	13.030	13.030	13.030	13.035	13.035	13.035	13.032	0.021	
132 Benzo(b)fluoranthene	13.795	13.790	13.789	13.789	13.795	13.795	13.800	13.800	13.805	13.795	0.040	
134 Benzo(k)fluoranthene	13.832	13.832	13.827	13.832	13.838	13.843	13.843	13.848	13.848	13.838	0.056	
135 Benzo(a)pyrene	14.303	14.303	14.298	14.303	14.303	14.308	14.308	14.314	14.319	14.307	0.045	
138 Indeno(1,2,3-c,d)pyren	16.287	16.271	16.271	16.276	16.282	16.293	16.303	16.309	16.319	16.290	0.105	
139 Dibenzo(a,h)anthracene	16.293	16.287	16.282	16.282	16.293	16.298	16.303	16.319	16.325	16.298	0.094	
140 Benzo(g,h,i)perylene	16.854	16.838	16.838	16.838	16.849	16.854	16.860	16.870	16.881	16.854	0.089	

Shealy Environmental Services
Form 6 Response

Batch: \\Organics\hh\chem\msd11.i\11120719B.b
Method: 8270DLVI-11.M Instrument: msd11
Cal Start Date: 07-Dec-2019 19:53:30 Cal End Date: 08-Dec-2019 03:00:30
Last Modified: 08-Dec-2019 13:04:30
No.Compounds: 178 Integrator: falcon

Internal Standards

* 16 1,4-Dichlorobenzene-d4
* 41 Naphthalene-d8
* 67 Acenaphthene-d10
* 102 Phenanthrene-d10
* 128 Chrysene-d12
* 136 Perylene-d12

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
S 214 Total PAHs	0.20000									#16
	292239									
193 1,4-Dioxane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		1408	2605	7470	15536	21480	27613	39220	48067	
2 N-Nitrosodimethylamine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		5925	11258	31898	66824	110472	143592	197046	229204	
1 pyridine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		8252	17348	46557	98526	176445	241456	385980	430492	
$ 6 2-Fluorophenol	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
	6659	26380	58669	157055	334963	560046	734083	995856	1177979	
199 Benzaldhyde		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		26511	50621	130667	278925	393968	528878	687839	820302	
$ 9 Phenol-d5	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
	7495	35618	79050	207809	442284	718194	944248	1279193	1501304	
10 Phenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		42490	83597	223969	485214	779764	1033474	1370464	1601551	
11 Aniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		6654	13380	34118	9624	49363	44087	46714	52623	
12 bis(2-Chloroethyl)ethe		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		21061	39578	100935	201577	317958	394129	524160	603702	
201 n-Decane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		8440	16726	42518	93491	151394	204891	279962	335945	
13 2-Chlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		30188	59845	163856	342738	561002	742984	1023190	1206943	
14 1,3-Dichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		28022	55658	143096	320238	544985	729896	1017587	1186612	
17 1,4-Dichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		29691	57713	157077	343045	576082	756377	1040952	1214504	
18 Benzyl alcohol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		17237	42261	123316	275347	443968	573991	779544	907164	
19 1,2-Dichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		27826	55696	149364	323161	543260	719132	982621	1143611	
20 o-Cresol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		29724	58622	154965	311336	534190	704065	969434	1145179	
21 bis(2Chloro1methylethy		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		5047	10324	24164	46448	70326	82933	107413	123209	
23 m+p-Cresol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		29339	59421	164654	338741	580077	744307	1031612	1224078	

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
26 n-Nitroso-di-n-propyla		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		27739	52699	132992	272763	425044	542166	715306	838757	
24 Acetophenone		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		45137	89505	229163	479445	774440	1008235	1359806	1563785	
28 Hexachloroethane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#16
		11728	22600	60638	134178	230583	303038	422622	491045	
$ 29 Nitrobenzene-d5	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
	4992	27584	60100	162482	352954	593550	788796	1074191	1252149	
30 Nitrobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		26648	59675	172596	383563	627354	806428	1094421	1272472	
32 Isophorone		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		60335	124543	328845	674068	1075893	1382044	1822570	2124478	
33 2-Nitrophenol			2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
			16719	57153	141483	251475	349686	490329	589201	
34 2,4-Dimethylphenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		20957	37610	102827	217749	383808	535226	788799	944328	
35 bis(2-Chloroethoxy)met		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		38460	80743	198727	419671	668534	860475	1132972	1316817	
36 Benzoic acid			4.0000	10.000	20.000	30.000	40.000	50.000	60.000	#41
			31159	122680	328831	593342	834301	1156644	1381077	
38 2,4-Dichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		18351	36948	106353	228263	377624	497402	689348	816591	
40 1,2,4-Trichlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		23661	48373	121458	258610	422258	547789	744737	865537	
43 Naphthalene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
	22347	90909	176109	454165	942428	1532082	2015686	2633271	3098586	
44 4-Chloroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		30682	68360	176300	403957	604293	774067	1045102	1268007	
45 2,6-Dichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		19225	36930	103332	221293	358091	477499	662988	783208	
47 Hexachlorobutadiene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		14927	28140	75510	156311	254188	327199	437202	510551	
196 Caprolactam		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		7115	15269	41857	99428	148853	197790	265841	322047	
49 4-Chloro-3-methylpheno		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
		20153	46726	126404	270245	437639	579959	773143	916251	
51 2-Methylnaphthalene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
	14660	56448	115851	289440	607864	1006278	1292387	1772893	2073503	
204 1-Methylnaphthalene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#41
	13781	54423	108930	278925	586979	940604	1225999	1678474	1965686	
53 Hexachlorocyclopentadi		5.0000	10.000	25.000	50.000	75.000	100.00	125.00	150.00	#67
		56054	129881	401539	860268	1338003	1618386	1996534	2234442	
52 1,2,4,5-Tetrachloroben		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		22692	44214	118079	244581	384755	500851	676425	780370	
54 2,4,6-Trichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		11344	23129	69488	148281	240990	319168	440517	522507	
55 2,4,5-Trichlorophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		11027	24173	71706	153438	245253	328779	449578	528778	
$ 56 2-Fluorobiphenyl	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
	12506	55806	111094	291961	600316	964627	1275444	1700217	2007776	
184 Biphenyl		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		62965	126727	322429	684927	1107710	1444119	1910925	2272074	
58 2-Chloronaphthalene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		49285	96361	248570	508968	811753	1059421	1451998	1683546	
60 2-Nitroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		10216	22260	65404	167968	253438	342557	458343	574239	

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
62 Dimethylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		50559	99826	258118	538152	852200	1128189	1498510	1765704	
65 2,6-Dinitrotoluene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		5050	12241	45079	108395	184844	250736	351480	424317	
64 Acenaphthylene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
	16882	72613	143909	380886	771632	1266513	1660011	2201293	2605567	
66 3-Nitroaniline			2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
			19085	54154	135050	205449	272889	377041	466542	
68 Acenaphthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
	12177	48779	96761	261133	546966	888627	1174527	1553720	1836509	
70 4-Nitrophenol			4.0000	10.000	20.000	30.000	40.000	50.000	60.000	#67
			15019	57868	137034	227519	302994	424902	506067	
73 2,4-Dinitrotoluene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		4714	14149	51838	128196	222585	302445	416849	505179	
71 Dibenzofuran	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
	16141	64245	127683	338659	692161	1106506	1462582	1956522	2294947	
76 2,3,4,6-Tetrachlorophe		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		8673	18022	54624	116570	190373	263776	373786	450432	
78 Diethylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		50597	99137	269215	550363	889625	1155827	1558711	1842465	
80 4-Chlorophenylphenylet		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		24588	50581	123880	259848	404608	545106	734885	871126	
83 4-Nitroaniline		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
		7578	15804	50186	133569	206966	276376	371220	464843	
79 Fluorene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#67
	12796	52394	101561	271727	562235	897853	1189921	1617560	1887445	
84 4,6-Dinitro-2-methylph				5.0000	10.000	15.000	20.000	25.000	30.000	#102
				20744	57674	108082	154669	219319	275345	
86 n-Nitrosodiphenylamine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		33814	70282	177591	360998	595410	782749	1058399	1250878	
87 Azobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		71172	143565	374337	736133	1111249	1411271	1821377	2082848	
$ 88 2,4,6-Tribromophenol		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000		#102
		6533	13547	44169	103166	178115	243008	332434		
94 4-Bromophenylphenyleth		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		15883	30585	80488	163189	265570	351978	474686	559139	
96 Hexachlorobenzene		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		19211	37159	102236	217799	355282	469703	640656	758681	
200 Atrazine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		11624	24260	67294	150869	230577	303996	404451	492427	
202 Octadecane		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		14065	28356	67616	126350	180610	220116	290864	361554	
99 Pentachlorophenol			4.0000	10.000	20.000	30.000	40.000	50.000		#102
			24489	77652	195828	330410	460861	649067		
103 Phenanthrene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
	17040	67363	134644	353121	747386	1195736	1598303	2115628	2509405	
104 Anthracene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
	15334	62713	122895	328663	665393	1110135	1459959	1980030	2326413	
106 Carbazole		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		58911	115868	318353	664206	1054345	1346008	1821895	2185589	
109 Di-n-butylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
		71122	148925	406804	849225	1396920	1867385	2481146	2981492	
114 Fluoranthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#102
	16778	68941	135486	368108	751332	1229830	1613636	2201018	2623077	
115 Benzidine		5.0000	10.000	25.000	50.000	75.000	100.00	125.00	150.00	#128
		134168	338002	1063986	2540495	3870024	4992528	6269727	7288645	

Report Date: 08-Dec-2019 13:38:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Level 8 Conc/Rsp	Level 9 Conc/Rsp	Istd #
116 Pyrene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
	16413	71648	141458	377766	769027	1247392	1643547	2201767	2627486	
$ 117 Terphenyl-d14	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
	13849	56146	113660	298080	625677	986612	1292224	1767190	2086077	
122 Butylbenzylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
		24417	54845	160906	340498	573457	765188	1069390	1297817	
130 bis(2-Ethylhexyl)phtha		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
		30825	68782	211647	461921	778055	1038467	1475157	1798276	
125 3,3'-Dichlorobenzidine		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
		21921	40606	106801	283391	439760	622095	814184	1031128	
127 Benzo(a)Anthracene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
	20545	71621	144412	361350	721262	1181602	1529964	2101043	2534952	
129 Chrysene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#128
	16280	68516	133048	342877	703540	1109216	1439550	2000367	2396284	
131 Di-n-octylphthalate		1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
		46779	111999	342420	754991	1290667	1719903	2424505	2980543	
132 Benzo(b)fluoranthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
	14944	64345	135868	373940	785665	1265760	1624672	2256101	2754210	
134 Benzo(k)fluoranthene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
	17418	67989	138394	376627	761160	1276921	1686119	2280660	2637269	
135 Benzo(a)pyrene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
	13390	58015	120536	324150	629362	1098377	1391857	1935287	2314014	
138 Indeno(1,2,3-c,d)pyren	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
	18746	83629	171107	474279	996392	1657301	2171760	2934300	3477746	
139 Dibenzo(a,h)anthracene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
	16612	69703	144878	404317	850167	1433650	1900902	2598901	3092996	
140 Benzo(g,h,i)perylene	0.20000	1.0000	2.0000	5.0000	10.000	15.000	20.000	25.000	30.000	#136
	16096	67254	132174	369597	759560	1225016	1579212	2089984	2475367	

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\hh\chem\msd11.i\11120719B.b		
Method:	8270DLVI-11.M	Instrument:	msd11
Cal Start Date:	07-Dec-2019 19:53:30	Cal End Date:	08-Dec-2019 03:00:30
Last Modified:	08-Dec-2019 13:04:30		
No.Compounds:	178	Integrator:	falcon
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

No. Cal Levels: 9 No. Cal Levels: 17

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	SVMS 4157	07-Dec-2019 19:53:30	11120719B.b	111207B03.d	PAH+.sub	43617376	49818696
2	2	SVMS 4158	07-Dec-2019 20:19:30	11120719B.b	111207B04.d	1STD.sub	43617376	49820345
3	3	SVMS 4159	07-Dec-2019 20:44:30	11120719B.b	111207B05.d	1STD.sub	43617376	49822200
4	4	SVMS 4167	07-Dec-2019 21:09:30	11120719B.b	111207B06.d	1STD.sub	43617376	49823997
5	5	SVMS 4281	07-Dec-2019 21:34:30	11120719B.b	111207B07.d	1STD.sub	43617376	49825798
6	6	SVMS 4162	07-Dec-2019 21:59:30	11120719B.b	111207B08.d	1STD.sub	43617376	49827647
7	7	SVMS 4168	07-Dec-2019 22:24:30	11120719B.b	111207B09.d	1STD.sub	43617376	49829454
8	8	SVMS 4164	07-Dec-2019 22:49:30	11120719B.b	111207B10.d	1STD.sub	43617376	49831273
9	9	SVMS 4165	07-Dec-2019 23:14:30	11120719B.b	111207B11.d	1STD.sub	43617376	49833051
10	2	SVMS 4212	08-Dec-2019 00:05:30	11120719B.b	111207B13.d	3STD.sub	43617376	49836956
11	3	SVMS 4213	08-Dec-2019 00:30:30	11120719B.b	111207B14.d	3STD.sub	43617376	49838733
12	4	SVMS 4214	08-Dec-2019 00:55:30	11120719B.b	111207B15.d	3STD.sub	43617376	49840495
13	5	SVMS 4215	08-Dec-2019 01:20:30	11120719B.b	111207B16.d	3STD.sub	43617376	49842251
14	6	SVMS 4216	08-Dec-2019 01:45:30	11120719B.b	111207B17.d	3STD.sub	43617376	49844056
15	7	SVMS 4217	08-Dec-2019 02:10:30	11120719B.b	111207B18.d	3STD.sub	43617376	49845795
16	8	SVMS 4218	08-Dec-2019 02:35:30	11120719B.b	111207B19.d	3STD.sub	43617376	49847538
17	9	SVMS 4219	08-Dec-2019 03:00:30	11120719B.b	111207B20.d	3STD.sub	43617376	49849285

Report Date: 08-Dec-2019 13:08:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B03.d
Lab Sample ID: SVMS 4157 Client Sample ID: 1STD0.2CB
Injection Date: 07-Dec-2019 19:53:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4157
Misc. Info: 1STD0.2
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 1 ALS Bottle: 1
Cpnd Sublist: PAH+.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
S 214 Total PAHs	100.0	1.000		0.000		0.20000	0.20000	Q
$ 6 2-Fluorophenol	112.0	4.772	4.772	0.000	6659	0.20000	0.20989	
$ 9 Phenol-d5	99.0	5.414	5.414	0.000	7495	0.20000	0.18360	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	414160	20.000	20.000	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	4992	0.20000	0.25886	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1937122	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	22347	0.20000	0.21810	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	14660	0.20000	0.21977	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	13781	0.20000	0.21751	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	12506	0.20000	0.19421	
64 Acenaphthylene	152.0	8.115	8.115	0.000	16882	0.20000	0.20096	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	927296	20.000	20.000	
68 Acenaphthene	153.0	8.259	8.259	0.000	12177	0.20000	0.20759	
71 Dibenzofuran	168.0	8.403	8.403	0.000	16141	0.20000	0.21513	
79 Fluorene	166.0	8.692	8.692	0.000	12796	0.20000	0.21045	
$ 88 2,4,6-Tribromophenol	330.0	8.901	8.901	0.000	1251	0.20000	0.75678	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1429973	20.000	20.000	
103 Phenanthrene	178.0	9.511	9.511	0.000	17040	0.20000	0.21089	
104 Anthracene	178.0	9.553	9.553	0.000	15334	0.20000	0.20657	
114 Fluoranthene	202.0	10.570	10.570	0.000	16778	0.20000	0.20345	
116 Pyrene	202.0	10.810	10.810	0.000	16413	0.20000	0.18774	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	13849	0.20000	0.19787	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	20545	0.20000	0.23669	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1482584	20.000	20.000	
129 Chrysene	228.0	12.271	12.271	0.000	16280	0.20000	0.20231	
132 Benzo(b)fluoranthene	252.0	13.795	13.795	0.000	14944	0.20000	0.16929	
134 Benzo(k)fluoranthene	252.0	13.832	13.832	0.000	17418	0.20000	0.19323	
135 Benzo(a)pyrene	252.0	14.303	14.303	0.000	13390	0.20000	0.17608	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1607697	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.287	16.287	0.000	18746	0.20000	0.16522	
139 Dibenzo(a,h)anthracene	278.0	16.293	16.293	0.000	16612	0.20000	0.16893	
140 Benzo(g,h,i)perylene	276.0	16.854	16.854	0.000	16096	0.20000	0.18721	

Compound Type Legend

S - Summary
$ - Surrogate
* - ISTD

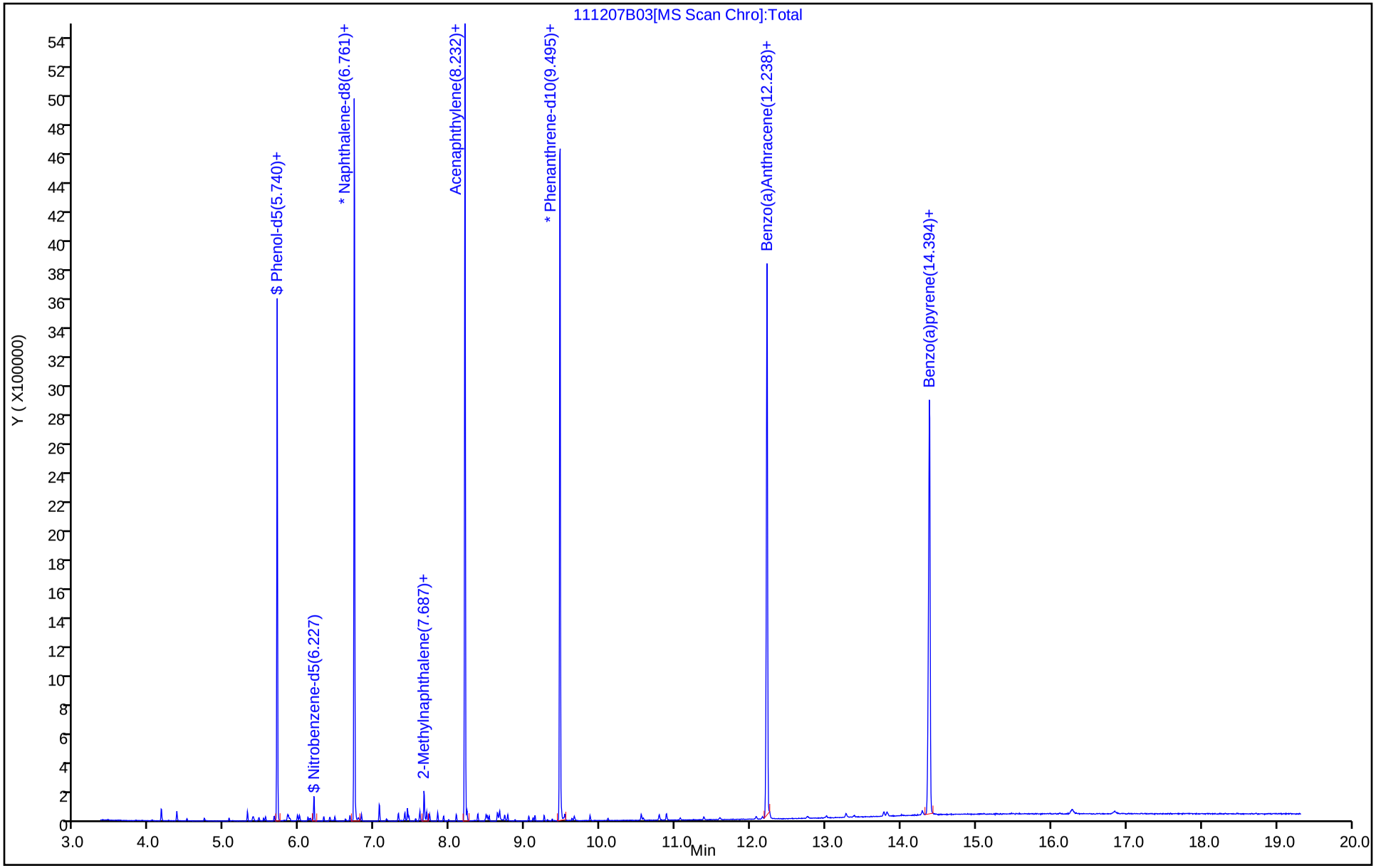
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags

Report Date: 08-Dec-2019 13:08:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B03.d				
Injection Date:	07-Dec-2019 19:53:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD0.2CB	Lab ID:	SVMS 4157		
Sample Info:	11120719B.b, SVMS 4157				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d
Lab Sample ID: SVMS 4158 Client Sample ID: 1STD001CB
Injection Date: 07-Dec-2019 20:19:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4158
Misc. Info: 1STD001
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 2 ALS Bottle: 2
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:15:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.659	3.659	0.000	1408	1.0000	1.0890	M
2 N-Nitrosodimethylamine	42.0	3.857	3.857	0.000	5925	1.0000	0.9922	
1 pyridine	79.0	3.921	3.921	0.000	8252	1.0000	0.85222	
$ 6 2-Fluorophenol	112.0	4.772	4.772	0.000	26380	1.0000	0.87878	
$ 9 Phenol-d5	99.0	5.414	5.414	0.000	35618	1.0000	0.92215	
10 Phenol	94.0	5.424	5.424	0.000	42490	1.0000	0.9975	
11 Aniline	66.0	5.483	5.483	0.000	6654	1.0000	1.8780	
12 bis(2-Chloroethyl)ether	63.0	5.499	5.499	0.000	21061	1.0000	1.1675	
201 n-Decane	57.0	5.558	5.558	0.000	8440	1.0000	0.9990	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	30188	1.0000	0.97734	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	28022	1.0000	0.95568	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	391870	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	29691	1.0000	0.96432	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	17237	1.0000	0.75477	M
20 o-Cresol	108.0	5.890	5.890	0.000	29724	1.0000	1.0112	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	27826	1.0000	0.95459	
21 bis(2Chloro1methylethyl)ether	45.0	5.906	5.906	0.000	5047	1.0000	1.2254	
23 m+p-Cresol	107.0	6.002	6.002	0.000	29339	1.0000	0.94786	
26 n-Nitroso-di-n-propylamine	70.0	6.013	6.013	0.000	27739	1.0000	1.1428	
24 Acetophenone	105.0	6.034	6.034	0.000	45137	1.0000	1.0486	
28 Hexachloroethane	117.0	6.152	6.152	0.000	11728	1.0000	0.95960	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	27584	1.0000	0.87729	
30 Nitrobenzene	77.0	6.184	6.184	0.000	26648	1.0000	0.75324	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.360	6.360	0.000	60335	1.0000	0.93592	
34 2,4-Dimethylphenol	107.0	6.430	6.430	0.000	20957	1.0000	0.89444	
33 2-Nitrophenol	139.0	6.441	6.441	0.000	7521	1.0000	1.7179	
36 Benzoic acid	105.0	6.467	6.467	0.000	10757	2.0000	3.4721	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	38460	1.0000	0.95522	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	18351	1.0000	0.83118	
40 1,2,4-Trichlorobenzene	180.0	6.703	6.703	0.000	23661	1.0000	0.93563	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1768971	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	90909	1.0000	0.97158	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	19225	1.0000	0.89359	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	14927	1.0000	0.98146	
49 4-Chloro-3-methylphenol	107.0	7.184	7.184	0.000	20153	1.0000	0.78613	
51 2-Methylnaphthalene	142.0	7.344	7.344	0.000	56448	1.0000	0.92664	
204 1-Methylnaphthalene	142.0	7.430	7.430	0.000	54423	1.0000	0.94062	
53 Hexachlorocyclopentadiene	237.0	7.467	7.467	0.000	56054	5.0000	3.7500	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.483	7.483	0.000	22692	1.0000	0.94437	
54 2,4,6-Trichlorophenol	196.0	7.574	7.574	0.000	11344	1.0000	0.78398	
55 2,4,5-Trichlorophenol	196.0	7.617	7.617	0.000	11027	1.0000	0.74625	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	55806	1.0000	0.93031	
184 Biphenyl	154.0	7.724	7.724	0.000	62965	1.0000	0.92445	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	49285	1.0000	0.96167	
62 Dimethylphthalate	163.0	7.943	7.943	0.000	50559	1.0000	0.94477	
65 2,6-Dinitrotoluene	165.0	8.013	8.013	0.000	5050	1.0000	1.2025	
64 Acenaphthylene	152.0	8.115	8.115	0.000	72613	1.0000	0.92785	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	863842	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.264	8.264	0.000	2007	2.0000	5.1642	
68 Acenaphthene	153.0	8.259	8.259	0.000	48779	1.0000	0.89264	
70 4-Nitrophenol	109.0	8.313	8.313	0.000	6212	2.0000	3.0902	M
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	4714	1.0000	1.1633	M
71 Dibenzofuran	168.0	8.398	8.398	0.000	64245	1.0000	0.91915	
76 2,3,4,6-Tetrachlorophenol	232.0	8.500	8.500	0.000	8673	1.0000	0.74093	
78 Diethylphthalate	149.0	8.526	8.526	0.000	50597	1.0000	0.92074	
80 4-Chlorophenylphenylether	204.0	8.660	8.660	0.000	24588	1.0000	0.94311	
79 Fluorene	166.0	8.692	8.692	0.000	52394	1.0000	0.92501	
84 4,6-Dinitro-2-methylphenol	198.0	8.708	8.708	0.000	1919	1.0000	3.3105	
86 n-Nitrosodiphenylamine	169.0	8.756	8.756	0.000	33814	1.0000	0.91781	
87 Azobenzene	77.0	8.799	8.799	0.000	71172	1.0000	1.0111	
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	6533	1.0000	1.2073	
94 4-Bromophenylphenylether	248.0	9.077	9.077	0.000	15883	1.0000	0.95819	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	19211	1.0000	0.88943	
202 Octadecane	57.0	9.281	9.281	0.000	14065	1.0000	1.1400	
99 Pentachlorophenol	266.0	9.323	9.323	0.000	9430	2.0000	3.1576	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1314915	20.000	20.000	
103 Phenanthrene	178.0	9.511	9.511	0.000	67363	1.0000	0.90663	
104 Anthracene	178.0	9.553	9.553	0.000	62713	1.0000	0.91873	
106 Carbazole	167.0	9.676	9.676	0.000	58911	1.0000	0.91520	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	71122	1.0000	0.84141	
114 Fluoranthene	202.0	10.570	10.570	0.000	68941	1.0000	0.90913	
116 Pyrene	202.0	10.810	10.810	0.000	71648	1.0000	0.93176	
$ 117 Terphenyl-d14	244.0	10.901	10.901	0.000	56146	1.0000	0.91204	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	24417	1.0000	0.71628	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.094	12.094	0.000	30825	1.0000	1.1508	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	71621	1.0000	0.93814	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1303994	20.000	20.000	
129 Chrysene	228.0	12.271	12.271	0.000	68516	1.0000	0.96803	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	46779	1.0000	1.1907	
132 Benzo(b)fluoranthene	252.0	13.790	13.790	0.000	64345	1.0000	0.82243	
134 Benzo(k)fluoranthene	252.0	13.832	13.832	0.000	67989	1.0000	0.85097	
135 Benzo(a)pyrene	252.0	14.303	14.303	0.000	58015	1.0000	0.86073	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1424940	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.271	16.271	0.000	83629	1.0000	0.83158	
139 Dibenzo(a,h)anthracene	278.0	16.287	16.287	0.000	69703	1.0000	0.79974	
140 Benzo(g,h,i)perylene	276.0	16.838	16.838	0.000	67254	1.0000	0.88252	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

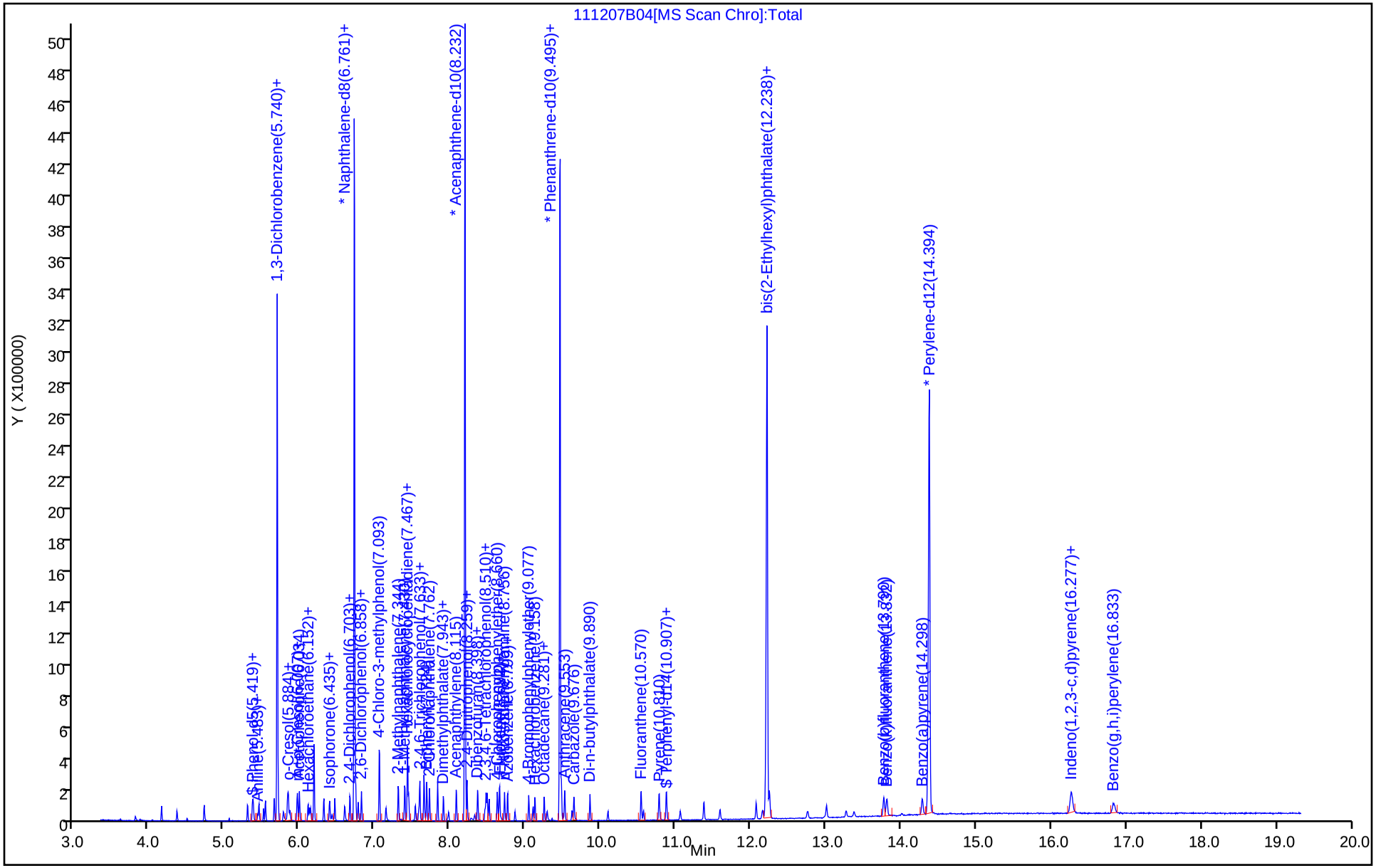
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d				
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD001CB	Lab ID:	SVMS 4158		
Sample Info:	11120719B.b, SVMS 4158				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

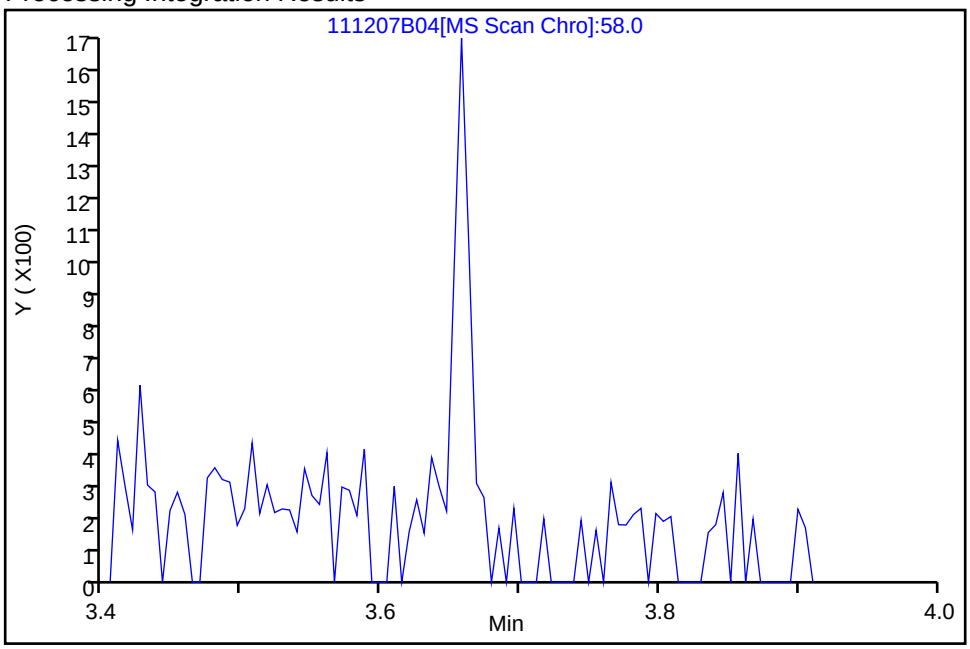
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

193 1,4-Dioxane, CAS: 123-91-1

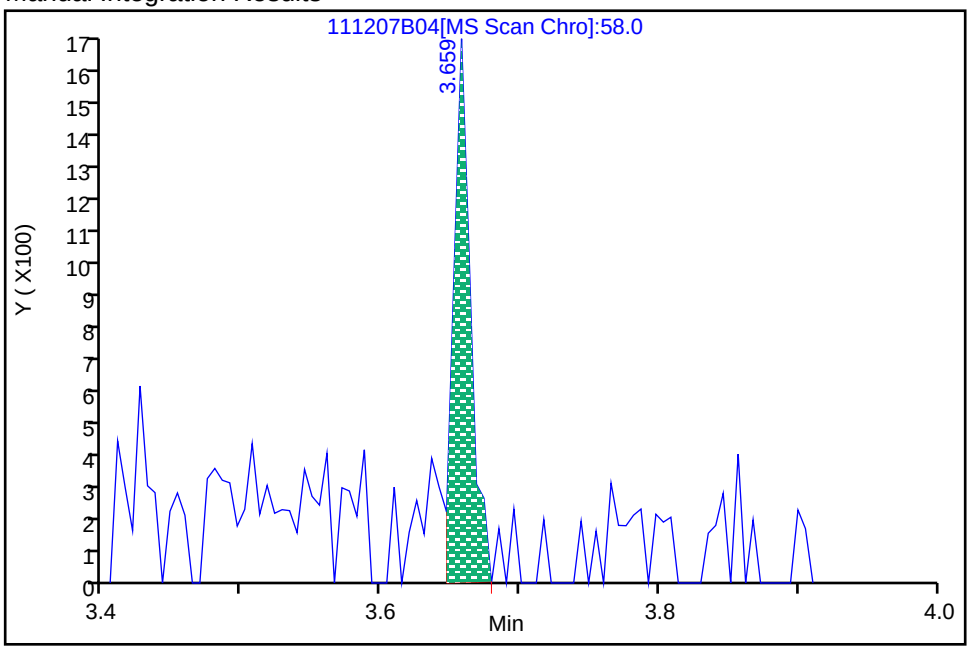
Not Detected
Expected RT: 3.659
RT Window: 3.315-4.004

Processing Integration Results



Manual Integration Results

RT: 3.659
Area: 1408
Amount: 1.0890
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:14:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

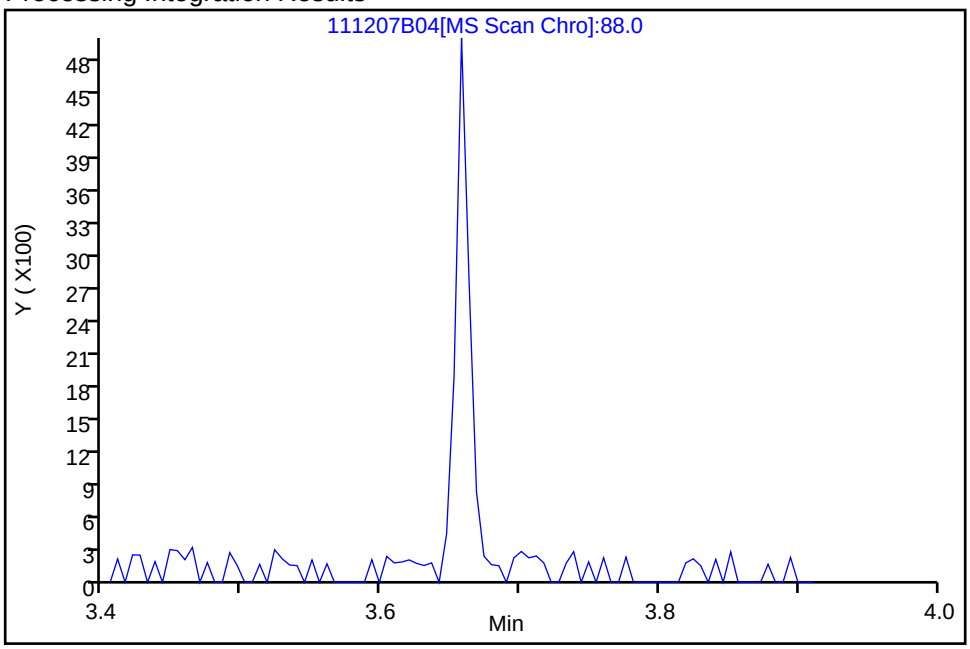
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

193 1,4-Dioxane, CAS: 123-91-1

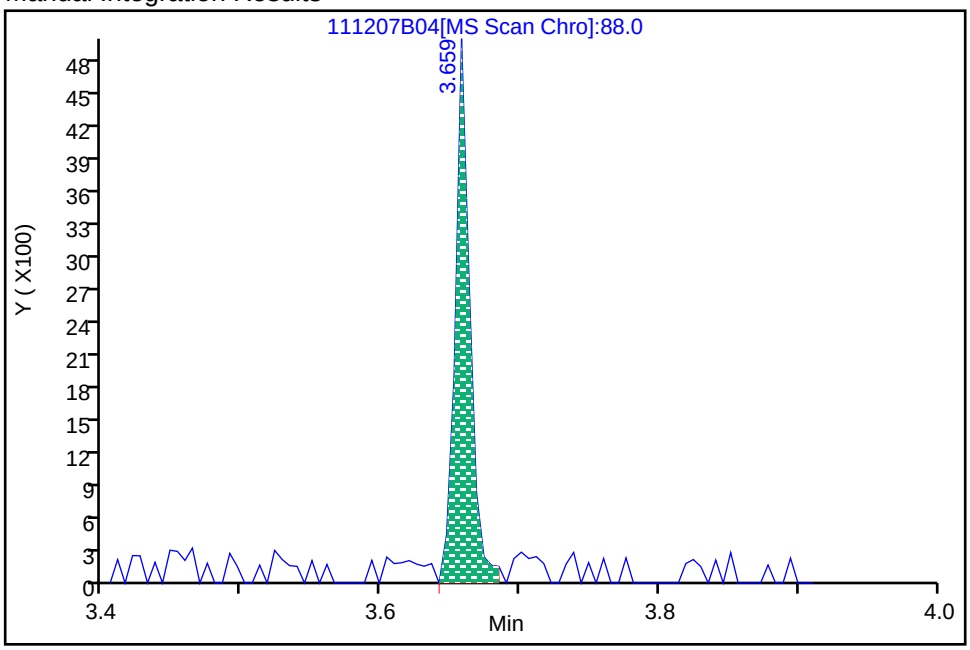
Not Detected
Expected RT: 3.659
RT Window: 3.315-4.004

Processing Integration Results



Manual Integration Results

RT: 3.659
Area: 3663
Amount: 1.0890
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:14:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

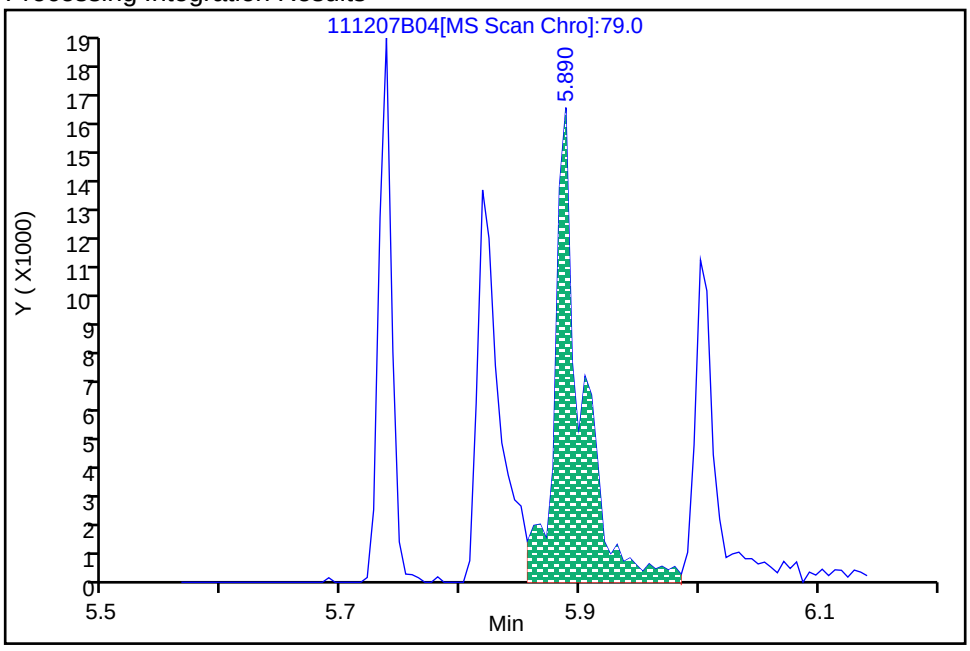
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

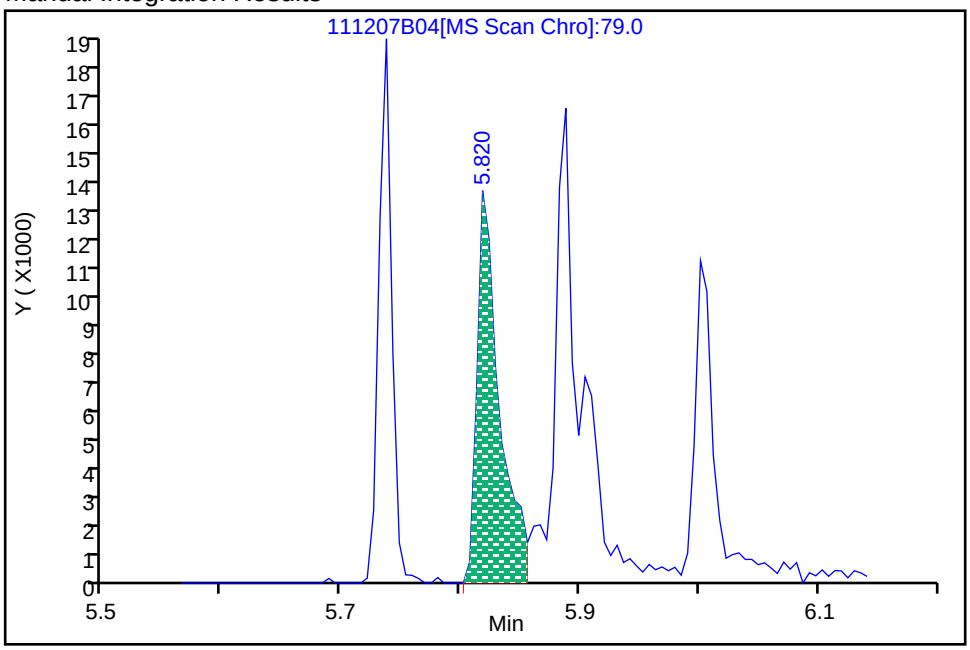
Processing Integration Results

RT: 5.890
Area: 24815
Amount: 1.0373
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 17237
Amount: 0.75477
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:14:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

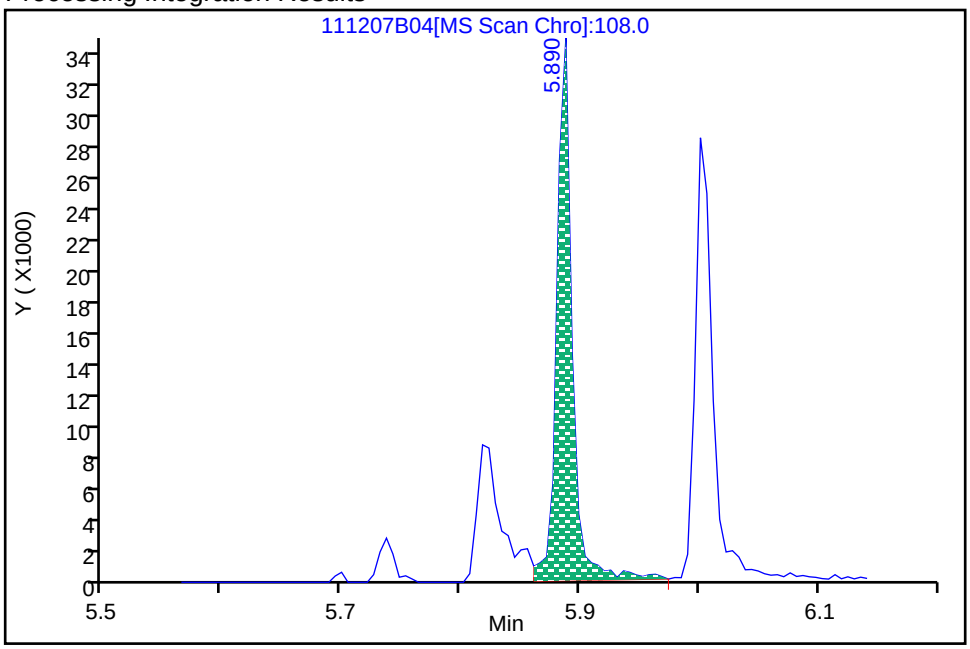
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

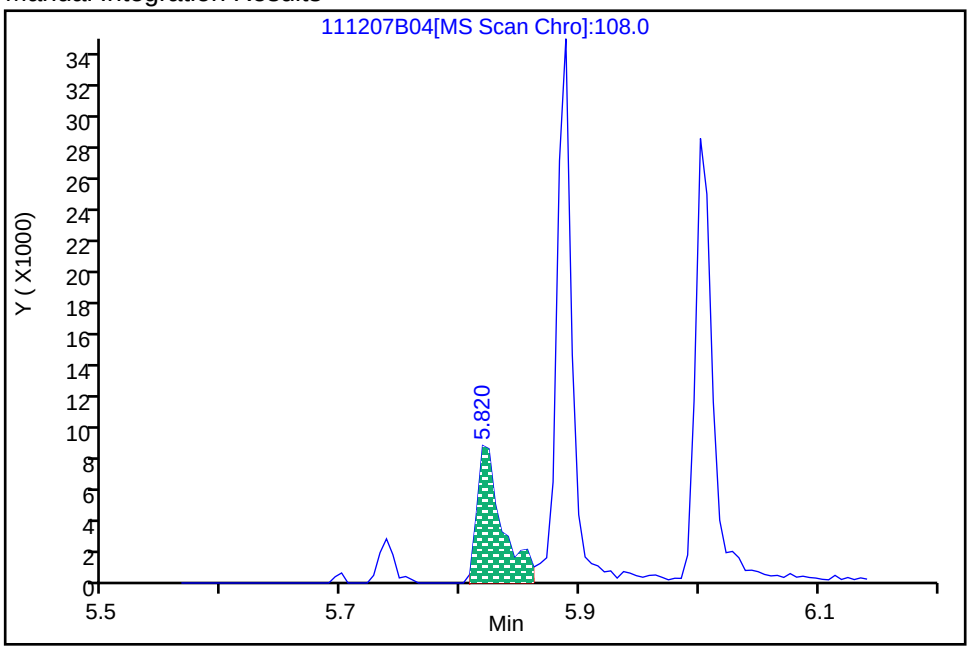
Processing Integration Results

RT: 5.890
Area: 30972
Amount: 1.0373
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 12866
Amount: 0.75477
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:15:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

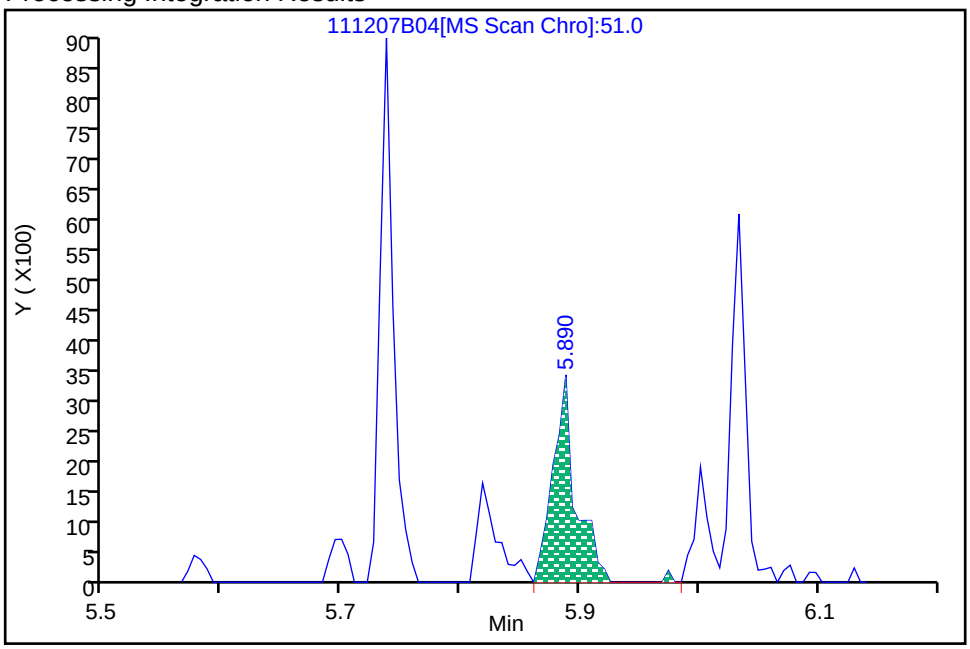
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

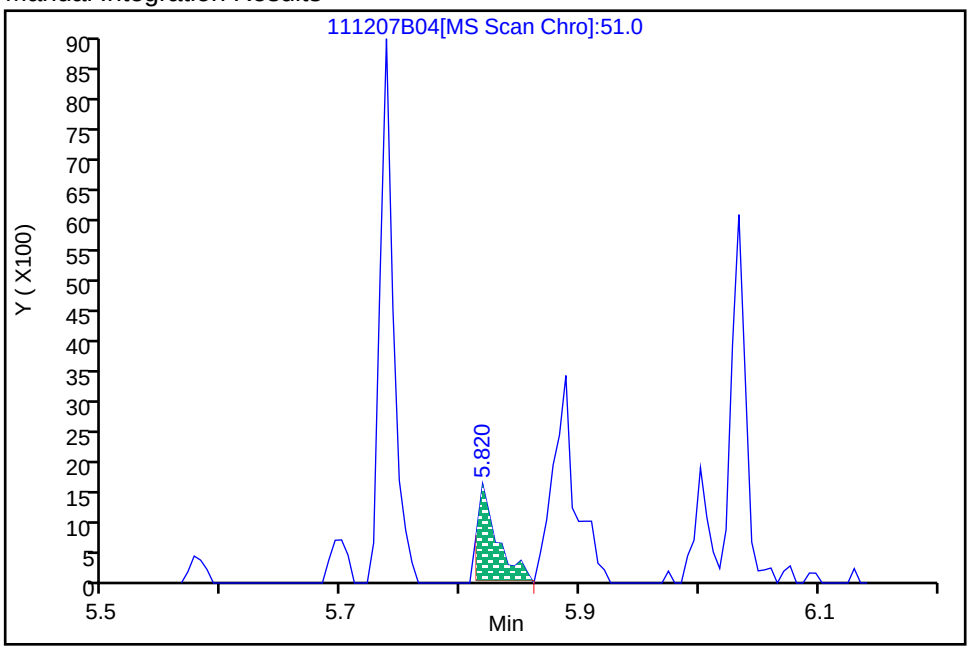
Processing Integration Results

RT: 5.890
Area: 4611
Amount: 1.0373
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 1809
Amount: 0.75477
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:15:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

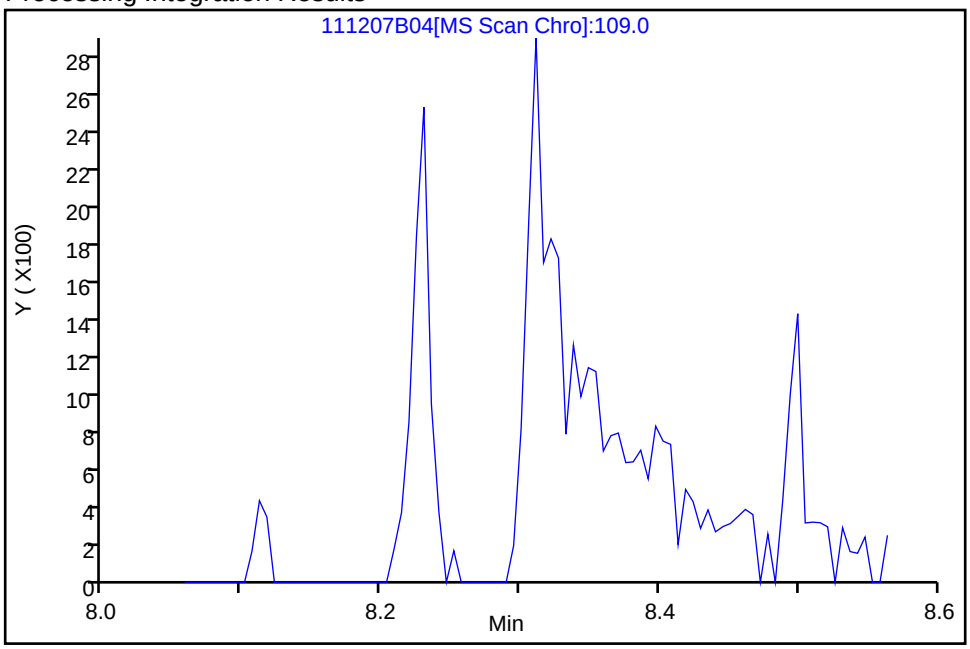
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

70 4-Nitrophenol, CAS: 100-02-7

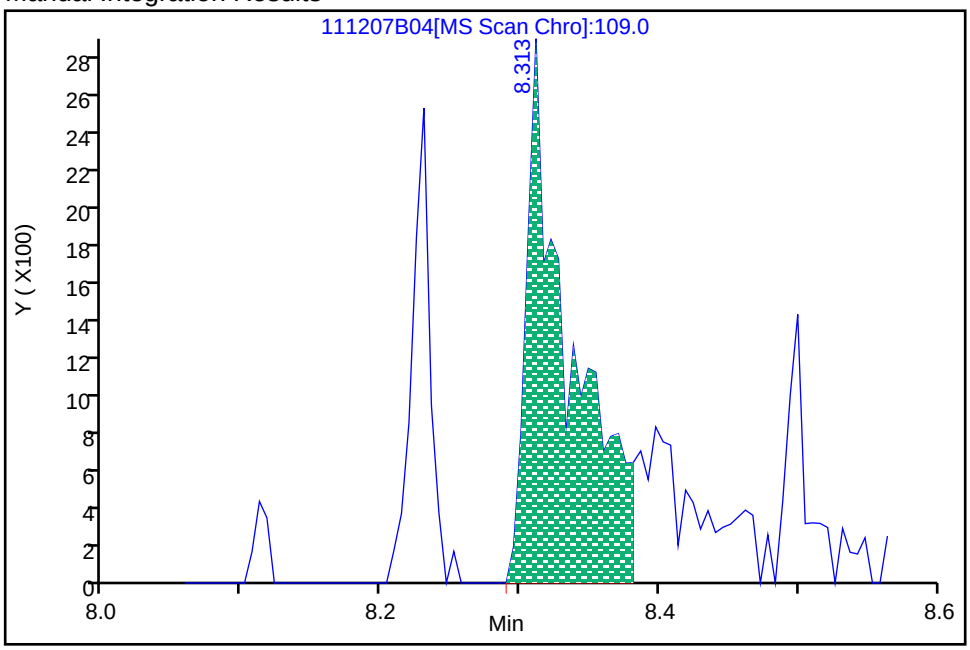
Not Detected
Expected RT: 8.313
RT Window: 7.818-8.806

Processing Integration Results



Manual Integration Results

RT: 8.313
Area: 6212
Amount: 3.0902
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:15:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

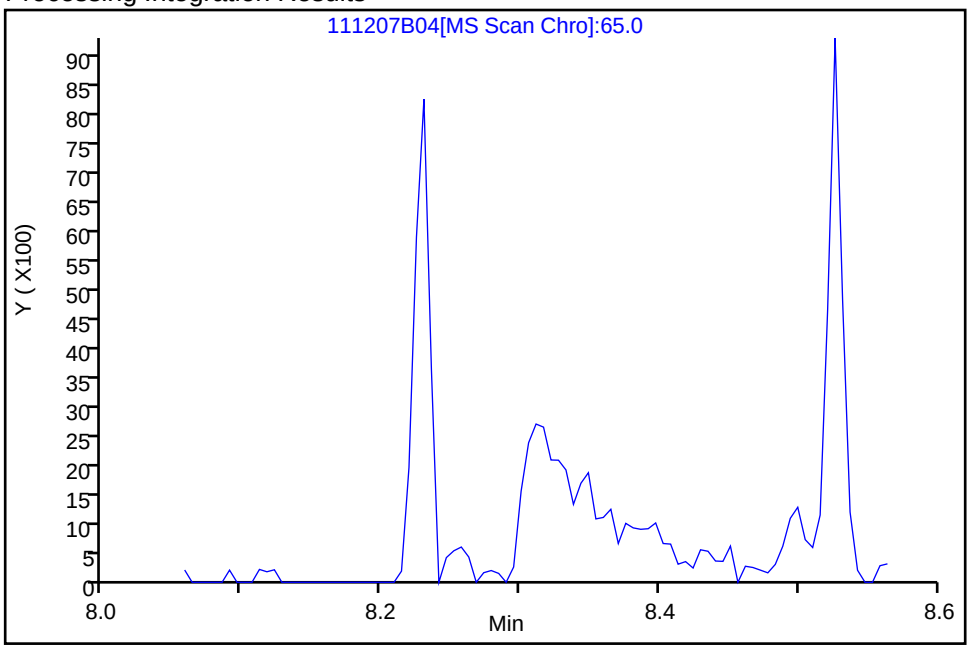
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

70 4-Nitrophenol, CAS: 100-02-7

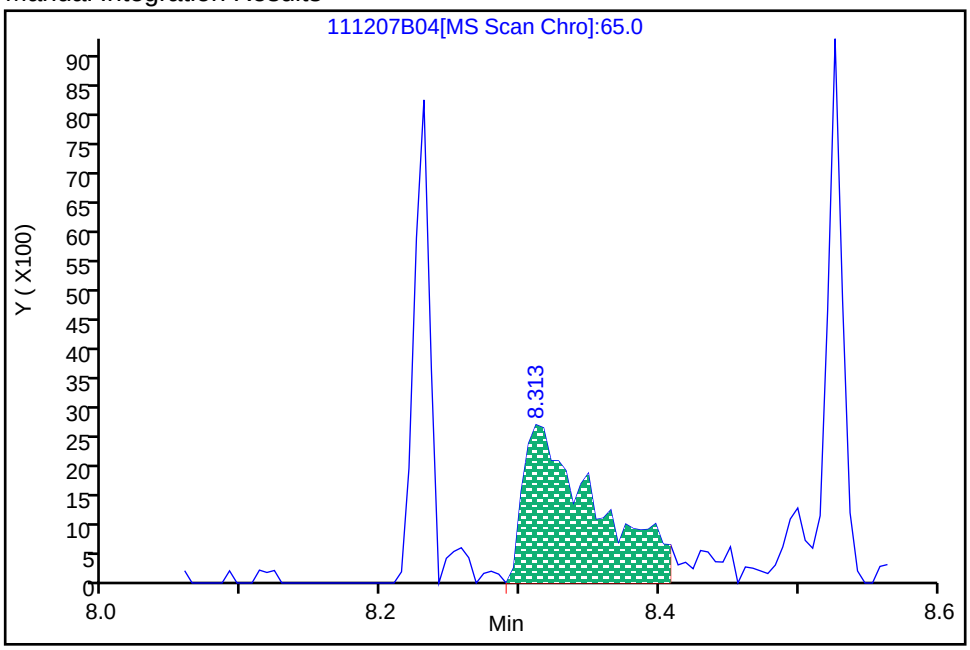
Not Detected
Expected RT: 8.313
RT Window: 7.818-8.806

Processing Integration Results



Manual Integration Results

RT: 8.313
Area: 9826
Amount: 3.0902
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:15:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

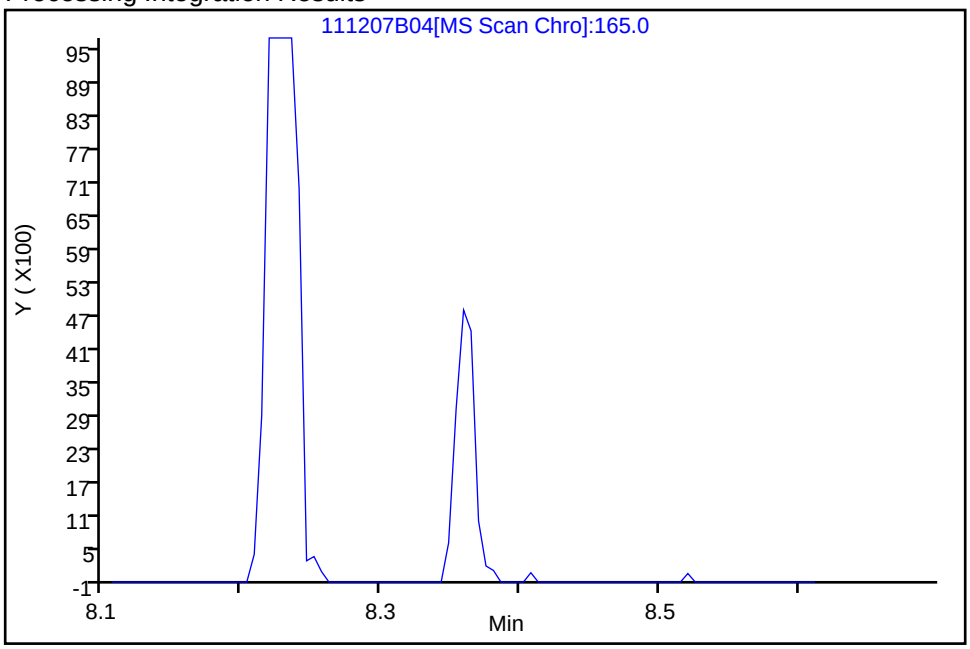
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

73 2,4-Dinitrotoluene, CAS: 121-14-2

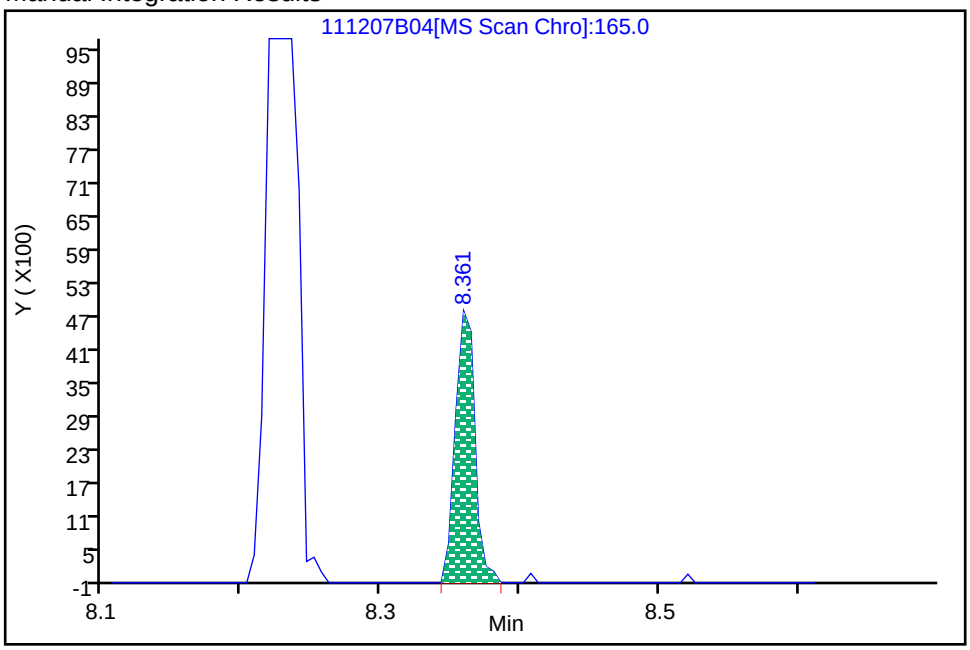
Not Detected
Expected RT: 8.361
RT Window: 7.867-8.855

Processing Integration Results



Manual Integration Results

RT: 8.361
Area: 4714
Amount: 1.1633
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:15:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

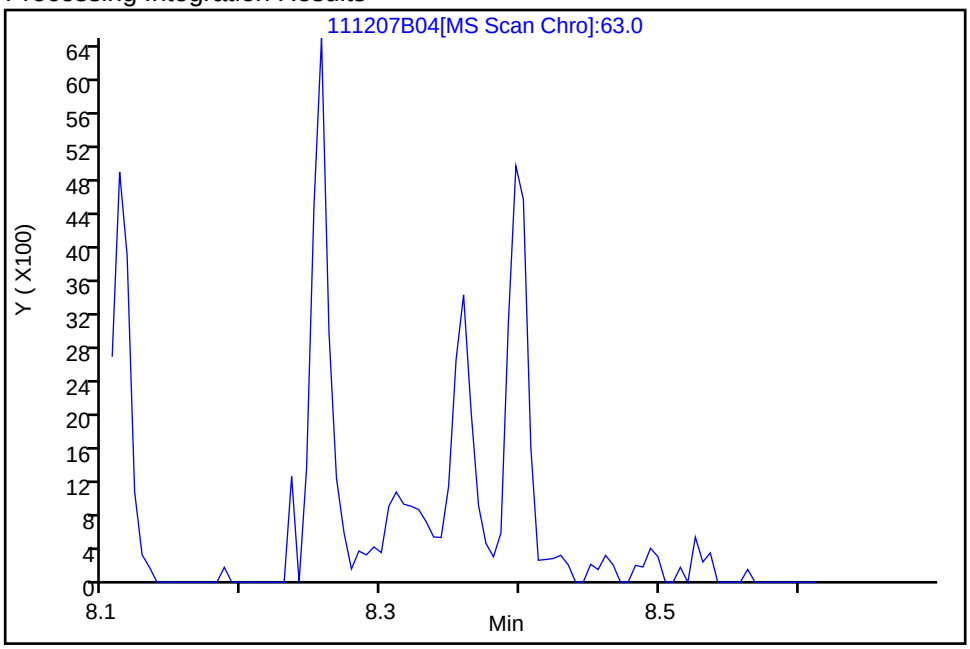
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B04.d		
Injection Date:	07-Dec-2019 20:19:30	Inst. ID:	msd11.i
Client ID:	1STD001CB	Lab ID:	SVMS 4158
Sample Info:	11120719B.b, SVMS 4158		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

73 2,4-Dinitrotoluene, CAS: 121-14-2

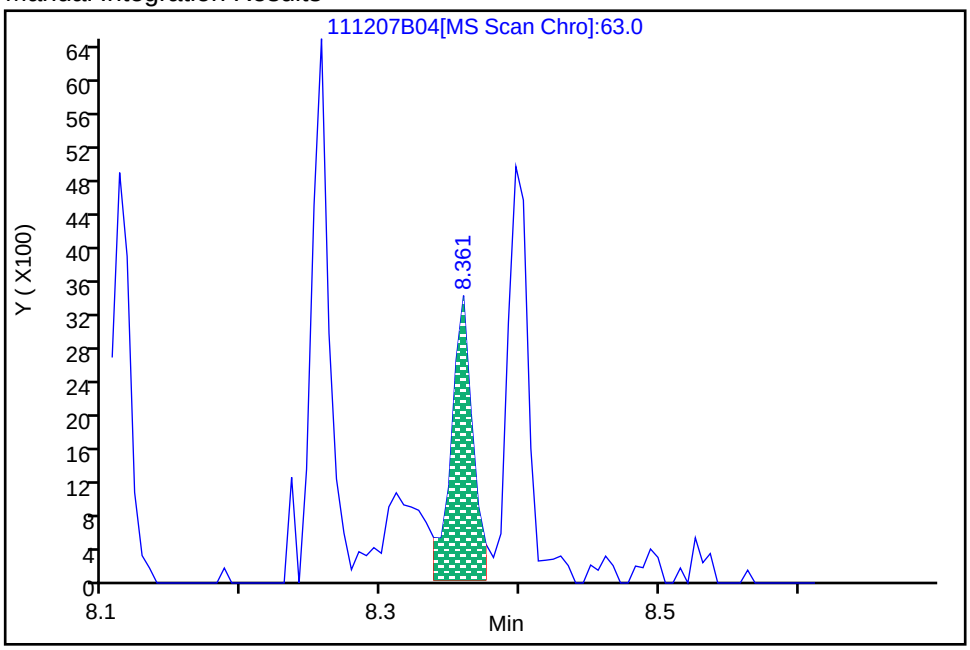
Not Detected
Expected RT: 8.361
RT Window: 7.867-8.855

Processing Integration Results



Manual Integration Results

RT: 8.361
Area: 3634
Amount: 1.1633
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:15:30
Audit Action: Mint
Audit Reason: Manually Assigned

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B05.d
Lab Sample ID: SVMS 4159 Client Sample ID: 1STD002CB
Injection Date: 07-Dec-2019 20:44:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4159
Misc. Info: 1STD002
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 3 ALS Bottle: 3
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 07-Dec-2019 21:15:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.659	3.659	0.000	2605	2.0000	2.0678	
2 N-Nitrosodimethylamine	42.0	3.852	3.852	0.000	11258	2.0000	1.9347	
1 pyridine	79.0	3.910	3.910	0.000	17348	2.0000	1.8387	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	58669	2.0000	2.0058	
$ 9 Phenol-d5	99.0	5.408	5.408	0.000	79050	2.0000	2.1004	
10 Phenol	94.0	5.419	5.419	0.000	83597	2.0000	2.0140	
11 Aniline	66.0	5.483	5.483	0.000	13380	2.0000	3.8756	
12 bis(2-Chloroethyl)ether	63.0	5.499	5.499	0.000	39578	2.0000	2.2517	
201 n-Decane	57.0	5.558	5.558	0.000	16726	2.0000	2.0318	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	59845	2.0000	1.9884	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	55658	2.0000	1.9481	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	381835	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	57713	2.0000	1.9237	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	42261	2.0000	1.8991	M
20 o-Cresol	108.0	5.889	5.889	0.000	58622	2.0000	2.0468	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	55696	2.0000	1.9609	
21 bis(2Chloro1methylethyl)ether	45.0	5.906	5.906	0.000	10324	2.0000	2.5726	
23 m+p-Cresol	107.0	6.002	6.002	0.000	59421	2.0000	1.9702	
26 n-Nitroso-di-n-propylamine	70.0	6.012	6.012	0.000	52699	2.0000	2.2281	
24 Acetophenone	105.0	6.034	6.034	0.000	89505	2.0000	2.1341	
28 Hexachloroethane	117.0	6.152	6.152	0.000	22600	2.0000	1.8978	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	60100	2.0000	1.7865	
30 Nitrobenzene	77.0	6.184	6.184	0.000	59675	2.0000	1.7243	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.360	6.360	0.000	124543	2.0000	1.9748	
34 2,4-Dimethylphenol	107.0	6.435	6.435	0.000	37610	2.0000	1.6409	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	16719	2.0000	2.2549	
36 Benzoic acid	105.0	6.478	6.478	0.000	31159	4.0000	4.4683	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	80743	2.0000	2.0499	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	36948	2.0000	1.7107	
40 1,2,4-Trichlorobenzene	180.0	6.702	6.702	0.000	48373	2.0000	1.9553	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1730526	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	176109	2.0000	1.9240	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	36930	2.0000	1.7547	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	28140	2.0000	1.8913	
49 4-Chloro-3-methylphenol	107.0	7.178	7.178	0.000	46726	2.0000	1.8632	
51 2-Methylnaphthalene	142.0	7.344	7.344	0.000	115851	2.0000	1.9440	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	108930	2.0000	1.9245	
53 Hexachlorocyclopentadiene	237.0	7.467	7.467	0.000	129881	10.000	8.9788	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.483	7.483	0.000	44214	2.0000	1.9014	
54 2,4,6-Trichlorophenol	196.0	7.569	7.569	0.000	23129	2.0000	1.6518	
55 2,4,5-Trichlorophenol	196.0	7.617	7.617	0.000	24173	2.0000	1.6905	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	111094	2.0000	1.9138	
184 Biphenyl	154.0	7.724	7.724	0.000	126727	2.0000	1.9227	
58 2-Chloronaphthalene	162.0	7.761	7.761	0.000	96361	2.0000	1.9430	
62 Dimethylphthalate	163.0	7.943	7.943	0.000	99826	2.0000	1.9276	
65 2,6-Dinitrotoluene	165.0	8.013	8.013	0.000	12241	2.0000	1.7863	
64 Acenaphthylene	152.0	8.114	8.114	0.000	143909	2.0000	1.9002	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	835955	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	5816	4.0000	5.8204	
68 Acenaphthene	153.0	8.259	8.259	0.000	96761	2.0000	1.8298	
70 4-Nitrophenol	109.0	8.302	8.302	0.000	15019	4.0000	4.2416	M
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	14149	2.0000	1.8002	
71 Dibenzofuran	168.0	8.398	8.398	0.000	127683	2.0000	1.8877	
76 2,3,4,6-Tetrachlorophenol	232.0	8.494	8.494	0.000	18022	2.0000	1.5910	
78 Diethylphthalate	149.0	8.526	8.526	0.000	99137	2.0000	1.8642	
80 4-Chlorophenylphenylether	204.0	8.660	8.660	0.000	50581	2.0000	2.0048	
79 Fluorene	166.0	8.692	8.692	0.000	101561	2.0000	1.8529	
84 4,6-Dinitro-2-methylphenol	198.0	8.708	8.708	0.000	4633	2.0000	3.6220	
86 n-Nitrosodiphenylamine	169.0	8.756	8.756	0.000	70282	2.0000	1.9662	
87 Azobenzene	77.0	8.799	8.799	0.000	143565	2.0000	2.1021	
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	13547	2.0000	1.8291	
94 4-Bromophenylphenylether	248.0	9.077	9.077	0.000	30585	2.0000	1.9018	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	37159	2.0000	1.7732	
202 Octadecane	57.0	9.280	9.280	0.000	28356	2.0000	2.3689	
99 Pentachlorophenol	266.0	9.323	9.323	0.000	24489	4.0000	4.4940	
* 102 Phenanthrene-d10	188.0	9.494	9.494	0.000	1275756	20.000	20.000	
103 Phenanthrene	178.0	9.510	9.510	0.000	134644	2.0000	1.8678	
104 Anthracene	178.0	9.553	9.553	0.000	122895	2.0000	1.8556	
106 Carbazole	167.0	9.676	9.676	0.000	115868	2.0000	1.8553	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	148925	2.0000	1.8159	
114 Fluoranthene	202.0	10.570	10.570	0.000	135486	2.0000	1.8415	
116 Pyrene	202.0	10.805	10.805	0.000	141458	2.0000	1.8445	
$ 117 Terphenyl-d14	244.0	10.906	10.906	0.000	113660	2.0000	1.8512	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	54845	2.0000	1.6132	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.094	12.094	0.000	68782	2.0000	1.8624	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	144412	2.0000	1.8967	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1300516	20.000	20.000	
129 Chrysene	228.0	12.270	12.270	0.000	133048	2.0000	1.8848	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	111999	2.0000	1.8945	
132 Benzo(b)fluoranthene	252.0	13.789	13.789	0.000	135868	2.0000	1.7583	
134 Benzo(k)fluoranthene	252.0	13.827	13.827	0.000	138394	2.0000	1.7538	
135 Benzo(a)pyrene	252.0	14.298	14.298	0.000	120536	2.0000	1.8106	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1407371	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.271	16.271	0.000	171107	2.0000	1.7227	
139 Dibenzo(a,h)anthracene	278.0	16.282	16.282	0.000	144878	2.0000	1.6830	
140 Benzo(g,h,i)perylene	276.0	16.838	16.838	0.000	132174	2.0000	1.7561	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

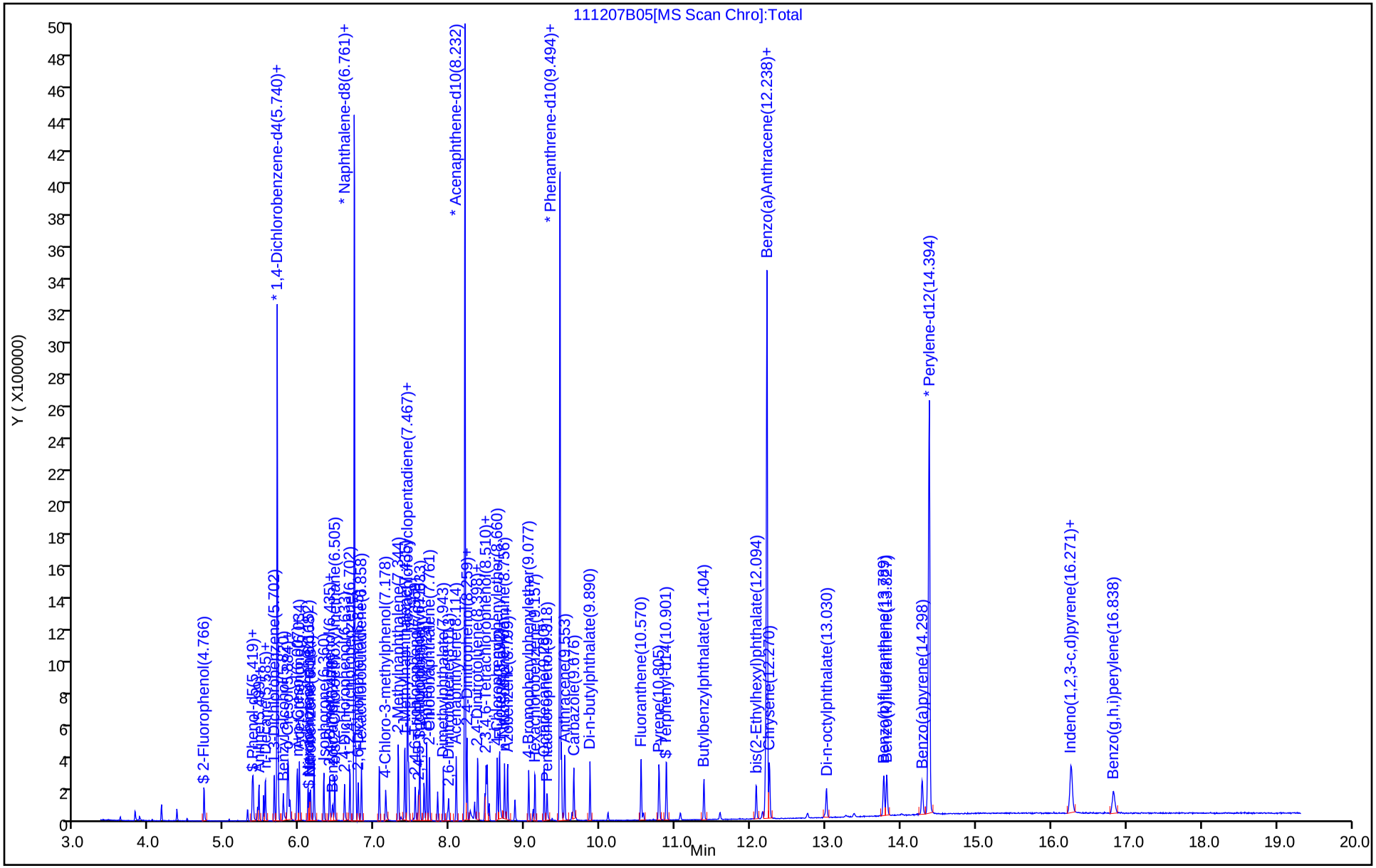
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B05.d				
Injection Date:	07-Dec-2019 20:44:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD002CB	Lab ID:	SVMS 4159		
Sample Info:	11120719B.b, SVMS 4159				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

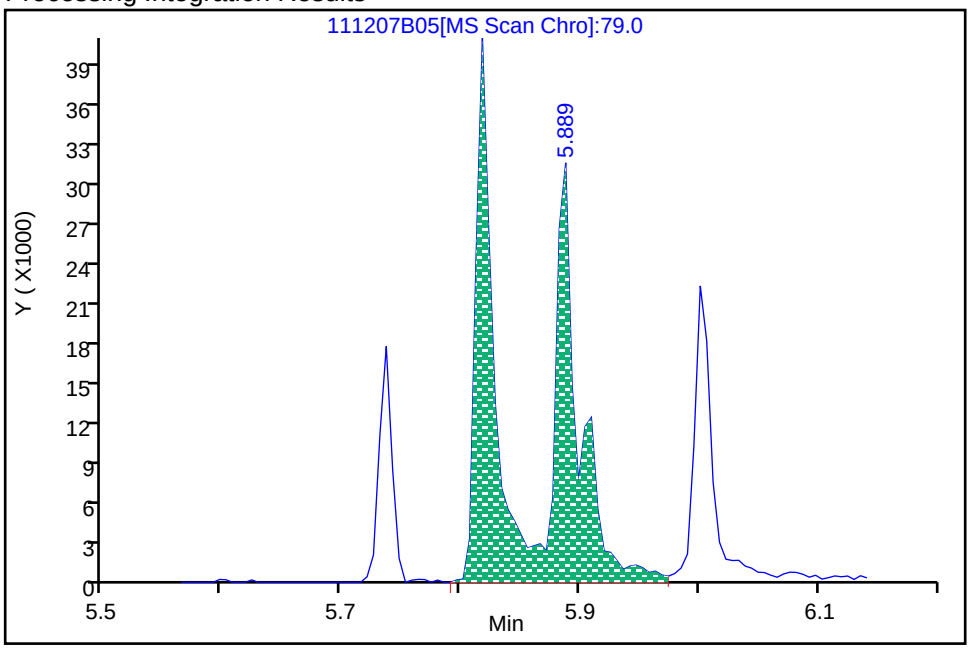
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B05.d		
Injection Date:	07-Dec-2019 20:44:30	Inst. ID:	msd11.i
Client ID:	1STD002CB	Lab ID:	SVMS 4159
Sample Info:	11120719B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

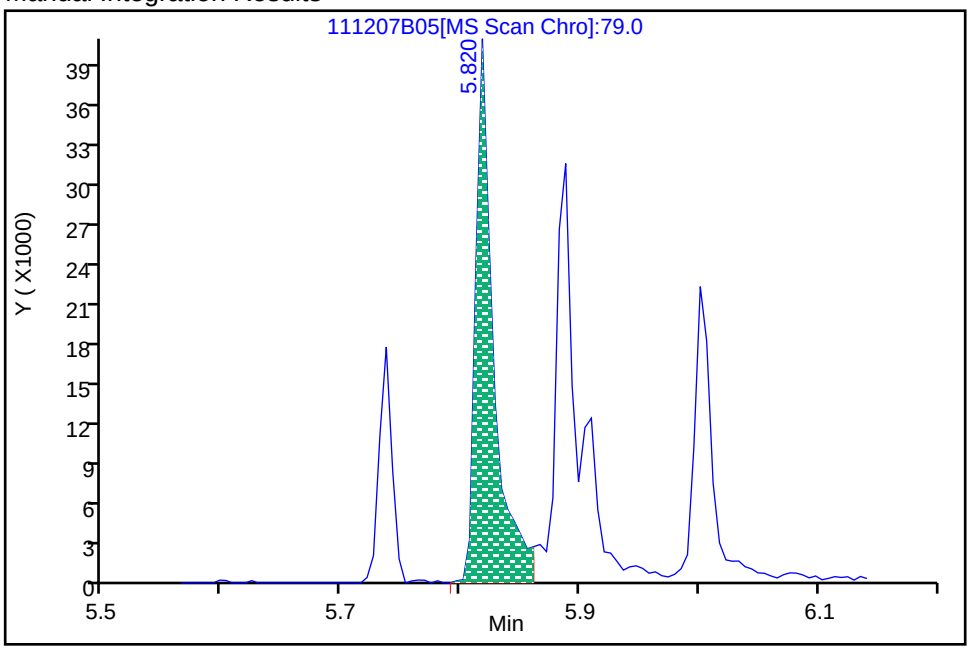
Processing Integration Results

RT: 5.889
Area: 84644
Amount: 5.0164
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 42261
Amount: 1.8991
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:16:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

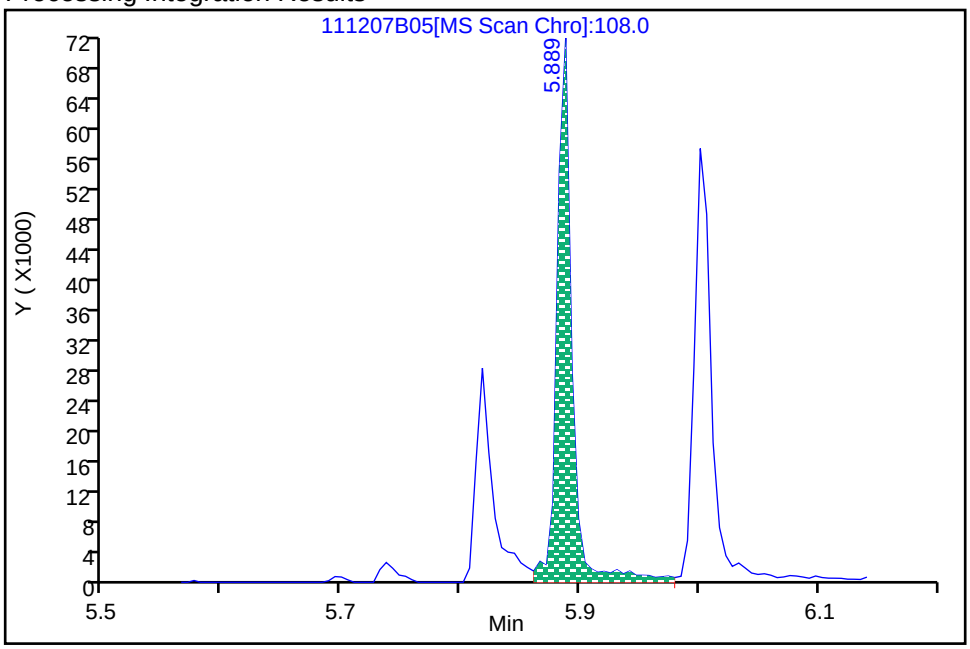
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B05.d		
Injection Date:	07-Dec-2019 20:44:30	Inst. ID:	msd11.i
Client ID:	1STD002CB	Lab ID:	SVMS 4159
Sample Info:	11120719B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

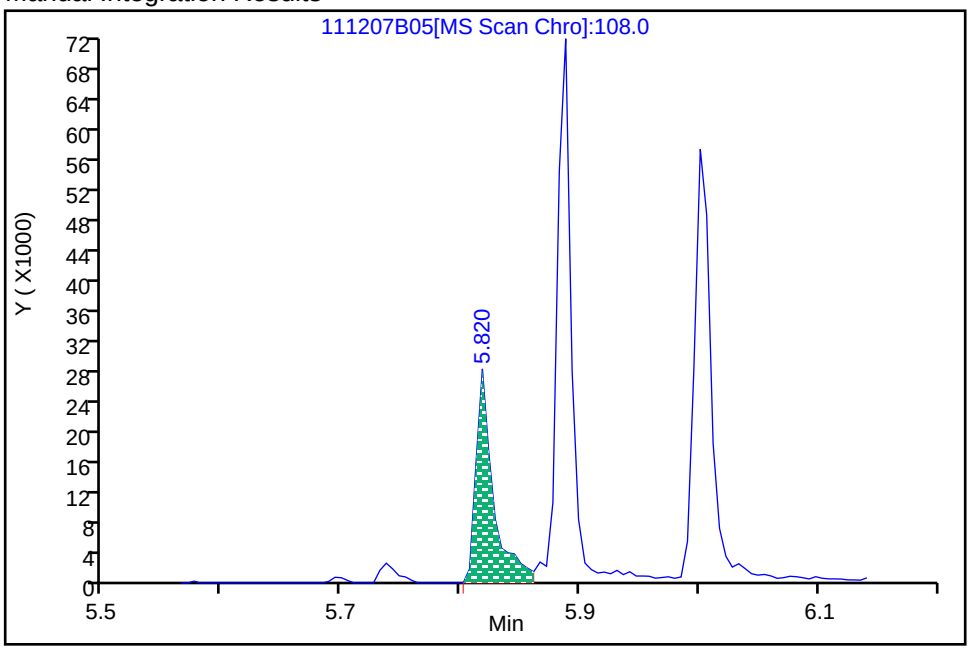
Processing Integration Results

RT: 5.889
Area: 63112
Amount: 5.0164
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 28623
Amount: 1.8991
Amount Units: ng



Data Editor: scd, 07-Dec-2019 21:15:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

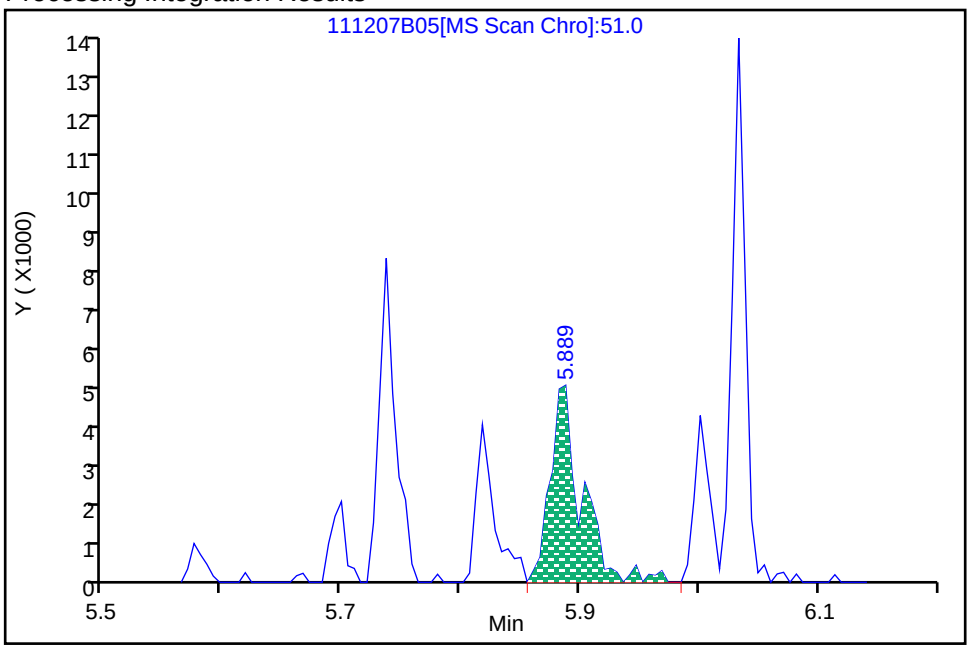
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B05.d		
Injection Date:	07-Dec-2019 20:44:30	Inst. ID:	msd11.i
Client ID:	1STD002CB	Lab ID:	SVMS 4159
Sample Info:	11120719B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

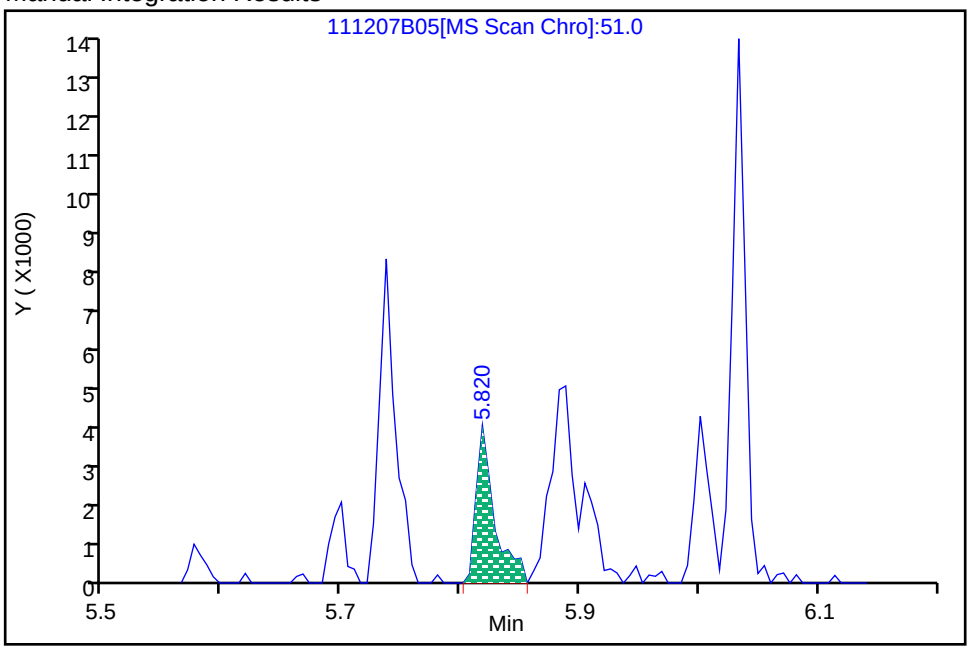
Processing Integration Results

RT: 5.889
Area: 8642
Amount: 5.0164
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 4094
Amount: 1.8991
Amount Units: ng



Data Editor: scd, 07-Dec-2019 21:15:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

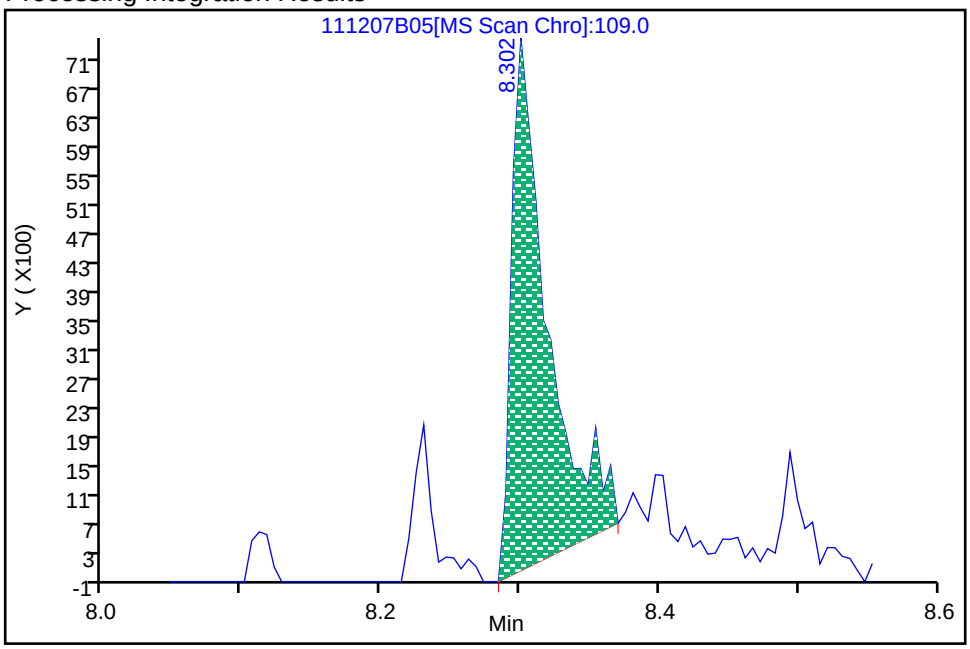
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B05.d		
Injection Date:	07-Dec-2019 20:44:30	Inst. ID:	msd11.i
Client ID:	1STD002CB	Lab ID:	SVMS 4159
Sample Info:	11120719B.b, SVMS 4159		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

70 4-Nitrophenol, CAS: 100-02-7

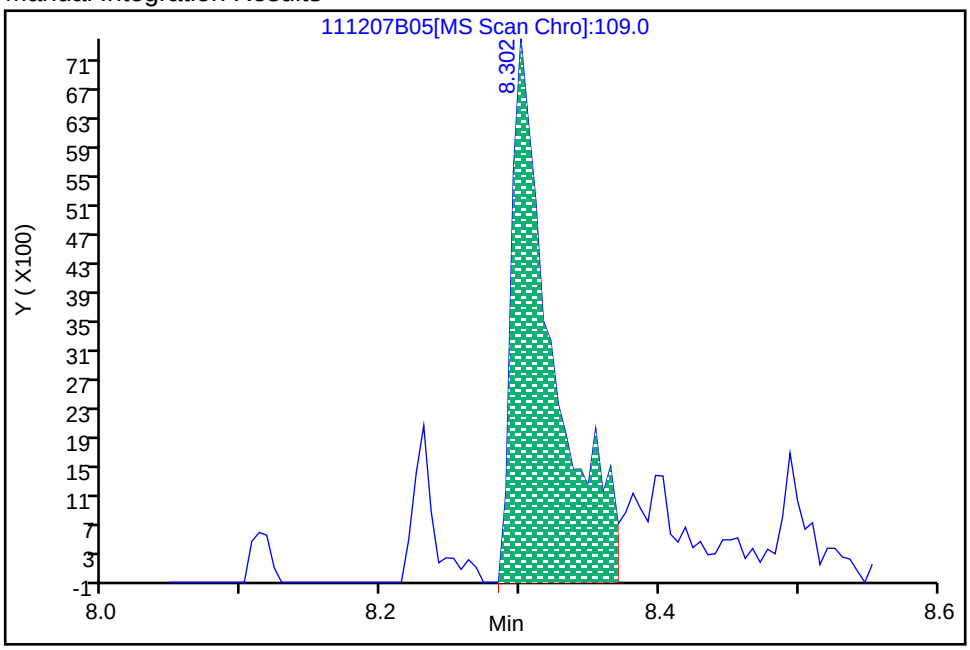
Processing Integration Results

RT: 8.302
Area: 12839
Amount: 3.1740
Amount Units: ng
Conc:



Manual Integration Results

RT: 8.302
Area: 15019
Amount: 4.2416
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B06.d
Lab Sample ID: SVMS 4167 Client Sample ID: 1STD005CB
Injection Date: 07-Dec-2019 21:09:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4167
Misc. Info: 1STD005
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 4 ALS Bottle: 4
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.654	3.654	0.000	7470	5.0000	5.6612	
2 N-Nitrosodimethylamine	42.0	3.852	3.852	0.000	31898	5.0000	5.2337	
1 pyridine	79.0	3.905	3.905	0.000	46557	5.0000	4.7112	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	157055	5.0000	5.1264	
$ 9 Phenol-d5	99.0	5.408	5.408	0.000	207809	5.0000	5.2717	
10 Phenol	94.0	5.419	5.419	0.000	223969	5.0000	5.1517	
11 Aniline	66.0	5.478	5.478	0.000	34118	5.0000	9.4352	
12 bis(2-Chloroethyl)ether	63.0	5.499	5.499	0.000	100935	5.0000	5.4827	
201 n-Decane	57.0	5.558	5.558	0.000	42518	5.0000	4.9312	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	163856	5.0000	5.1979	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	143096	5.0000	4.7819	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	399933	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	157077	5.0000	4.9988	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	123316	5.0000	5.2909	
20 o-Cresol	108.0	5.889	5.889	0.000	154965	5.0000	5.1658	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	149364	5.0000	5.0208	
21 bis(2Chloro1methylethyl)ether	45.0	5.905	5.905	0.000	24164	5.0000	5.7489	
23 m+p-Cresol	107.0	6.002	6.002	0.000	164654	5.0000	5.2123	
26 n-Nitroso-di-n-propylamine	70.0	6.012	6.012	0.000	132992	5.0000	5.3684	
24 Acetophenone	105.0	6.034	6.034	0.000	229163	5.0000	5.2167	
28 Hexachloroethane	117.0	6.152	6.152	0.000	60638	5.0000	4.8615	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	162482	5.0000	4.4818	
30 Nitrobenzene	77.0	6.184	6.184	0.000	172596	5.0000	4.8578	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.360	6.360	0.000	328845	5.0000	5.0792	
34 2,4-Dimethylphenol	107.0	6.430	6.430	0.000	102827	5.0000	4.3699	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	57153	5.0000	4.4893	
36 Benzoic acid	105.0	6.494	6.494	0.000	122680	10.000	8.7330	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	198727	5.0000	4.9146	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	106353	5.0000	4.7965	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	121458	5.0000	4.7823	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	1776571	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	454165	5.0000	4.8331	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	103332	5.0000	4.7824	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	75510	5.0000	4.9436	
49 4-Chloro-3-methylphenol	107.0	7.178	7.178	0.000	126404	5.0000	4.9097	
51 2-Methylnaphthalene	142.0	7.344	7.344	0.000	289440	5.0000	4.7311	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	278925	5.0000	4.8002	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	401539	25.000	26.801	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.483	7.483	0.000	118079	5.0000	4.9027	
54 2,4,6-Trichlorophenol	196.0	7.569	7.569	0.000	69488	5.0000	4.7912	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	71706	5.0000	4.8415	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	291961	5.0000	4.8559	
184 Biphenyl	154.0	7.724	7.724	0.000	322429	5.0000	4.7230	
58 2-Chloronaphthalene	162.0	7.761	7.761	0.000	248570	5.0000	4.8390	
62 Dimethylphthalate	163.0	7.949	7.949	0.000	258118	5.0000	4.8122	
65 2,6-Dinitrotoluene	165.0	8.013	8.013	0.000	45079	5.0000	4.2698	
64 Acenaphthylene	152.0	8.114	8.114	0.000	380886	5.0000	4.8558	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	865838	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	27426	10.000	9.2637	
68 Acenaphthene	153.0	8.259	8.259	0.000	261133	5.0000	4.7676	
70 4-Nitrophenol	109.0	8.296	8.296	0.000	57868	10.000	9.4636	
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	51838	5.0000	4.1852	
71 Dibenzofuran	168.0	8.398	8.398	0.000	338659	5.0000	4.8340	
76 2,3,4,6-Tetrachlorophenol	232.0	8.494	8.494	0.000	54624	5.0000	4.6557	
78 Diethylphthalate	149.0	8.526	8.526	0.000	269215	5.0000	4.8877	
80 4-Chlorophenylphenylether	204.0	8.660	8.660	0.000	123880	5.0000	4.7406	
79 Fluorene	166.0	8.692	8.692	0.000	271727	5.0000	4.7862	
84 4,6-Dinitro-2-methylphenol	198.0	8.708	8.708	0.000	20744	5.0000	5.3335	
86 n-Nitrosodiphenylamine	169.0	8.756	8.756	0.000	177591	5.0000	4.7562	
87 Azobenzene	77.0	8.799	8.799	0.000	374337	5.0000	5.2470	
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	44169	5.0000	4.3078	
94 4-Bromophenylphenylether	248.0	9.077	9.077	0.000	80488	5.0000	4.7911	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	102236	5.0000	4.6703	
202 Octadecane	57.0	9.280	9.280	0.000	67616	5.0000	5.4075	
99 Pentachlorophenol	266.0	9.318	9.318	0.000	77652	10.000	8.8368	
* 102 Phenanthrene-d10	188.0	9.494	9.494	0.000	1332645	20.000	20.000	
103 Phenanthrene	178.0	9.510	9.510	0.000	353121	5.0000	4.6894	
104 Anthracene	178.0	9.553	9.553	0.000	328663	5.0000	4.7508	
106 Carbazole	167.0	9.676	9.676	0.000	318353	5.0000	4.8799	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	406804	5.0000	4.7486	
114 Fluoranthene	202.0	10.570	10.570	0.000	368108	5.0000	4.7897	
116 Pyrene	202.0	10.810	10.810	0.000	377766	5.0000	4.9384	
$ 117 Terphenyl-d14	244.0	10.901	10.901	0.000	298080	5.0000	4.8673	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	160906	5.0000	4.7449	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.094	12.094	0.000	211647	5.0000	4.5452	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	361350	5.0000	4.7579	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1297220	20.000	20.000	
129 Chrysene	228.0	12.276	12.276	0.000	342877	5.0000	4.8696	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	342420	5.0000	4.3674	
132 Benzo(b)fluoranthene	252.0	13.789	13.789	0.000	373940	5.0000	4.8503	
134 Benzo(k)fluoranthene	252.0	13.832	13.832	0.000	376627	5.0000	4.7838	
135 Benzo(a)pyrene	252.0	14.303	14.303	0.000	324150	5.0000	4.8804	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1404137	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.276	16.276	0.000	474279	5.0000	4.7860	
139 Dibenzo(a,h)anthracene	278.0	16.282	16.282	0.000	404317	5.0000	4.7077	
140 Benzo(g,h,i)perylene	276.0	16.838	16.838	0.000	369597	5.0000	4.9218	

Compound Type Legend

$ - Surrogate
* - ISTD

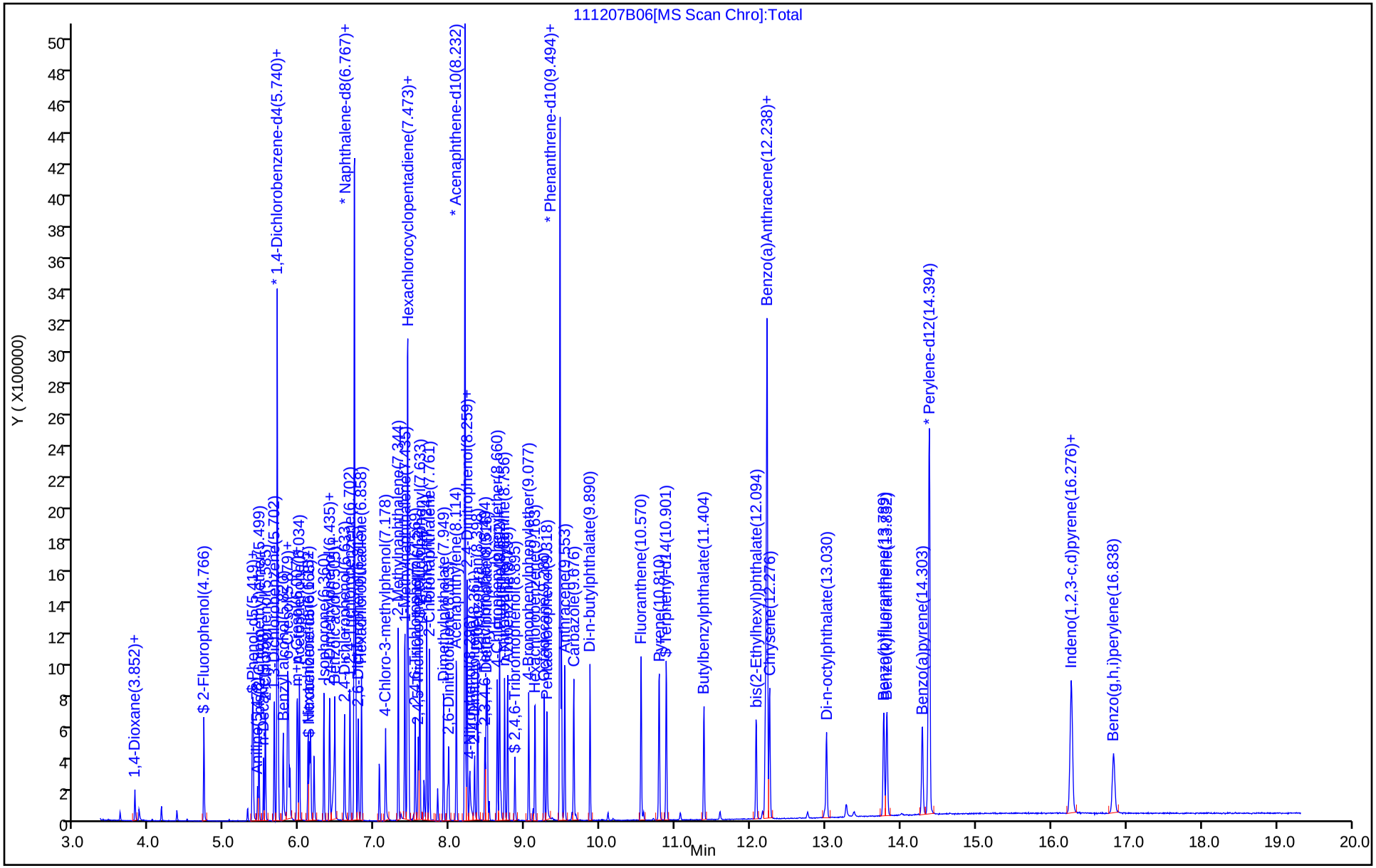
QC Flag Legend

Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B06.d				
Injection Date:	07-Dec-2019 21:09:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD005CB	Lab ID:	SVMS 4167		
Sample Info:	11120719B.b, SVMS 4167				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B07.d
Lab Sample ID: SVMS 4281 Client Sample ID: 1STD010CB
Injection Date: 07-Dec-2019 21:34:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4281
Misc. Info: 1STD010
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 5 ALS Bottle: 5
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:21:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.654	3.654	0.000	15536	10.000	10.939	
2 N-Nitrosodimethylamine	42.0	3.852	3.852	0.000	66824	10.000	10.187	
1 pyridine	79.0	3.905	3.905	0.000	98526	10.000	9.2633	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	334963	10.000	10.158	
$ 9 Phenol-d5	99.0	5.414	5.414	0.000	442284	10.000	10.425	
10 Phenol	94.0	5.424	5.424	0.000	485214	10.000	10.370	
11 Aniline	66.0	5.483	5.483	0.000	9624	10.000	2.4728	
12 bis(2-Chloroethyl)ether	63.0	5.499	5.499	0.000	201577	10.000	10.173	
201 n-Decane	57.0	5.558	5.558	0.000	93491	10.000	10.074	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	342738	10.000	10.102	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	320238	10.000	9.9429	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	430444	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	343045	10.000	10.143	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	275347	10.000	10.976	M
20 o-Cresol	108.0	5.890	5.890	0.000	311336	10.000	9.6428	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	323161	10.000	10.093	
21 bis(2Chloro1methylethyl)ether	45.0	5.911	5.911	0.000	46448	10.000	10.267	
23 m+p-Cresol	107.0	6.002	6.002	0.000	338741	10.000	9.9630	
26 n-Nitroso-di-n-propylamine	70.0	6.013	6.013	0.000	272763	10.000	10.230	
24 Acetophenone	105.0	6.039	6.039	0.000	479445	10.000	10.140	
28 Hexachloroethane	117.0	6.152	6.152	0.000	134178	10.000	9.995	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	352954	10.000	9.2866	
30 Nitrobenzene	77.0	6.184	6.184	0.000	383563	10.000	10.465	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.360	6.360	0.000	674068	10.000	10.093	
34 2,4-Dimethylphenol	107.0	6.435	6.435	0.000	217749	10.000	8.9703	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	141483	10.000	8.9591	
36 Benzoic acid	105.0	6.510	6.510	0.000	328831	20.000	17.953	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	419671	10.000	10.061	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	228263	10.000	9.9792	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	258610	10.000	9.8706	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	1832714	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	942428	10.000	9.7218	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	221293	10.000	9.9281	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	156311	10.000	9.9201	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	270245	10.000	10.175	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	607864	10.000	9.6315	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	586979	10.000	9.7922	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	860268	50.000	57.640	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.489	7.489	0.000	244581	10.000	10.194	
54 2,4,6-Trichlorophenol	196.0	7.569	7.569	0.000	148281	10.000	10.264	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	153438	10.000	10.400	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	600316	10.000	10.023	
184 Biphenyl	154.0	7.724	7.724	0.000	684927	10.000	10.072	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	508968	10.000	9.9465	
62 Dimethylphthalate	163.0	7.949	7.949	0.000	538152	10.000	10.072	
65 2,6-Dinitrotoluene	165.0	8.018	8.018	0.000	108395	10.000	9.1551	
64 Acenaphthylene	152.0	8.120	8.120	0.000	771632	10.000	9.8752	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	862511	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	86696	20.000	18.347	
68 Acenaphthene	153.0	8.259	8.259	0.000	546966	10.000	10.025	
70 4-Nitrophenol	109.0	8.291	8.291	0.000	137034	20.000	19.299	
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	128196	10.000	9.1146	
71 Dibenzofuran	168.0	8.403	8.403	0.000	692161	10.000	9.9180	
76 2,3,4,6-Tetrachlorophenol	232.0	8.494	8.494	0.000	116570	10.000	9.9738	
78 Diethylphthalate	149.0	8.532	8.532	0.000	550363	10.000	10.031	
80 4-Chlorophenylphenylether	204.0	8.660	8.660	0.000	259848	10.000	9.9822	
79 Fluorene	166.0	8.692	8.692	0.000	562235	10.000	9.9415	
84 4,6-Dinitro-2-methylphenol	198.0	8.708	8.708	0.000	57674	10.000	9.3492	
86 n-Nitrosodiphenylamine	169.0	8.756	8.756	0.000	360998	10.000	9.7331	
87 Azobenzene	77.0	8.799	8.799	0.000	736133	10.000	10.388	
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	103166	10.000	9.2368	
94 4-Bromophenylphenylether	248.0	9.077	9.077	0.000	163189	10.000	9.7790	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	217799	10.000	10.016	
202 Octadecane	57.0	9.281	9.281	0.000	126350	10.000	10.172	
99 Pentachlorophenol	266.0	9.318	9.318	0.000	195828	20.000	18.802	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1323763	20.000	20.000	
103 Phenanthrene	178.0	9.511	9.511	0.000	747386	10.000	9.992	
104 Anthracene	178.0	9.553	9.553	0.000	665393	10.000	9.6827	
106 Carbazole	167.0	9.676	9.676	0.000	664206	10.000	10.250	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	849225	10.000	9.9796	
114 Fluoranthene	202.0	10.570	10.570	0.000	751332	10.000	9.8416	
116 Pyrene	202.0	10.810	10.810	0.000	769027	10.000	10.482	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	625677	10.000	10.652	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	340498	10.000	10.469	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.099	12.099	0.000	461921	10.000	9.6085	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	721262	10.000	9.9017	
* 128 Chrysene-d12	240.0	12.244	12.244	0.000	1244181	20.000	20.000	
129 Chrysene	228.0	12.276	12.276	0.000	703540	10.000	10.418	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	754991	10.000	8.8935	
132 Benzo(b)fluoranthene	252.0	13.795	13.795	0.000	785665	10.000	10.321	
134 Benzo(k)fluoranthene	252.0	13.838	13.838	0.000	761160	10.000	9.7912	
135 Benzo(a)pyrene	252.0	14.303	14.303	0.000	629362	10.000	9.5965	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1386474	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.282	16.282	0.000	996392	10.000	10.183	
139 Dibenzo(a,h)anthracene	278.0	16.293	16.293	0.000	850167	10.000	10.025	
140 Benzo(g,h,i)perylene	276.0	16.849	16.849	0.000	759560	10.000	10.244	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

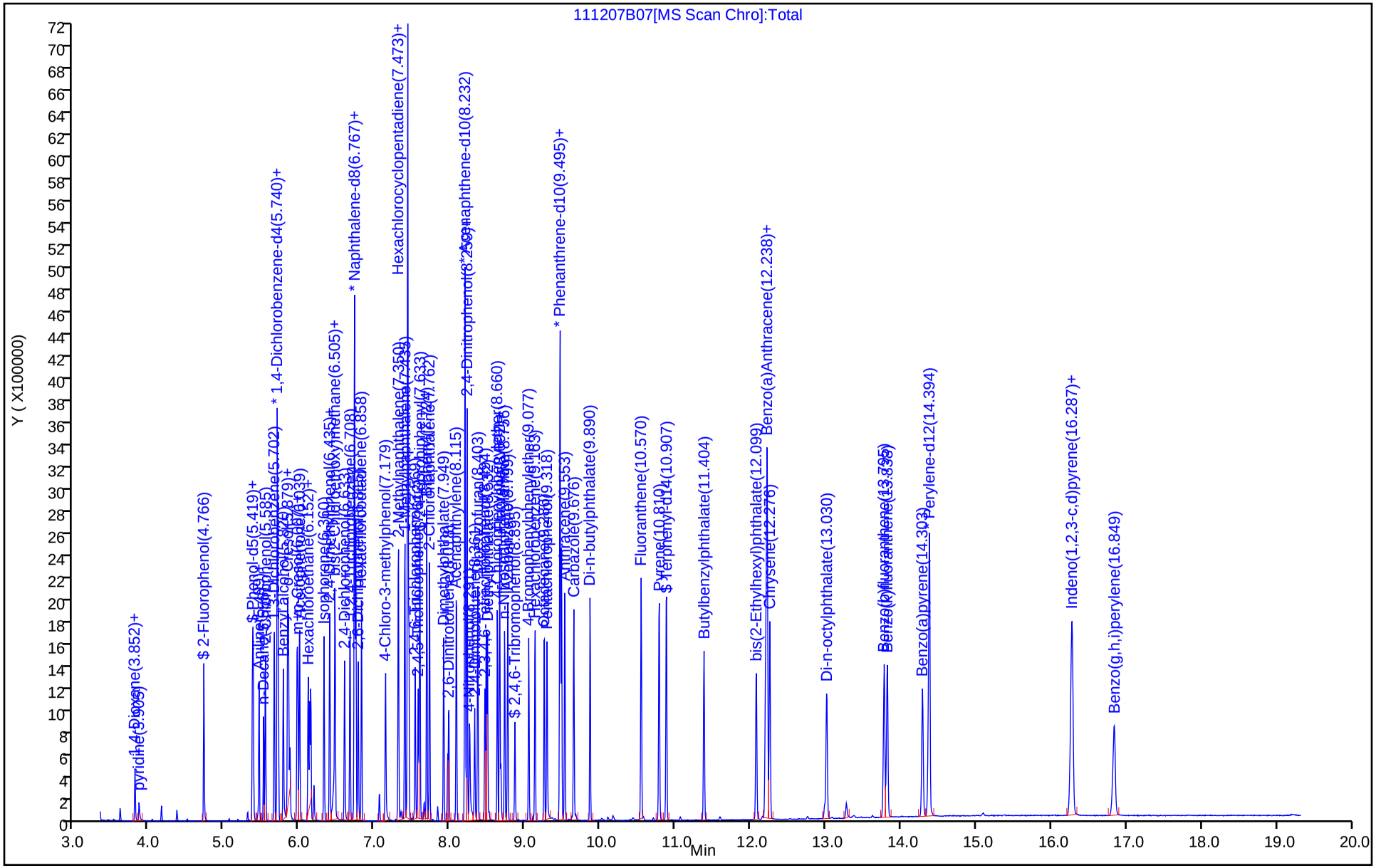
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B07.d				
Injection Date:	07-Dec-2019 21:34:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD010CB	Lab ID:	SVMS 4281		
Sample Info:	11120719B.b, SVMS 4281				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

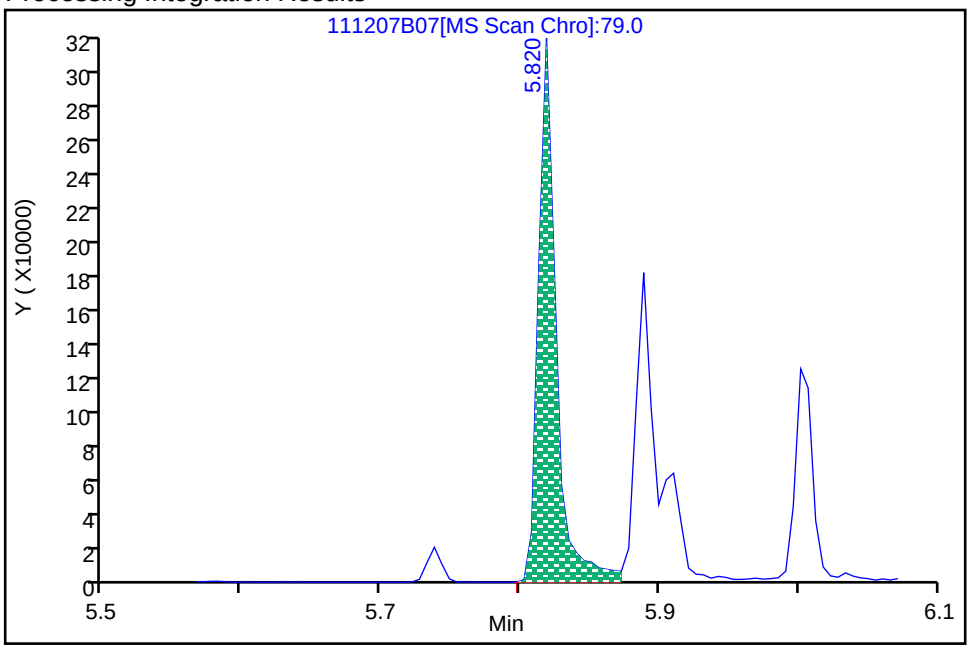
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B07.d		
Injection Date:	07-Dec-2019 21:34:30	Inst. ID:	msd11.i
Client ID:	1STD010CB	Lab ID:	SVMS 4281
Sample Info:	11120719B.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

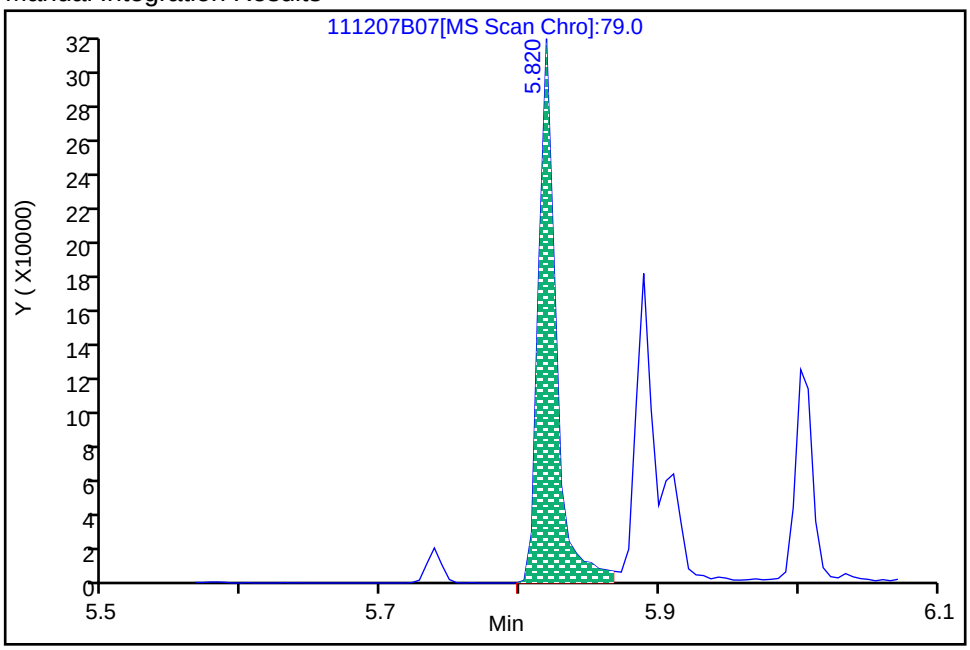
Processing Integration Results

RT: 5.820
Area: 276300
Amount: 12.899
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 275347
Amount: 10.976
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:21:30
Audit Action: Mint
Audit Reason:

Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

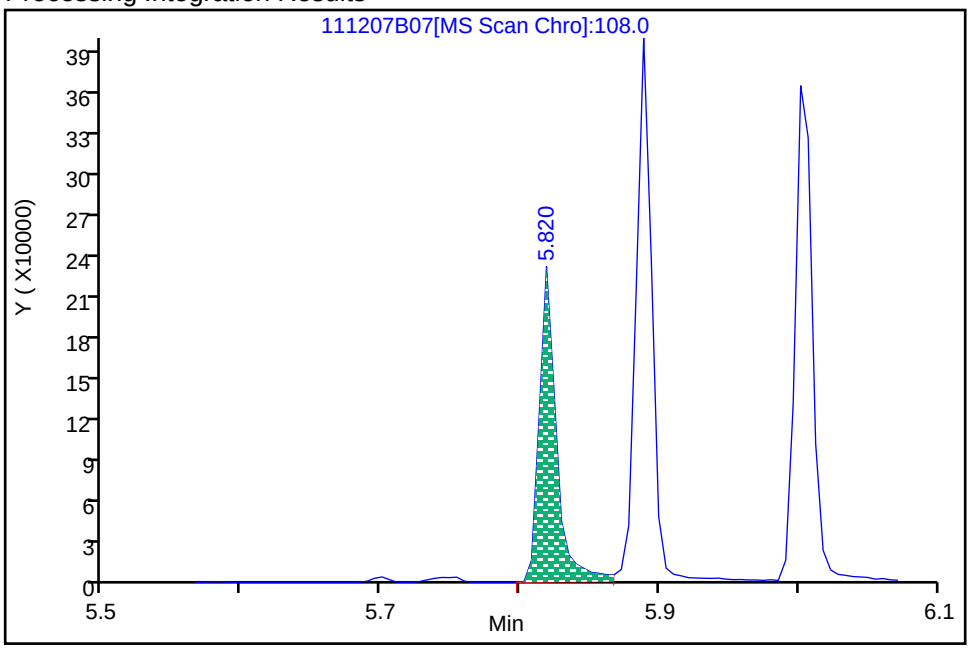
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B07.d		
Injection Date:	07-Dec-2019 21:34:30	Inst. ID:	msd11.i
Client ID:	1STD010CB	Lab ID:	SVMS 4281
Sample Info:	11120719B.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

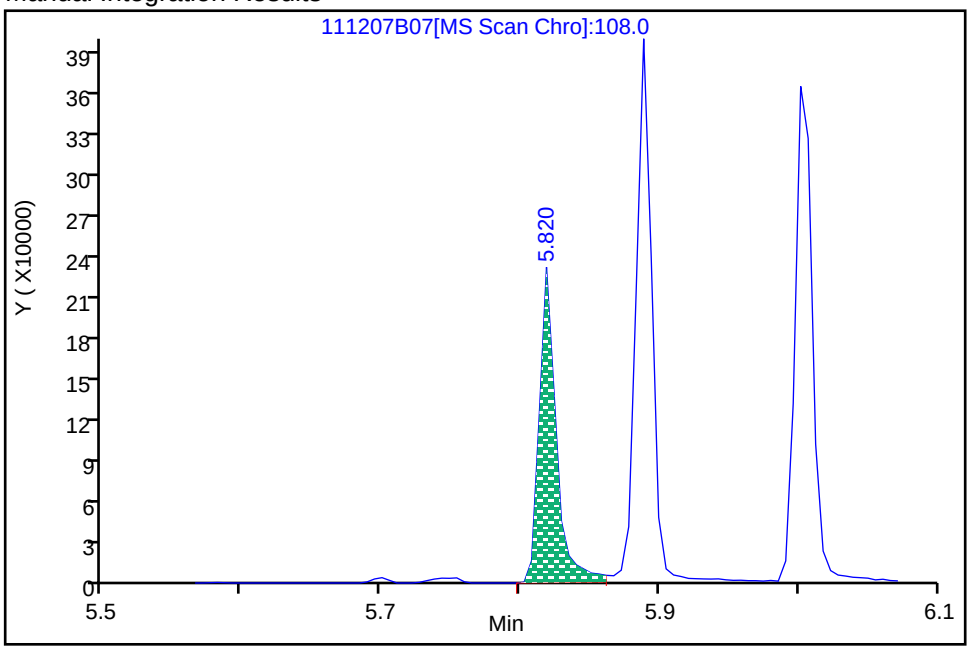
Processing Integration Results

RT: 5.820
Area: 194653
Amount: 12.899
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 193552
Amount: 10.976
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:21:30
Audit Action: Mint
Audit Reason:

Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B08.d
Lab Sample ID: SVMS 4162 Client Sample ID: 1STD015CB
Injection Date: 07-Dec-2019 21:59:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4162
Misc. Info: 1STD015
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 6 ALS Bottle: 6
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:21:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.654	3.654	0.000	21480	15.000	13.663	
2 N-Nitrosodimethylamine	42.0	3.852	3.852	0.000	110472	15.000	15.214	
1 pyridine	79.0	3.911	3.911	0.000	176445	15.000	14.986	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	560046	15.000	15.343	
$ 9 Phenol-d5	99.0	5.414	5.414	0.000	718194	15.000	15.292	
10 Phenol	94.0	5.424	5.424	0.000	779764	15.000	15.055	
11 Aniline	66.0	5.483	5.483	0.000	49363	15.000	11.458	
12 bis(2-Chloroethyl)ether	63.0	5.499	5.499	0.000	317958	15.000	14.496	
201 n-Decane	57.0	5.558	5.558	0.000	151394	15.000	14.738	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	561002	15.000	14.937	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	544985	15.000	15.286	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	476484	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	576082	15.000	15.388	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	443968	15.000	15.988	M
20 o-Cresol	108.0	5.890	5.890	0.000	534190	15.000	14.947	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	543260	15.000	15.327	
21 bis(2Chloro1methylethyl)ether	45.0	5.911	5.911	0.000	70326	15.000	14.043	
23 m+p-Cresol	107.0	6.007	6.007	0.000	580077	15.000	15.413	
26 n-Nitroso-di-n-propylamine	70.0	6.018	6.018	0.000	425044	15.000	14.401	
24 Acetophenone	105.0	6.039	6.039	0.000	774440	15.000	14.797	
28 Hexachloroethane	117.0	6.152	6.152	0.000	230583	15.000	15.516	
$ 29 Nitrobenzene-d5	82.0	6.173	6.173	0.000	593550	15.000	14.995	
30 Nitrobenzene	77.0	6.189	6.189	0.000	627354	15.000	16.528	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.366	6.366	0.000	1075893	15.000	15.555	
34 2,4-Dimethylphenol	107.0	6.435	6.435	0.000	383808	15.000	15.268	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	251475	15.000	14.449	
36 Benzoic acid	105.0	6.526	6.526	0.000	593342	30.000	29.081	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	668534	15.000	15.476	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	377624	15.000	15.942	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	422258	15.000	15.563	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	1897930	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	1532082	15.000	15.261	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	358091	15.000	15.513	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	254188	15.000	15.577	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	437639	15.000	15.912	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	1006278	15.000	15.396	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	940604	15.000	15.152	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	1338003	75.000	84.361	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.489	7.489	0.000	384755	15.000	15.091	
54 2,4,6-Trichlorophenol	196.0	7.574	7.574	0.000	240990	15.000	15.696	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	245253	15.000	15.642	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	964627	15.000	15.155	
184 Biphenyl	154.0	7.724	7.724	0.000	1107710	15.000	15.328	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	811753	15.000	14.928	
62 Dimethylphthalate	163.0	7.954	7.954	0.000	852200	15.000	15.008	
65 2,6-Dinitrotoluene	165.0	8.018	8.018	0.000	184844	15.000	14.198	
64 Acenaphthylene	152.0	8.120	8.120	0.000	1266513	15.000	15.252	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	916582	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	178587	30.000	29.582	
68 Acenaphthene	153.0	8.259	8.259	0.000	888627	15.000	15.326	
70 4-Nitrophenol	109.0	8.296	8.296	0.000	227519	30.000	28.847	
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	222585	15.000	14.347	
71 Dibenzofuran	168.0	8.403	8.403	0.000	1106506	15.000	14.920	
76 2,3,4,6-Tetrachlorophenol	232.0	8.494	8.494	0.000	190373	15.000	15.328	
78 Diethylphthalate	149.0	8.532	8.532	0.000	889625	15.000	15.257	
80 4-Chlorophenylphenylether	204.0	8.665	8.665	0.000	404608	15.000	14.626	
79 Fluorene	166.0	8.692	8.692	0.000	897853	15.000	14.939	
84 4,6-Dinitro-2-methylphenol	198.0	8.714	8.714	0.000	108082	15.000	14.175	
86 n-Nitrosodiphenylamine	169.0	8.762	8.762	0.000	595410	15.000	15.182	
87 Azobenzene	77.0	8.799	8.799	0.000	1111249	15.000	14.830	
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	178115	15.000	14.664	
94 4-Bromophenylphenylether	248.0	9.083	9.083	0.000	265570	15.000	15.051	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	355282	15.000	15.452	
202 Octadecane	57.0	9.286	9.286	0.000	180610	15.000	13.752	
99 Pentachlorophenol	266.0	9.323	9.323	0.000	330410	30.000	28.597	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1399709	20.000	20.000	
103 Phenanthrene	178.0	9.516	9.516	0.000	1195736	15.000	15.118	
104 Anthracene	178.0	9.559	9.559	0.000	1110135	15.000	15.278	
106 Carbazole	167.0	9.676	9.676	0.000	1054345	15.000	15.387	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	1396920	15.000	15.525	
114 Fluoranthene	202.0	10.570	10.570	0.000	1229830	15.000	15.235	
116 Pyrene	202.0	10.810	10.810	0.000	1247392	15.000	15.504	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	986612	15.000	15.317	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	573457	15.000	16.078	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.099	12.099	0.000	778055	15.000	14.450	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	1181602	15.000	14.792	
* 128 Chrysene-d12	240.0	12.244	12.244	0.000	1364404	20.000	20.000	
129 Chrysene	228.0	12.281	12.281	0.000	1109216	15.000	14.978	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	1290667	15.000	14.198	
132 Benzo(b)fluoranthene	252.0	13.795	13.795	0.000	1265760	15.000	16.020	
134 Benzo(k)fluoranthene	252.0	13.843	13.843	0.000	1276921	15.000	15.826	
135 Benzo(a)pyrene	252.0	14.308	14.308	0.000	1098377	15.000	16.136	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1439033	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.293	16.293	0.000	1657301	15.000	16.318	
139 Dibenzo(a,h)anthracene	278.0	16.298	16.298	0.000	1433650	15.000	16.288	
140 Benzo(g,h,i)perylene	276.0	16.854	16.854	0.000	1225016	15.000	15.918	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

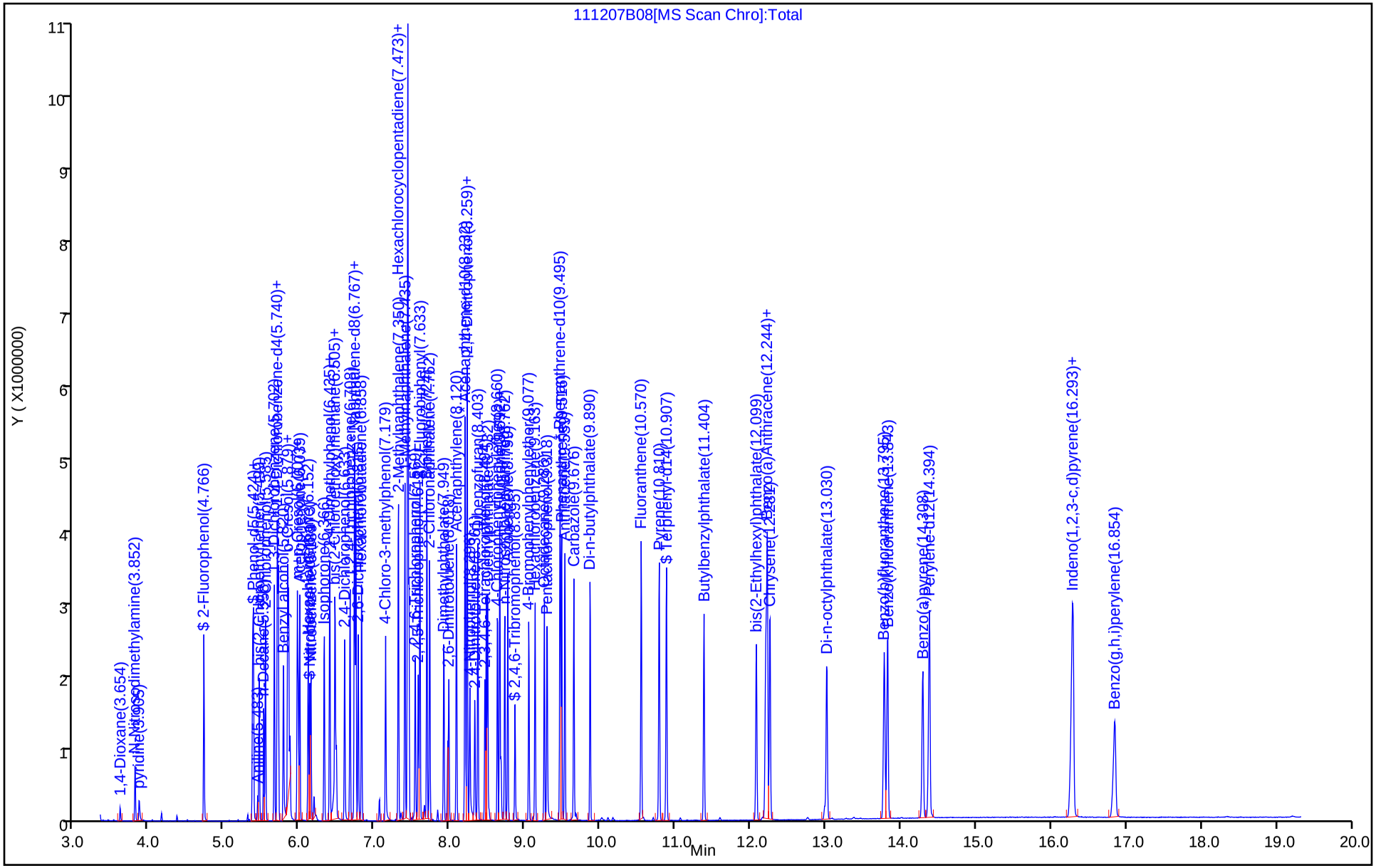
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B08.d				
Injection Date:	07-Dec-2019 21:59:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD015CB	Lab ID:	SVMS 4162		
Sample Info:	11120719B.b, SVMS 4162				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

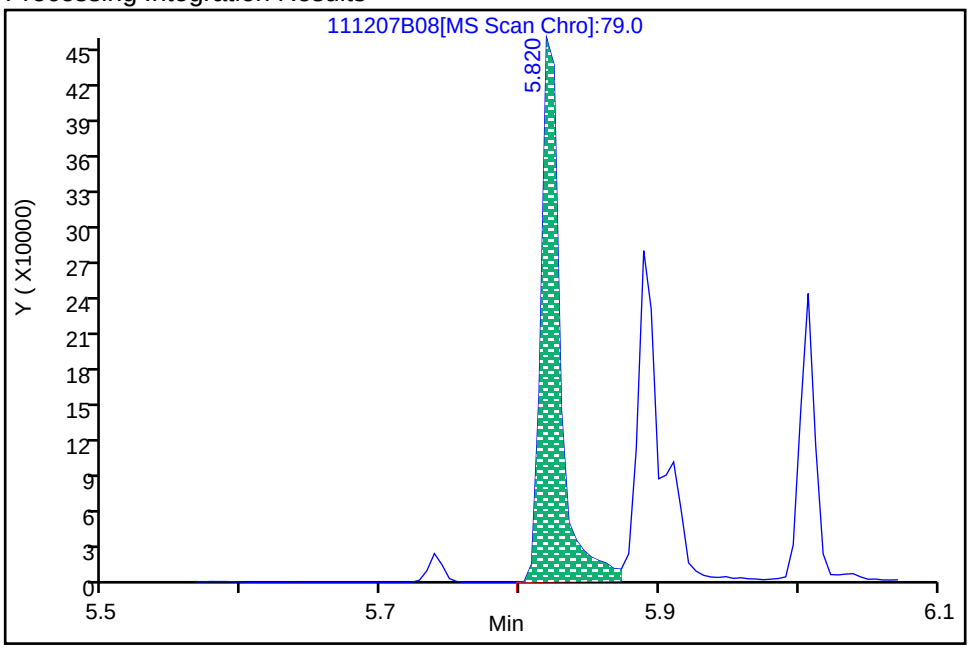
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B08.d		
Injection Date:	07-Dec-2019 21:59:30	Inst. ID:	msd11.i
Client ID:	1STD015CB	Lab ID:	SVMS 4162
Sample Info:	11120719B.b, SVMS 4162		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

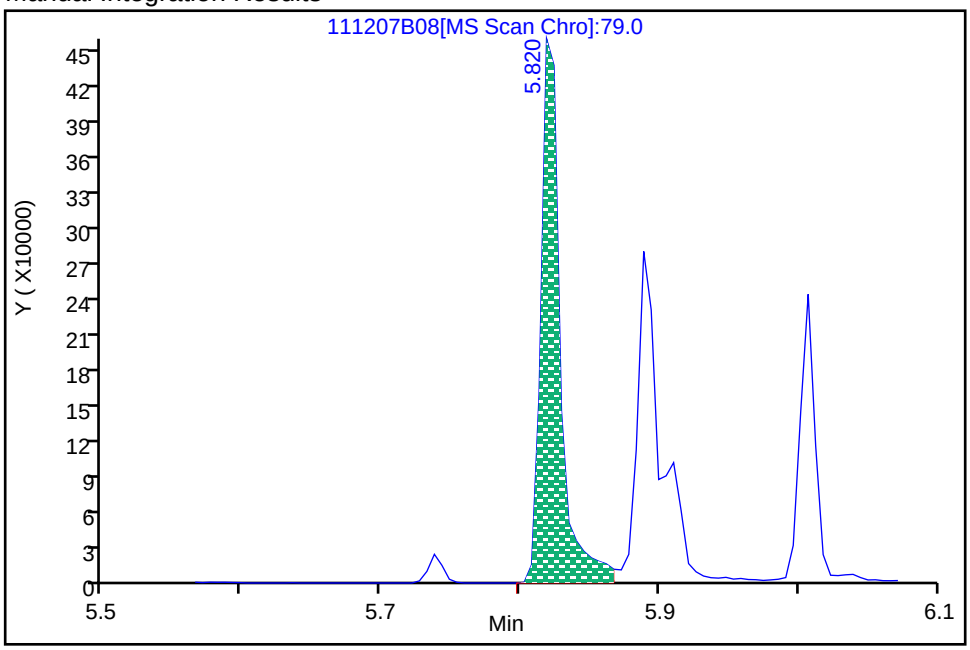
Processing Integration Results

RT: 5.820
Area: 443781
Amount: 18.715
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 443968
Amount: 15.988
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:21:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 08-Dec-2019 13:08:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

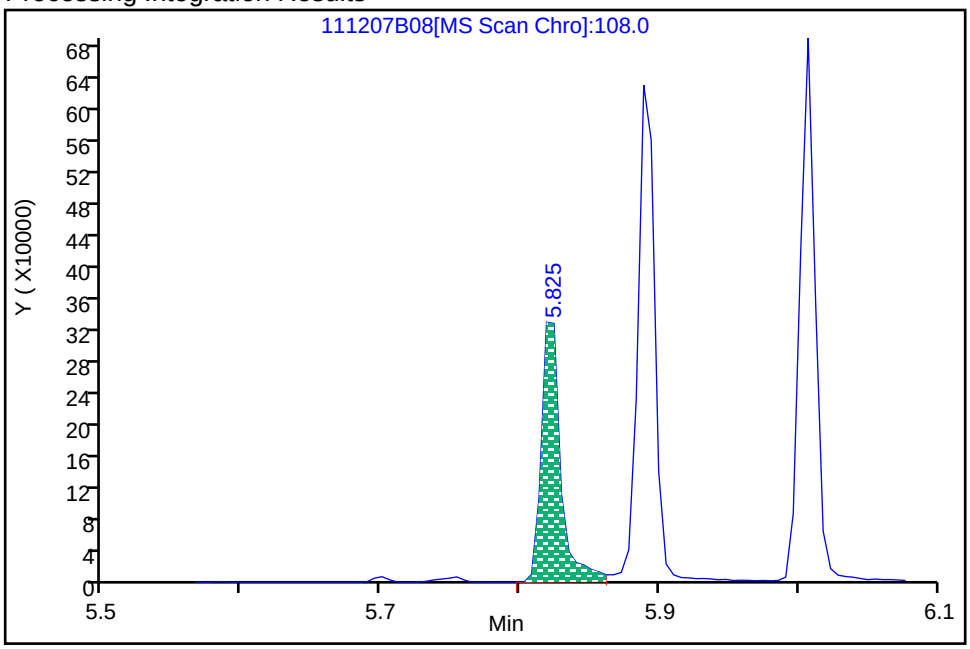
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B08.d		
Injection Date:	07-Dec-2019 21:59:30	Inst. ID:	msd11.i
Client ID:	1STD015CB	Lab ID:	SVMS 4162
Sample Info:	11120719B.b, SVMS 4162		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

18 Benzyl alcohol, CAS: 100-51-6

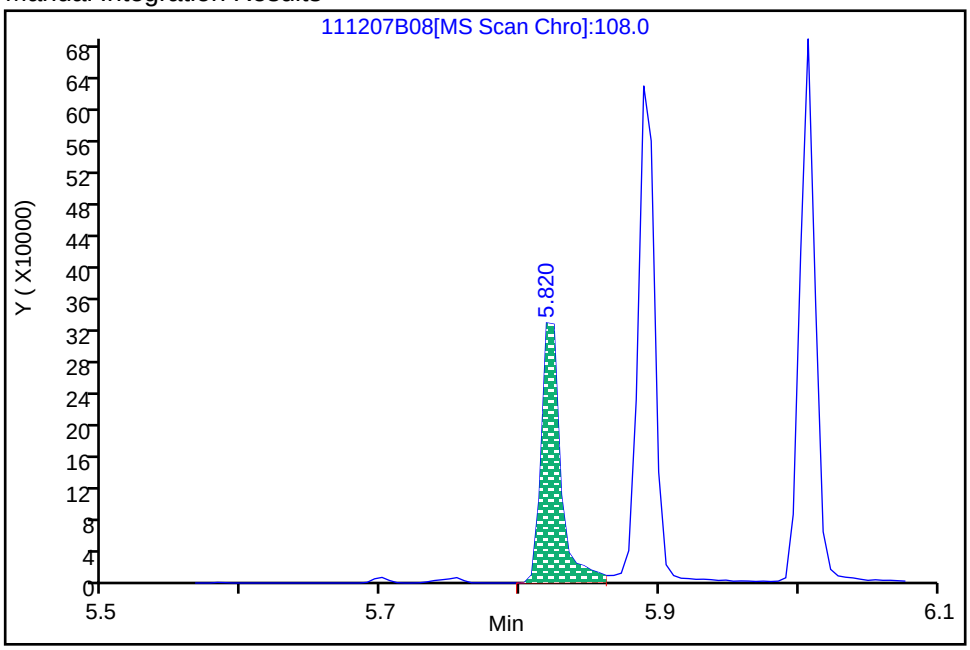
Processing Integration Results

RT: 5.825
Area: 319422
Amount: 18.715
Amount Units: ng
Conc:



Manual Integration Results

RT: 5.820
Area: 320659
Amount: 15.988
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:21:30
Audit Action: Mint
Audit Reason: Split Peak

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B09.d
Lab Sample ID: SVMS 4168 Client Sample ID: 1STD020CB
Injection Date: 07-Dec-2019 22:24:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4168
Misc. Info: 1STD020
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 7 ALS Bottle: 7
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.654	3.654	0.000	27613	20.000	17.374	
2 N-Nitrosodimethylamine	42.0	3.852	3.852	0.000	143592	20.000	19.560	
1 pyridine	79.0	3.905	3.905	0.000	241456	20.000	20.285	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	734083	20.000	19.893	
$ 9 Phenol-d5	99.0	5.414	5.414	0.000	944248	20.000	19.887	
10 Phenol	94.0	5.424	5.424	0.000	1033474	20.000	19.736	
11 Aniline	66.0	5.483	5.483	0.000	44087	20.000	10.122	
12 bis(2-Chloroethyl)ether	63.0	5.499	5.499	0.000	394129	20.000	17.774	
201 n-Decane	57.0	5.558	5.558	0.000	204891	20.000	19.728	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	742984	20.000	19.567	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	729896	20.000	20.250	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	481725	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	756377	20.000	19.984	
18 Benzyl alcohol	79.0	5.825	5.825	0.000	573991	20.000	20.446	
20 o-Cresol	108.0	5.895	5.895	0.000	704065	20.000	19.485	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	719132	20.000	20.069	
21 bis(2Chloro1methylethyl)ether	45.0	5.911	5.911	0.000	82933	20.000	16.381	
23 m+p-Cresol	107.0	6.007	6.007	0.000	744307	20.000	19.561	
26 n-Nitroso-di-n-propylamine	70.0	6.018	6.018	0.000	542166	20.000	18.170	
24 Acetophenone	105.0	6.039	6.039	0.000	1008235	20.000	19.055	
28 Hexachloroethane	117.0	6.152	6.152	0.000	303038	20.000	20.170	
$ 29 Nitrobenzene-d5	82.0	6.173	6.173	0.000	788796	20.000	19.966	
30 Nitrobenzene	77.0	6.189	6.189	0.000	806428	20.000	21.335	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.366	6.366	0.000	1382044	20.000	20.066	
34 2,4-Dimethylphenol	107.0	6.435	6.435	0.000	535226	20.000	21.381	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	349686	20.000	19.662	
36 Benzoic acid	105.0	6.537	6.537	0.000	834301	40.000	39.842	
35 bis(2-Chloroethoxy)methane	93.0	6.510	6.510	0.000	860475	20.000	20.003	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	497402	20.000	21.087	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	547789	20.000	20.275	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	1889977	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	2015686	20.000	20.163	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	477499	20.000	20.773	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	327199	20.000	20.136	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	579959	20.000	21.175	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	1292387	20.000	19.857	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	1225999	20.000	19.833	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	1618386	100.00	105.06	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.489	7.489	0.000	500851	20.000	20.226	
54 2,4,6-Trichlorophenol	196.0	7.574	7.574	0.000	319168	20.000	21.404	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	328779	20.000	21.591	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	1275444	20.000	20.632	
184 Biphenyl	154.0	7.729	7.729	0.000	1444119	20.000	20.574	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	1059421	20.000	20.060	
62 Dimethylphthalate	163.0	7.954	7.954	0.000	1128189	20.000	20.457	
65 2,6-Dinitrotoluene	165.0	8.018	8.018	0.000	250736	20.000	19.507	
64 Acenaphthylene	152.0	8.120	8.120	0.000	1660011	20.000	20.583	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	890213	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.264	8.264	0.000	266536	40.000	40.402	
68 Acenaphthene	153.0	8.259	8.259	0.000	1174527	20.000	20.857	
70 4-Nitrophenol	109.0	8.296	8.296	0.000	302994	40.000	38.692	
73 2,4-Dinitrotoluene	165.0	8.366	8.366	0.000	302445	20.000	19.728	
71 Dibenzofuran	168.0	8.403	8.403	0.000	1462582	20.000	20.305	
76 2,3,4,6-Tetrachlorophenol	232.0	8.500	8.500	0.000	263776	20.000	21.867	
78 Diethylphthalate	149.0	8.532	8.532	0.000	1155827	20.000	20.410	
80 4-Chlorophenylphenylether	204.0	8.665	8.665	0.000	545106	20.000	20.289	
79 Fluorene	166.0	8.692	8.692	0.000	1189921	20.000	20.386	
84 4,6-Dinitro-2-methylphenol	198.0	8.714	8.714	0.000	154669	20.000	19.371	
86 n-Nitrosodiphenylamine	169.0	8.762	8.762	0.000	782749	20.000	20.493	
87 Azobenzene	77.0	8.799	8.799	0.000	1411271	20.000	19.337	
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	243008	20.000	20.277	
94 4-Bromophenylphenylether	248.0	9.083	9.083	0.000	351978	20.000	20.481	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	469703	20.000	20.975	
202 Octadecane	57.0	9.286	9.286	0.000	220116	20.000	17.208	
99 Pentachlorophenol	266.0	9.323	9.323	0.000	460861	40.000	39.934	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1363265	20.000	20.000	
103 Phenanthrene	178.0	9.516	9.516	0.000	1598303	20.000	20.749	
104 Anthracene	178.0	9.559	9.559	0.000	1459959	20.000	20.630	
106 Carbazole	167.0	9.676	9.676	0.000	1346008	20.000	20.169	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	1867385	20.000	21.308	
114 Fluoranthene	202.0	10.575	10.575	0.000	1613636	20.000	20.524	
116 Pyrene	202.0	10.810	10.810	0.000	1643547	20.000	21.009	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	1292224	20.000	20.632	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	765188	20.000	22.064	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.099	12.099	0.000	1038467	20.000	19.620	
127 Benzo(a)Anthracene	228.0	12.228	12.228	0.000	1529964	20.000	19.698	
* 128 Chrysene-d12	240.0	12.244	12.244	0.000	1326667	20.000	20.000	
129 Chrysene	228.0	12.281	12.281	0.000	1439550	20.000	19.991	
131 Di-n-octylphthalate	149.0	13.035	13.035	0.000	1719903	20.000	19.449	
132 Benzo(b)fluoranthene	252.0	13.800	13.800	0.000	1624672	20.000	21.433	
134 Benzo(k)fluoranthene	252.0	13.843	13.843	0.000	1686119	20.000	21.782	
135 Benzo(a)pyrene	252.0	14.308	14.308	0.000	1391857	20.000	21.313	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1380587	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.303	16.303	0.000	2171760	20.000	22.289	
139 Dibenzo(a,h)anthracene	278.0	16.303	16.303	0.000	1900902	20.000	22.511	
140 Benzo(g,h,i)perylene	276.0	16.860	16.860	0.000	1579212	20.000	21.389	

Compound Type Legend

$ - Surrogate
* - ISTD

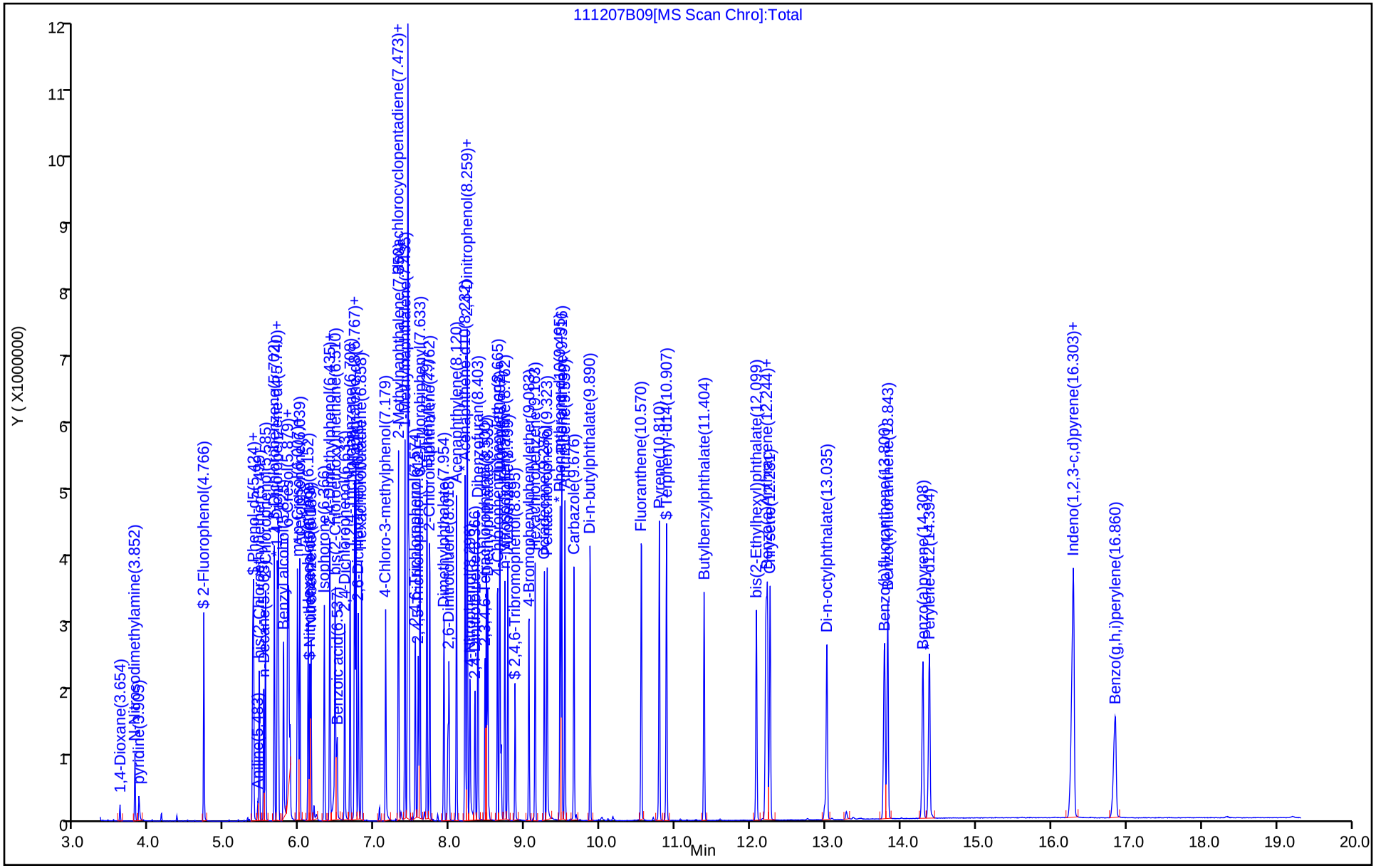
QC Flag Legend

Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B09.d				
Injection Date:	07-Dec-2019 22:24:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD020CB	Lab ID:	SVMS 4168		
Sample Info:	11120719B.b, SVMS 4168				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B10.d
Lab Sample ID: SVMS 4164 Client Sample ID: 1STD025CB
Injection Date: 07-Dec-2019 22:49:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4164
Misc. Info: 1STD025
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 8 ALS Bottle: 8
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:20:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.654	3.654	0.000	39220	25.000	22.992	
2 N-Nitrosodimethylamine	42.0	3.857	3.857	0.000	197046	25.000	25.008	
1 pyridine	79.0	3.911	3.911	0.000	385980	25.000	30.212	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	995856	25.000	25.144	
$ 9 Phenol-d5	99.0	5.419	5.419	0.000	1279193	25.000	25.101	
10 Phenol	94.0	5.430	5.430	0.000	1370464	25.000	24.384	
11 Aniline	66.0	5.483	5.483	0.000	46714	25.000	9.993	
12 bis(2-Chloroethyl)ether	63.0	5.504	5.504	0.000	524160	25.000	22.024	
201 n-Decane	57.0	5.563	5.563	0.000	279962	25.000	25.116	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	1023190	25.000	25.107	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	1017587	25.000	26.304	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	517028	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	1040952	25.000	25.625	
18 Benzyl alcohol	79.0	5.825	5.825	0.000	779544	25.000	25.872	
20 o-Cresol	108.0	5.895	5.895	0.000	969434	25.000	24.997	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	982621	25.000	25.549	
21 bis(2Chloro1methylethyl)ether	45.0	5.911	5.911	0.000	107413	25.000	19.767	
23 m+p-Cresol	107.0	6.013	6.013	0.000	1031612	25.000	25.261	
26 n-Nitroso-di-n-propylamine	70.0	6.023	6.023	0.000	715306	25.000	22.335	
24 Acetophenone	105.0	6.039	6.039	0.000	1359806	25.000	23.944	
28 Hexachloroethane	117.0	6.152	6.152	0.000	422622	25.000	26.209	
$ 29 Nitrobenzene-d5	82.0	6.173	6.173	0.000	1074191	25.000	25.902	
30 Nitrobenzene	77.0	6.189	6.189	0.000	1094421	25.000	27.627	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.366	6.366	0.000	1822570	25.000	25.248	
34 2,4-Dimethylphenol	107.0	6.435	6.435	0.000	788799	25.000	30.065	M
33 2-Nitrophenol	139.0	6.440	6.440	0.000	490329	25.000	25.868	
36 Benzoic acid	105.0	6.547	6.547	0.000	1156644	50.000	51.746	
35 bis(2-Chloroethoxy)methane	93.0	6.510	6.510	0.000	1132972	25.000	25.130	
38 2,4-Dichlorophenol	162.0	6.638	6.638	0.000	689348	25.000	27.884	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	744737	25.000	26.300	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	1980820	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	2633271	25.000	25.133	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	662988	25.000	27.520	
47 Hexachlorobutadiene	224.6	6.863	6.863	0.000	437202	25.000	25.672	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	773143	25.000	26.933	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	1772893	25.000	25.991	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	1678474	25.000	25.907	
53 Hexachlorocyclopentadiene	237.0	7.478	7.478	0.000	1996534	125.00	125.81	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.494	7.494	0.000	676425	25.000	26.516	
54 2,4,6-Trichlorophenol	196.0	7.574	7.574	0.000	440517	25.000	28.676	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	449578	25.000	28.658	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	1700217	25.000	26.698	
184 Biphenyl	154.0	7.730	7.730	0.000	1910925	25.000	26.427	
58 2-Chloronaphthalene	162.0	7.767	7.767	0.000	1451998	25.000	26.687	
62 Dimethylphthalate	163.0	7.954	7.954	0.000	1498510	25.000	26.376	
65 2,6-Dinitrotoluene	165.0	8.024	8.024	0.000	351480	25.000	26.250	
64 Acenaphthylene	152.0	8.120	8.120	0.000	2201293	25.000	26.495	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	917096	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.264	8.264	0.000	395670	50.000	51.607	
68 Acenaphthene	153.0	8.264	8.264	0.000	1553720	25.000	26.782	
70 4-Nitrophenol	109.0	8.302	8.302	0.000	424902	50.000	51.831	
73 2,4-Dinitrotoluene	165.0	8.366	8.366	0.000	416849	25.000	26.103	
71 Dibenzofuran	168.0	8.403	8.403	0.000	1956522	25.000	26.366	
76 2,3,4,6-Tetrachlorophenol	232.0	8.500	8.500	0.000	373786	25.000	30.078	
78 Diethylphthalate	149.0	8.537	8.537	0.000	1558711	25.000	26.717	
80 4-Chlorophenylphenylether	204.0	8.666	8.666	0.000	734885	25.000	26.551	
79 Fluorene	166.0	8.698	8.698	0.000	1617560	25.000	26.899	
84 4,6-Dinitro-2-methylphenol	198.0	8.714	8.714	0.000	219319	25.000	25.374	
86 n-Nitrosodiphenylamine	169.0	8.762	8.762	0.000	1058399	25.000	26.751	
87 Azobenzene	77.0	8.799	8.799	0.000	1821377	25.000	24.093	
$ 88 2,4,6-Tribromophenol	330.0	8.901	8.901	0.000	332434	25.000	26.567	
94 4-Bromophenylphenylether	248.0	9.083	9.083	0.000	474686	25.000	26.666	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	640656	25.000	27.619	
202 Octadecane	57.0	9.286	9.286	0.000	290864	25.000	21.952	
99 Pentachlorophenol	266.0	9.323	9.323	0.000	649067	50.000	53.447	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1412114	20.000	20.000	
103 Phenanthrene	178.0	9.516	9.516	0.000	2115628	25.000	26.514	
104 Anthracene	178.0	9.559	9.559	0.000	1980030	25.000	27.010	
106 Carbazole	167.0	9.676	9.676	0.000	1821895	25.000	26.355	
109 Di-n-butylphthalate	149.0	9.896	9.896	0.000	2481146	25.000	27.333	
114 Fluoranthene	202.0	10.575	10.575	0.000	2201018	25.000	27.027	
116 Pyrene	202.0	10.816	10.816	0.000	2201767	25.000	26.360	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	1767190	25.000	26.428	
122 Butylbenzylphthalate	149.0	11.409	11.409	0.000	1069390	25.000	28.881	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.099	12.099	0.000	1475157	25.000	25.914	
127 Benzo(a)Anthracene	228.0	12.228	12.228	0.000	2101043	25.000	25.336	
* 128 Chrysene-d12	240.0	12.249	12.249	0.000	1416442	20.000	20.000	
129 Chrysene	228.0	12.287	12.287	0.000	2000367	25.000	26.019	
131 Di-n-octylphthalate	149.0	13.035	13.035	0.000	2424505	25.000	26.131	
132 Benzo(b)fluoranthene	252.0	13.800	13.800	0.000	2256101	25.000	28.636	
134 Benzo(k)fluoranthene	252.0	13.848	13.848	0.000	2280660	25.000	28.347	
135 Benzo(a)pyrene	252.0	14.314	14.314	0.000	1935287	25.000	28.513	
* 136 Perylene-d12	264.0	14.399	14.399	0.000	1434912	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.309	16.309	0.000	2934300	25.000	28.975	
139 Dibenzo(a,h)anthracene	278.0	16.319	16.319	0.000	2598901	25.000	29.612	
140 Benzo(g,h,i)perylene	276.0	16.870	16.870	0.000	2089984	25.000	27.235	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

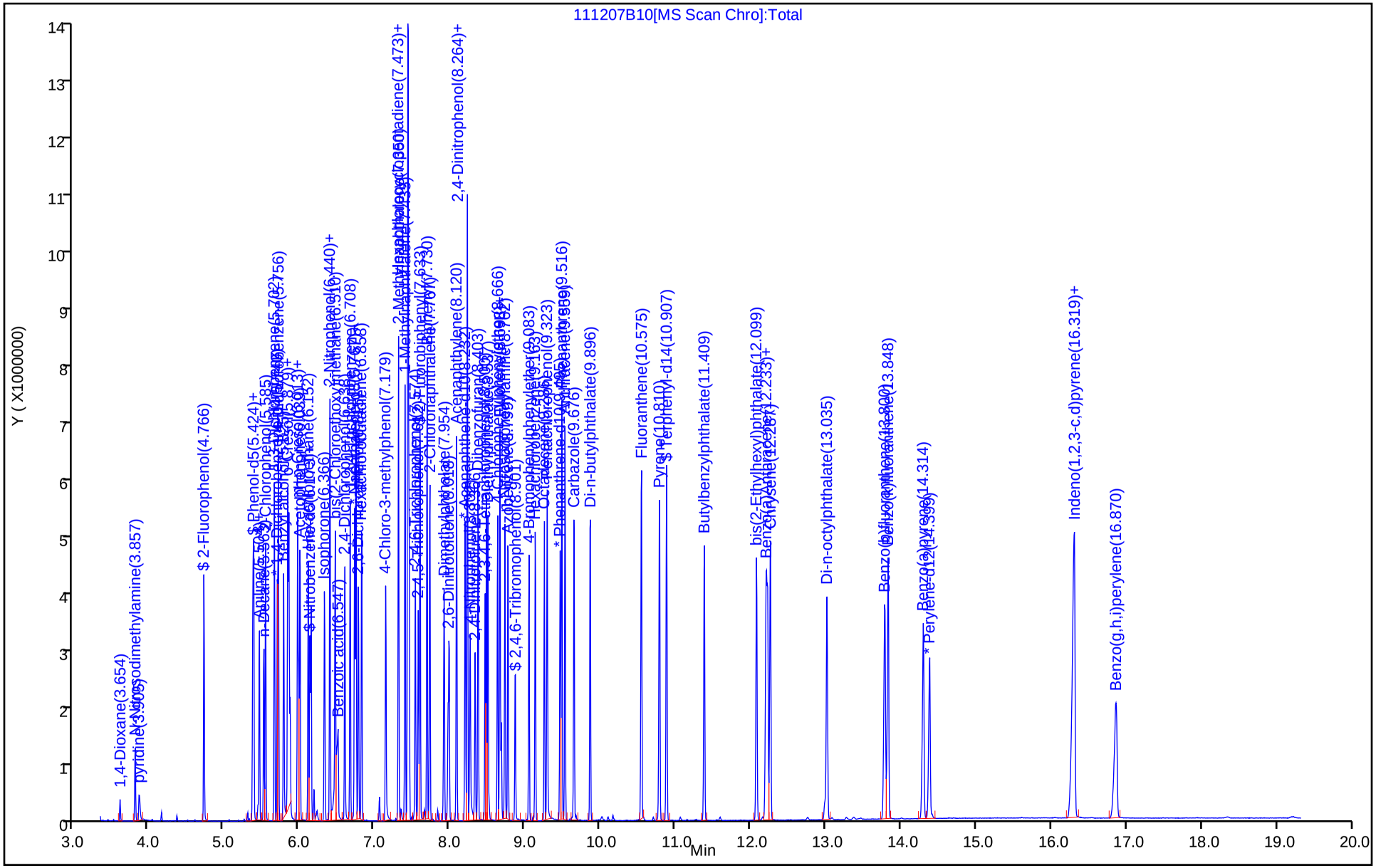
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B10.d				
Injection Date:	07-Dec-2019 22:49:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD025CB	Lab ID:	SVMS 4164		
Sample Info:	11120719B.b, SVMS 4164				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

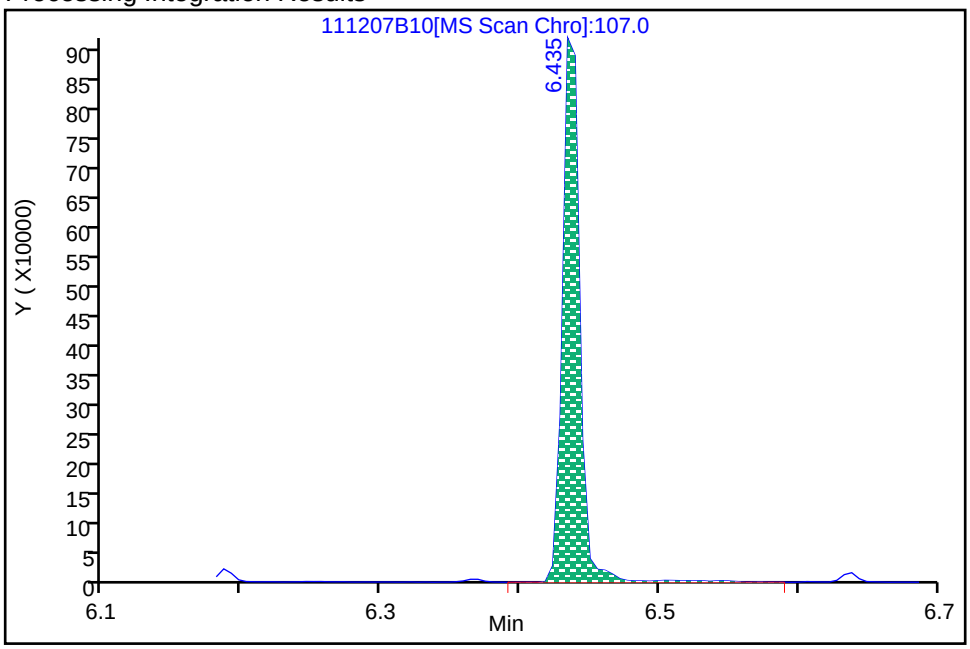
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B10.d		
Injection Date:	07-Dec-2019 22:49:30	Inst. ID:	msd11.i
Client ID:	1STD025CB	Lab ID:	SVMS 4164
Sample Info:	11120719B.b, SVMS 4164		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

34 2,4-Dimethylphenol, CAS: 105-67-9

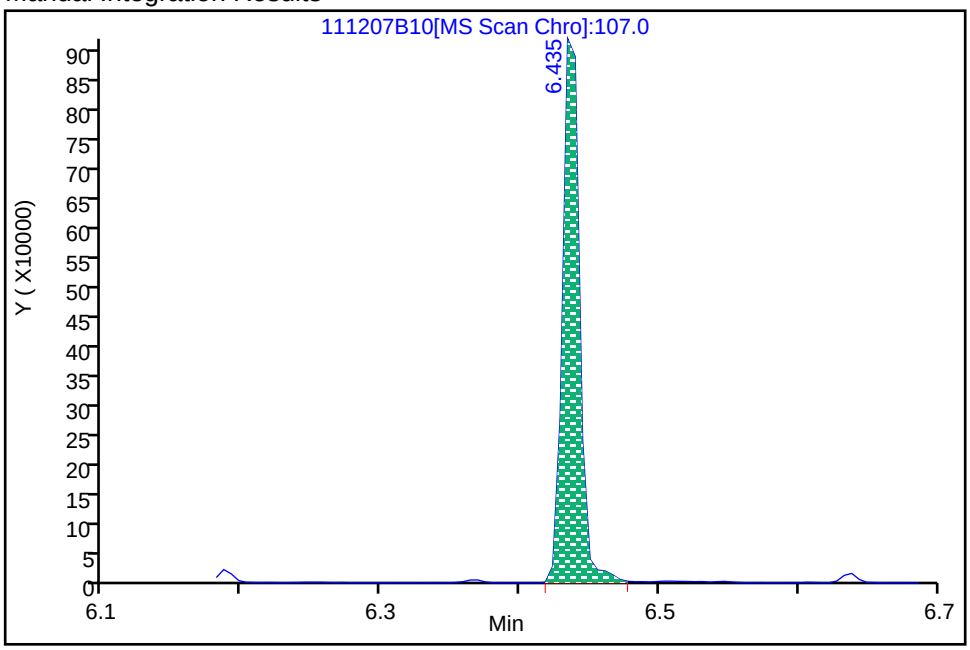
Processing Integration Results

RT: 6.435
Area: 800027
Amount: 35.828
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.435
Area: 788799
Amount: 30.065
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:20:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

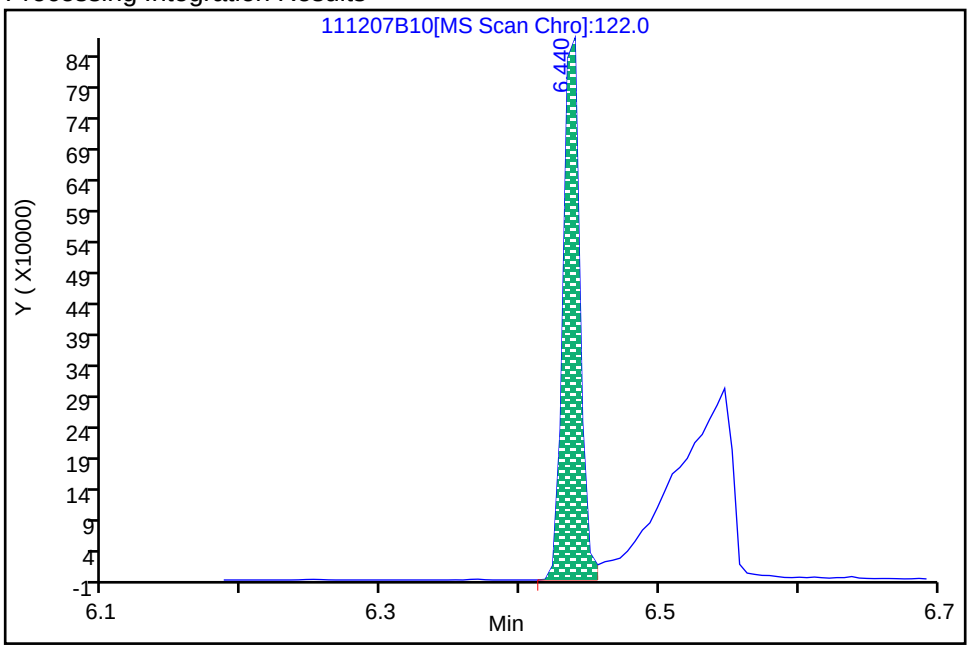
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B10.d		
Injection Date:	07-Dec-2019 22:49:30	Inst. ID:	msd11.i
Client ID:	1STD025CB	Lab ID:	SVMS 4164
Sample Info:	11120719B.b, SVMS 4164		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

34 2,4-Dimethylphenol, CAS: 105-67-9

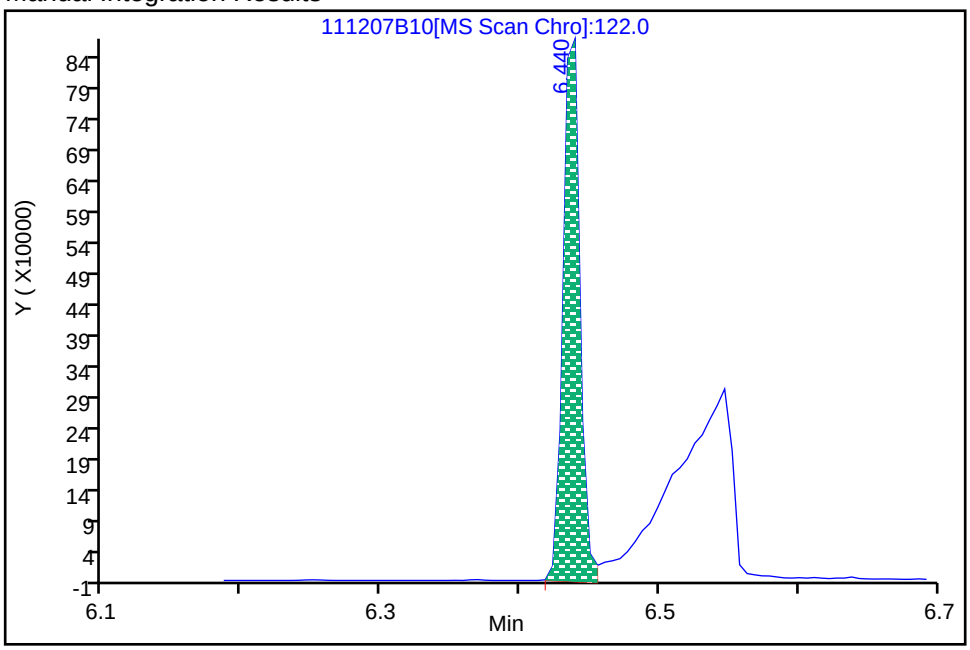
Processing Integration Results

RT: 6.440
Area: 726819
Amount: 35.828
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.440
Area: 736117
Amount: 30.065
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:20:30
Audit Action: Mint
Audit Reason: Manually Assigned

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B11.d
Lab Sample ID: SVMS 4165 Client Sample ID: 1STD030CB
Injection Date: 07-Dec-2019 23:14:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4165
Misc. Info: 1STD030
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 9 ALS Bottle: 9
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:19:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.648	3.648	0.000	48067	30.000	28.550	
2 N-Nitrosodimethylamine	42.0	3.852	3.852	0.000	229204	30.000	29.474	
1 pyridine	79.0	3.905	3.905	0.000	430492	30.000	34.142	
$ 6 2-Fluorophenol	112.0	4.766	4.766	0.000	1177979	30.000	30.135	
$ 9 Phenol-d5	99.0	5.419	5.419	0.000	1501304	30.000	29.849	
10 Phenol	94.0	5.430	5.430	0.000	1601551	30.000	28.872	
11 Aniline	66.0	5.483	5.483	0.000	52623	30.000	11.406	
12 bis(2-Chloroethyl)ether	63.0	5.504	5.504	0.000	603702	30.000	25.701	
201 n-Decane	57.0	5.563	5.563	0.000	335945	30.000	30.536	
13 2-Chlorophenol	128.0	5.585	5.585	0.000	1206943	30.000	30.007	
14 1,3-Dichlorobenzene	146.0	5.702	5.702	0.000	1186612	30.000	31.078	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	510287	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.756	5.756	0.000	1214504	30.000	30.292	
18 Benzyl alcohol	79.0	5.825	5.825	0.000	907164	30.000	30.505	
20 o-Cresol	108.0	5.895	5.895	0.000	1145179	30.000	29.919	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	1143611	30.000	30.128	
21 bis(2Chloro1methylethyl)ether	45.0	5.911	5.911	0.000	123209	30.000	22.974	
23 m+p-Cresol	107.0	6.013	6.013	0.000	1224078	30.000	30.369	
26 n-Nitroso-di-n-propylamine	70.0	6.023	6.023	0.000	838757	30.000	26.536	
24 Acetophenone	105.0	6.045	6.045	0.000	1563785	30.000	27.900	
28 Hexachloroethane	117.0	6.152	6.152	0.000	491045	30.000	30.854	
$ 29 Nitrobenzene-d5	82.0	6.173	6.173	0.000	1252149	30.000	30.792	
30 Nitrobenzene	77.0	6.189	6.189	0.000	1272472	30.000	32.786	

Report Date: 08-Dec-2019 13:08:55 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B11.d

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
32 Isophorone	82.0	6.371	6.371	0.000	2124478	30.000	30.040	
34 2,4-Dimethylphenol	107.0	6.440	6.440	0.000	944328	30.000	36.738	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	589201	30.000	31.434	
36 Benzoic acid	105.0	6.553	6.553	0.000	1381077	60.000	62.417	M
35 bis(2-Chloroethoxy)methane	93.0	6.510	6.510	0.000	1316817	30.000	29.812	
38 2,4-Dichlorophenol	162.0	6.638	6.638	0.000	816591	30.000	33.714	
40 1,2,4-Trichlorobenzene	180.0	6.708	6.708	0.000	865537	30.000	31.198	
* 41 Naphthalene-d8	136.0	6.767	6.767	0.000	1940659	20.000	20.000	
43 Naphthalene	128.0	6.788	6.788	0.000	3098586	30.000	30.186	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	783208	30.000	33.183	
47 Hexachlorobutadiene	224.6	6.863	6.863	0.000	510551	30.000	30.599	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	916251	30.000	32.579	
51 2-Methylnaphthalene	142.0	7.350	7.350	0.000	2073503	30.000	31.027	
204 1-Methylnaphthalene	142.0	7.435	7.435	0.000	1965686	30.000	30.968	
53 Hexachlorocyclopentadiene	237.0	7.478	7.478	0.000	2234442	150.00	141.80	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.494	7.494	0.000	780370	30.000	30.808	
54 2,4,6-Trichlorophenol	196.0	7.574	7.574	0.000	522507	30.000	34.255	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	528778	30.000	33.946	
$ 56 2-Fluorobiphenyl	172.0	7.638	7.638	0.000	2007776	30.000	31.751	
184 Biphenyl	154.0	7.729	7.729	0.000	2272074	30.000	31.645	
58 2-Chloronaphthalene	162.0	7.767	7.767	0.000	1683546	30.000	31.162	
62 Dimethylphthalate	163.0	7.959	7.959	0.000	1765704	30.000	31.300	
65 2,6-Dinitrotoluene	165.0	8.024	8.024	0.000	424317	30.000	31.739	
64 Acenaphthylene	152.0	8.120	8.120	0.000	2605567	30.000	31.584	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	910628	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.264	8.264	0.000	495139	60.000	58.979	
68 Acenaphthene	153.0	8.264	8.264	0.000	1836509	30.000	31.881	
70 4-Nitrophenol	109.0	8.302	8.302	0.000	506067	60.000	61.707	
73 2,4-Dinitrotoluene	165.0	8.366	8.366	0.000	505179	30.000	31.669	
71 Dibenzofuran	168.0	8.403	8.403	0.000	2294947	30.000	31.147	
76 2,3,4,6-Tetrachlorophenol	232.0	8.500	8.500	0.000	450432	30.000	36.503	
78 Diethylphthalate	149.0	8.537	8.537	0.000	1842465	30.000	31.806	
80 4-Chlorophenylphenylether	204.0	8.665	8.665	0.000	871126	30.000	31.697	
79 Fluorene	166.0	8.698	8.698	0.000	1887445	30.000	31.611	
84 4,6-Dinitro-2-methylphenol	198.0	8.714	8.714	0.000	275345	30.000	31.431	
86 n-Nitrosodiphenylamine	169.0	8.762	8.762	0.000	1250878	30.000	32.031	
87 Azobenzene	77.0	8.799	8.799	0.000	2082848	30.000	27.914	
$ 88 2,4,6-Tribromophenol	330.0	8.901	8.901	0.000	398802	30.000	32.148	
94 4-Bromophenylphenylether	248.0	9.083	9.083	0.000	559139	30.000	31.823	
96 Hexachlorobenzene	284.0	9.168	9.168	0.000	758681	30.000	33.138	
202 Octadecane	57.0	9.286	9.286	0.000	361554	30.000	27.646	
99 Pentachlorophenol	266.0	9.323	9.323	0.000	791909	60.000	65.510	
* 102 Phenanthrene-d10	188.0	9.494	9.494	0.000	1393789	20.000	20.000	
103 Phenanthrene	178.0	9.516	9.516	0.000	2509405	30.000	31.863	
104 Anthracene	178.0	9.559	9.559	0.000	2326413	30.000	32.153	
106 Carbazole	167.0	9.682	9.682	0.000	2185589	30.000	32.032	
109 Di-n-butylphthalate	149.0	9.896	9.896	0.000	2981492	30.000	33.276	
114 Fluoranthene	202.0	10.575	10.575	0.000	2623077	30.000	32.633	
116 Pyrene	202.0	10.816	10.816	0.000	2627486	30.000	30.990	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	2086077	30.000	30.734	
122 Butylbenzylphthalate	149.0	11.409	11.409	0.000	1297817	30.000	34.530	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.099	12.099	0.000	1798276	30.000	31.006	
127 Benzo(a)Anthracene	228.0	12.228	12.228	0.000	2534952	30.000	30.115	
* 128 Chrysene-d12	240.0	12.249	12.249	0.000	1437772	20.000	20.000	
129 Chrysene	228.0	12.286	12.286	0.000	2396284	30.000	30.706	
131 Di-n-octylphthalate	149.0	13.035	13.035	0.000	2980543	30.000	31.949	
132 Benzo(b)fluoranthene	252.0	13.805	13.805	0.000	2754210	30.000	34.942	
134 Benzo(k)fluoranthene	252.0	13.848	13.848	0.000	2637269	30.000	32.764	
135 Benzo(a)pyrene	252.0	14.319	14.319	0.000	2314014	30.000	34.077	
* 136 Perylene-d12	264.0	14.399	14.399	0.000	1435589	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.319	16.319	0.000	3477746	30.000	34.325	
139 Dibenzo(a,h)anthracene	278.0	16.325	16.325	0.000	3092996	30.000	35.225	
140 Benzo(g,h,i)perylene	276.0	16.881	16.881	0.000	2475367	30.000	32.241	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

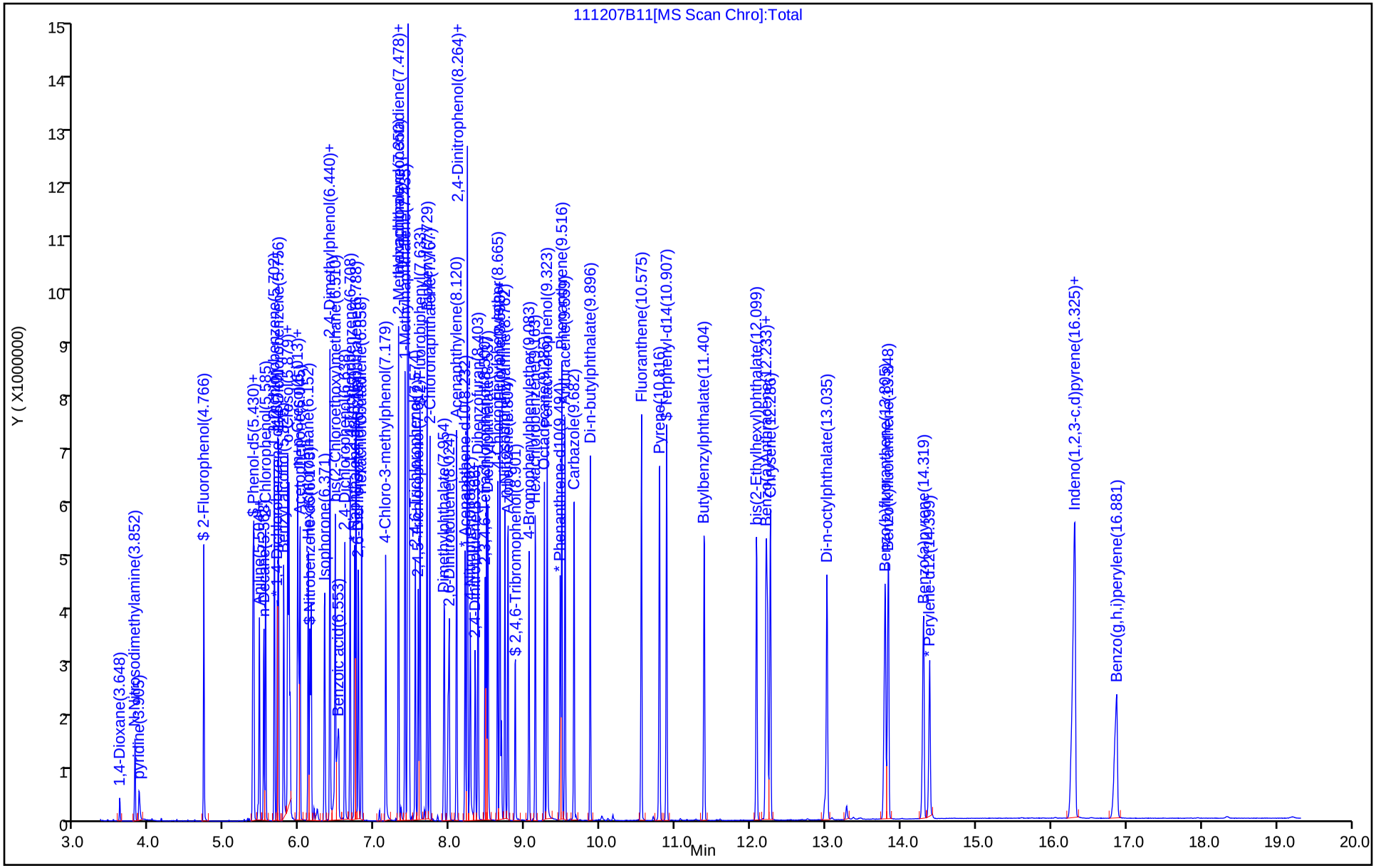
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B11.d				
Injection Date:	07-Dec-2019 23:14:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD030CB	Lab ID:	SVMS 4165		
Sample Info:	11120719B.b, SVMS 4165				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

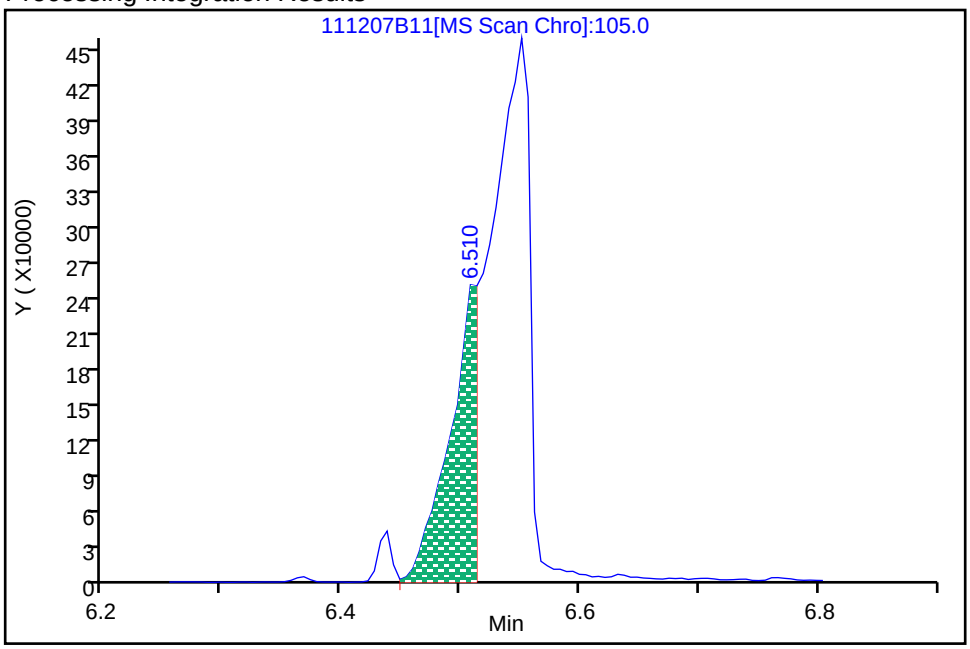
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B11.d		
Injection Date:	07-Dec-2019 23:14:30	Inst. ID:	msd11.i
Client ID:	1STD030CB	Lab ID:	SVMS 4165
Sample Info:	11120719B.b, SVMS 4165		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

36 Benzoic acid, CAS: 65-85-0

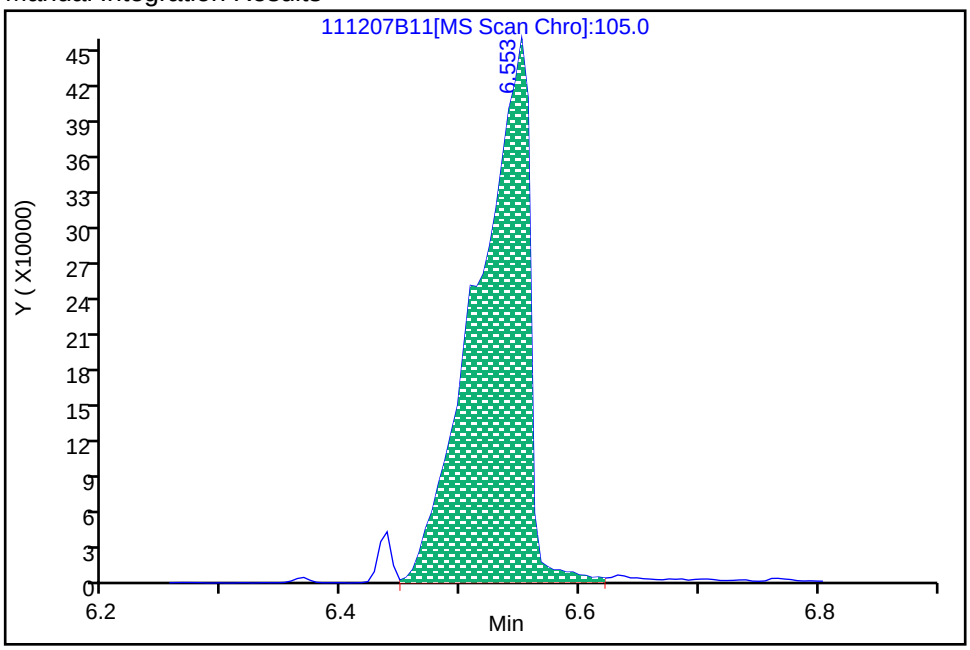
Processing Integration Results

RT: 6.510
Area: 375860
Amount: 51.360
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.553
Area: 1381077
Amount: 62.417
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:19:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B13.d
Lab Sample ID: SVMS 4212 Client Sample ID: 3STD001CC
Injection Date: 08-Dec-2019 00:05:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4212
Misc. Info: 3STD001
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 2 ALS Bottle: 11
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:35:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	26511	1.0000	1.0348	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	398481	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1859782	20.000	20.000	
44 4-Chloroaniline	127.0	6.804	6.804	0.000	30682	1.0000	0.85783	
196 Caprolactam	113.0	7.066	7.066	0.000	7115	1.0000	0.81437	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	890410	20.000	20.000	
200 Atrazine	200.0	9.174	9.174	0.000	11624	1.0000	0.85951	M
* 102 Phenanthrene-d10	188.0	9.489	9.489	0.000	1361527	20.000	20.000	
115 Benzidine	184.0	10.661	10.661	0.000	134168	5.0000	5.3625	
125 3,3'-Dichlorobenzidine	252.0	12.148	12.148	0.000	21921	1.0000	0.82781	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1348197	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1492034	20.000	20.000	
60 2-Nitroaniline	138.0	7.837	7.837	0.000	10216	1.0000	0.70872	
66 3-Nitroaniline	138.0	8.179	8.179	0.000	7948	1.0000	0.64827	
83 4-Nitroaniline	138.0	8.708	8.708	0.000	7578	1.0000	1.2173	

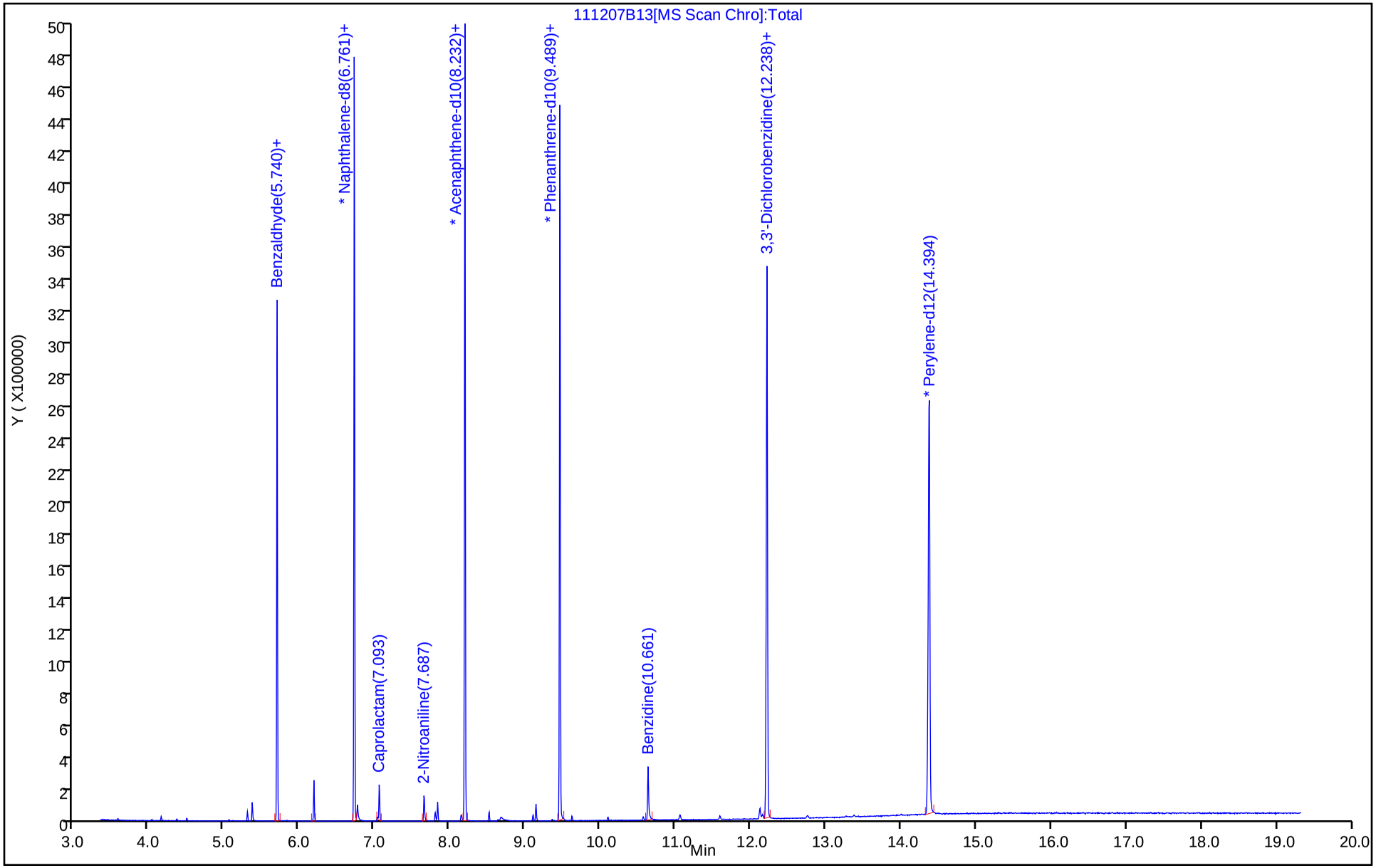
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 08-Dec-2019 13:08:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B13.d				
Injection Date:	08-Dec-2019 00:05:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD001CC	Lab ID:	SVMS 4212		
Sample Info:	11120719B.b, SVMS 4212				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 08-Dec-2019 13:08:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

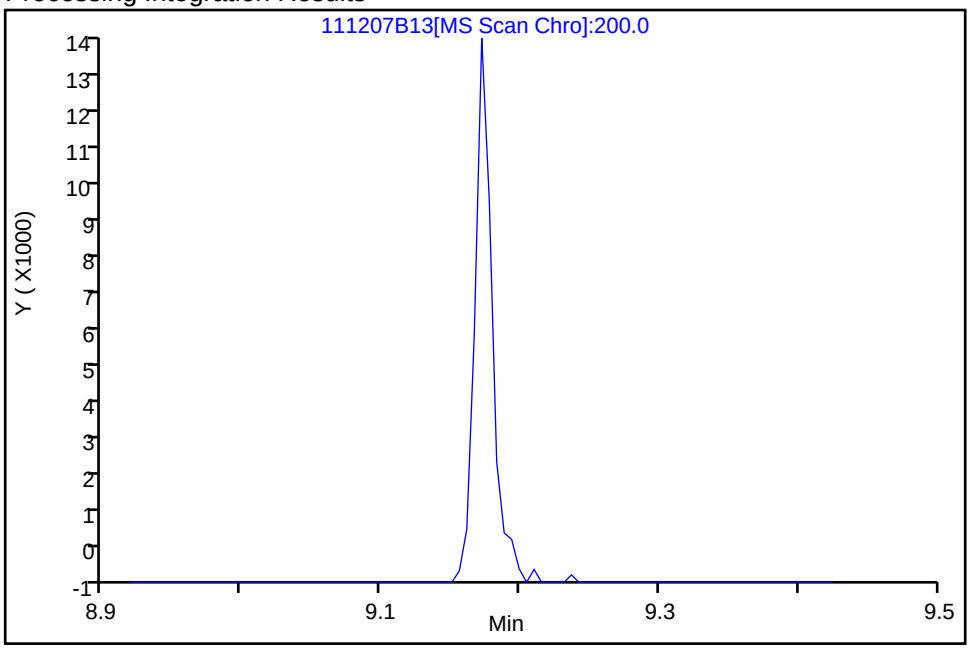
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B13.d		
Injection Date:	08-Dec-2019 00:05:30	Inst. ID:	msd11.i
Client ID:	3STD001CC	Lab ID:	SVMS 4212
Sample Info:	11120719B.b, SVMS 4212		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

200 Atrazine, CAS: 1912-24-9

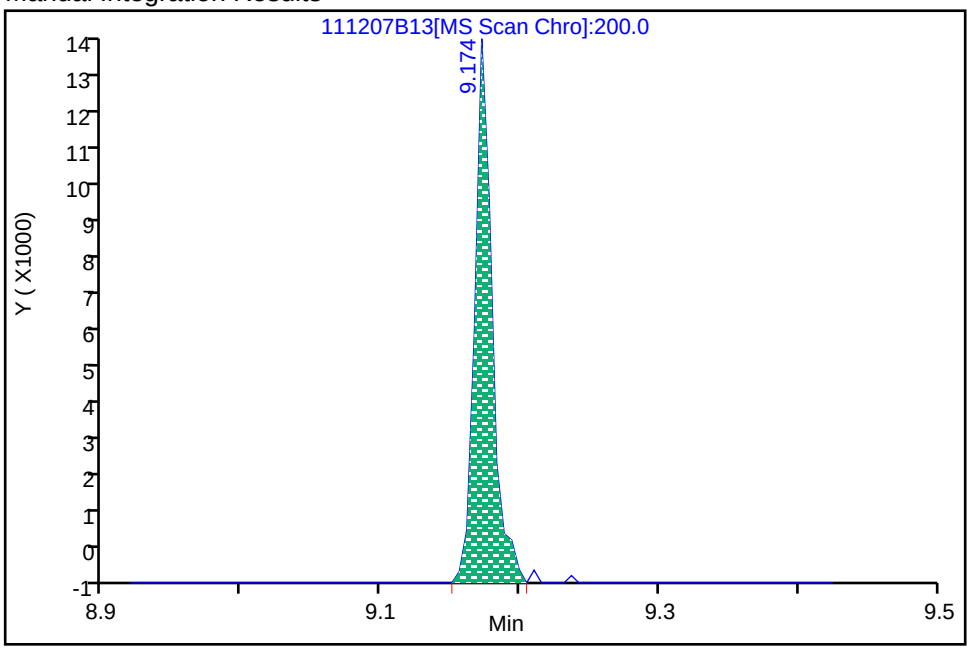
Not Detected
Expected RT: 9.174
RT Window: 8.604-9.743

Processing Integration Results



Manual Integration Results

RT: 9.174
Area: 11624
Amount: 0.85951
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:34:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 08-Dec-2019 13:08:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

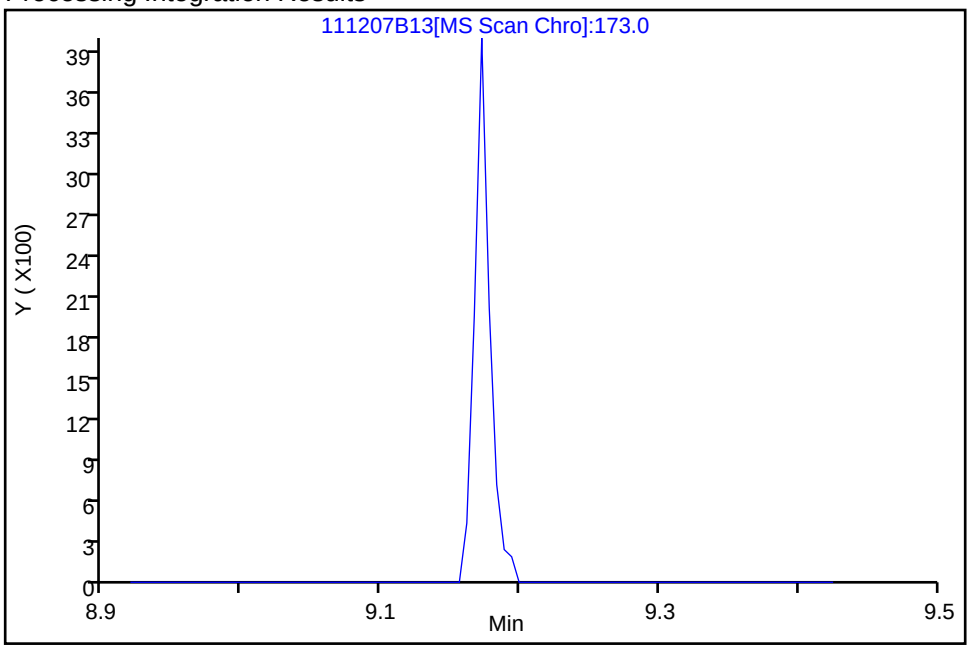
Manual Integration Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B13.d		
Injection Date:	08-Dec-2019 00:05:30	Inst. ID:	msd11.i
Client ID:	3STD001CC	Lab ID:	SVMS 4212
Sample Info:	11120719B.b, SVMS 4212		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

200 Atrazine, CAS: 1912-24-9

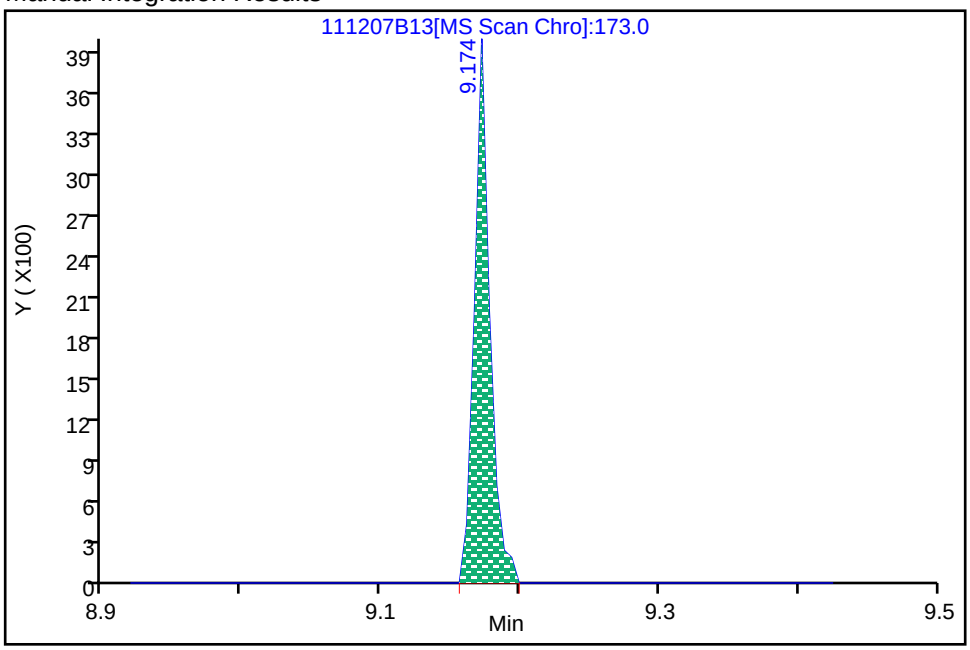
Not Detected
Expected RT: 9.174
RT Window: 8.604-9.743

Processing Integration Results



Manual Integration Results

RT: 9.174
Area: 3058
Amount: 0.85951
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:35:30
Audit Action: Mint
Audit Reason: Manually Assigned

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B14.d
Lab Sample ID: SVMS 4213 Client Sample ID: 3STD002CC
Injection Date: 08-Dec-2019 00:30:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4213
Misc. Info: 3STD002
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 3 ALS Bottle: 12
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	50621	2.0000	2.0550	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	383150	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1915414	20.000	20.000	
44 4-Chloroaniline	127.0	6.804	6.804	0.000	68360	2.0000	1.8557	
196 Caprolactam	113.0	7.066	7.066	0.000	15269	2.0000	1.6969	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	927018	20.000	20.000	
200 Atrazine	200.0	9.174	9.174	0.000	24260	2.0000	1.7125	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1426232	20.000	20.000	
115 Benzidine	184.0	10.661	10.661	0.000	338002	10.000	9.1321	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	40606	2.0000	1.4516	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1424200	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1578085	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	22260	2.0000	1.4833	
66 3-Nitroaniline	138.0	8.179	8.179	0.000	19085	2.0000	1.4952	
83 4-Nitroaniline	138.0	8.703	8.703	0.000	15804	2.0000	1.7730	

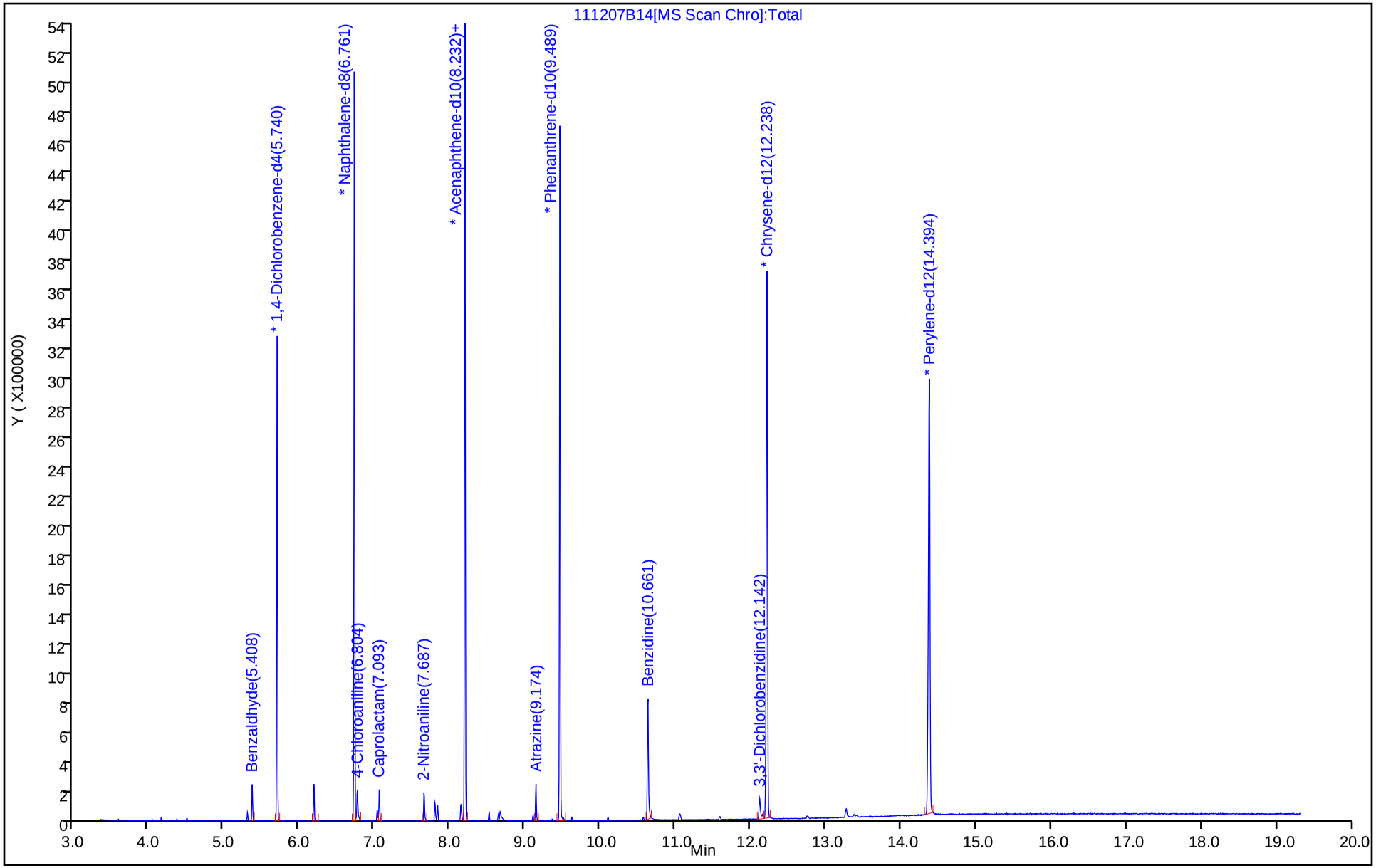
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B14.d				
Injection Date:	08-Dec-2019 00:30:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD002CC	Lab ID:	SVMS 4213		
Sample Info:	11120719B.b, SVMS 4213				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B15.d		
Lab Sample ID:	SVMS 4214	Client Sample ID:	3STD005CC
Injection Date:	08-Dec-2019 00:55:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120719B.b, SVMS 4214		
Misc. Info:	3STD005		
Method:	\\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m		
Method Date:	08-Dec-2019 13:04:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	Ical, Level: 4	ALS Bottle:	13
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	130667	5.0000	5.0750	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	400481	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1886544	20.000	20.000	
44 4-Chloroaniline	127.0	6.799	6.799	0.000	176300	5.0000	4.8592	
196 Caprolactam	113.0	7.066	7.066	0.000	41857	5.0000	4.7229	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	901075	20.000	20.000	
200 Atrazine	200.0	9.174	9.174	0.000	67294	5.0000	4.7996	
* 102 Phenanthrene-d10	188.0	9.489	9.489	0.000	1411534	20.000	20.000	
115 Benzidine	184.0	10.661	10.661	0.000	1063986	25.000	23.880	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	106801	5.0000	3.9683	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1370237	20.000	20.000	
* 136 Perylene-d12	264.0	14.389	14.389	0.000	1536804	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	65404	5.0000	4.4836	
66 3-Nitroaniline	138.0	8.174	8.174	0.000	54154	5.0000	4.3647	
83 4-Nitroaniline	138.0	8.692	8.692	0.000	50186	5.0000	4.2884	

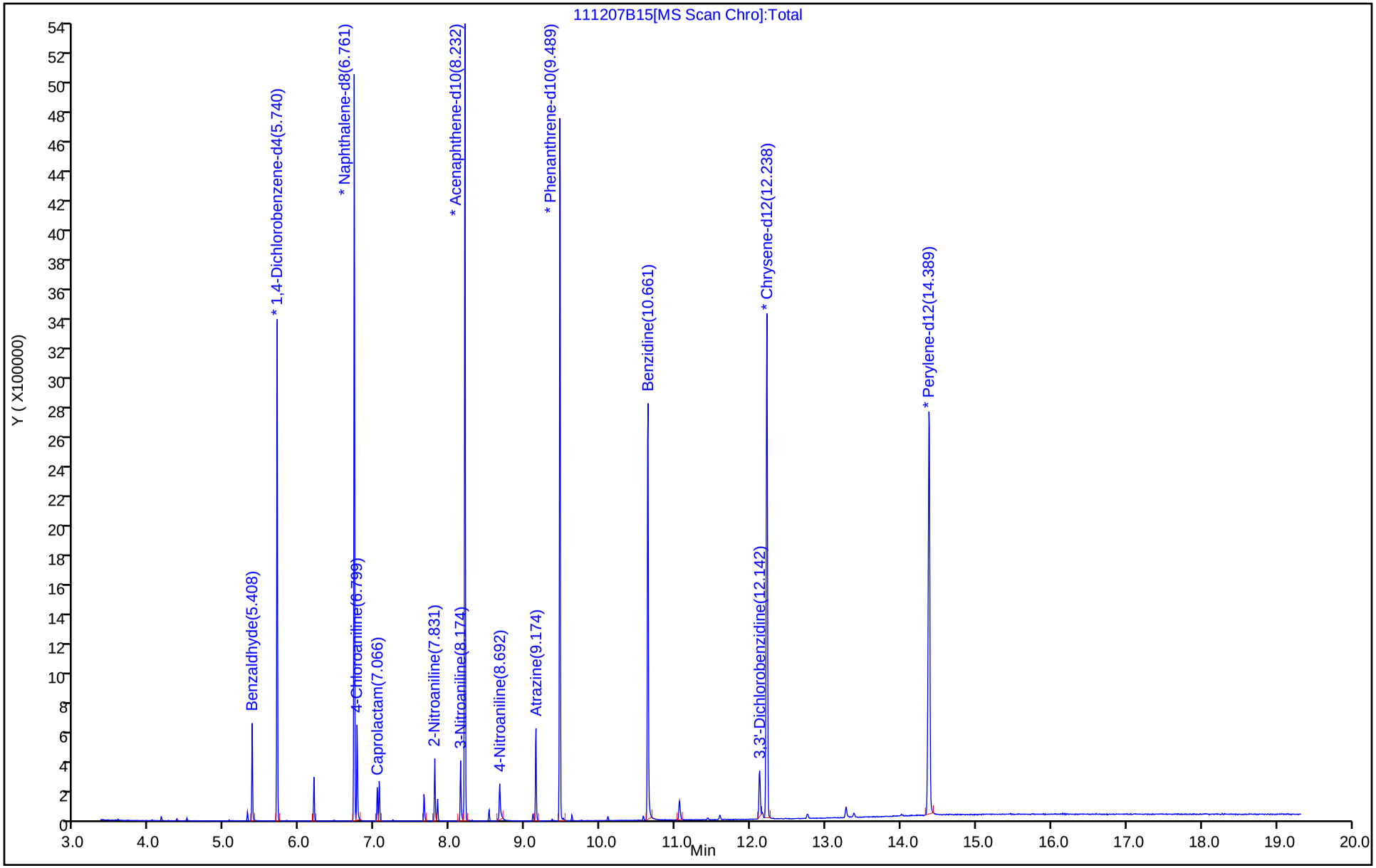
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B15.d				
Injection Date:	08-Dec-2019 00:55:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD005CC	Lab ID:	SVMS 4214		
Sample Info:	11120719B.b, SVMS 4214				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B16.d		
Lab Sample ID:	SVMS 4215	Client Sample ID:	3STD010CC
Injection Date:	08-Dec-2019 01:20:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120719B.b, SVMS 4215		
Misc. Info:	3STD010		
Method:	\\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m		
Method Date:	08-Dec-2019 13:04:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	Ical, Level: 5	ALS Bottle:	14
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	278925	10.000	10.233	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	423959	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	2050901	20.000	20.000	
44 4-Chloroaniline	127.0	6.799	6.799	0.000	403957	10.000	10.242	
196 Caprolactam	113.0	7.072	7.072	0.000	99428	10.000	10.320	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	970488	20.000	20.000	
200 Atrazine	200.0	9.174	9.174	0.000	150869	10.000	10.086	
* 102 Phenanthrene-d10	188.0	9.494	9.494	0.000	1505854	20.000	20.000	
115 Benzidine	184.0	10.666	10.666	0.000	2540495	50.000	50.026	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	283391	10.000	9.8385	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1466488	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1706688	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	167968	10.000	10.691	
66 3-Nitroaniline	138.0	8.173	8.173	0.000	135050	10.000	10.106	
83 4-Nitroaniline	138.0	8.692	8.692	0.000	133569	10.000	9.6213	

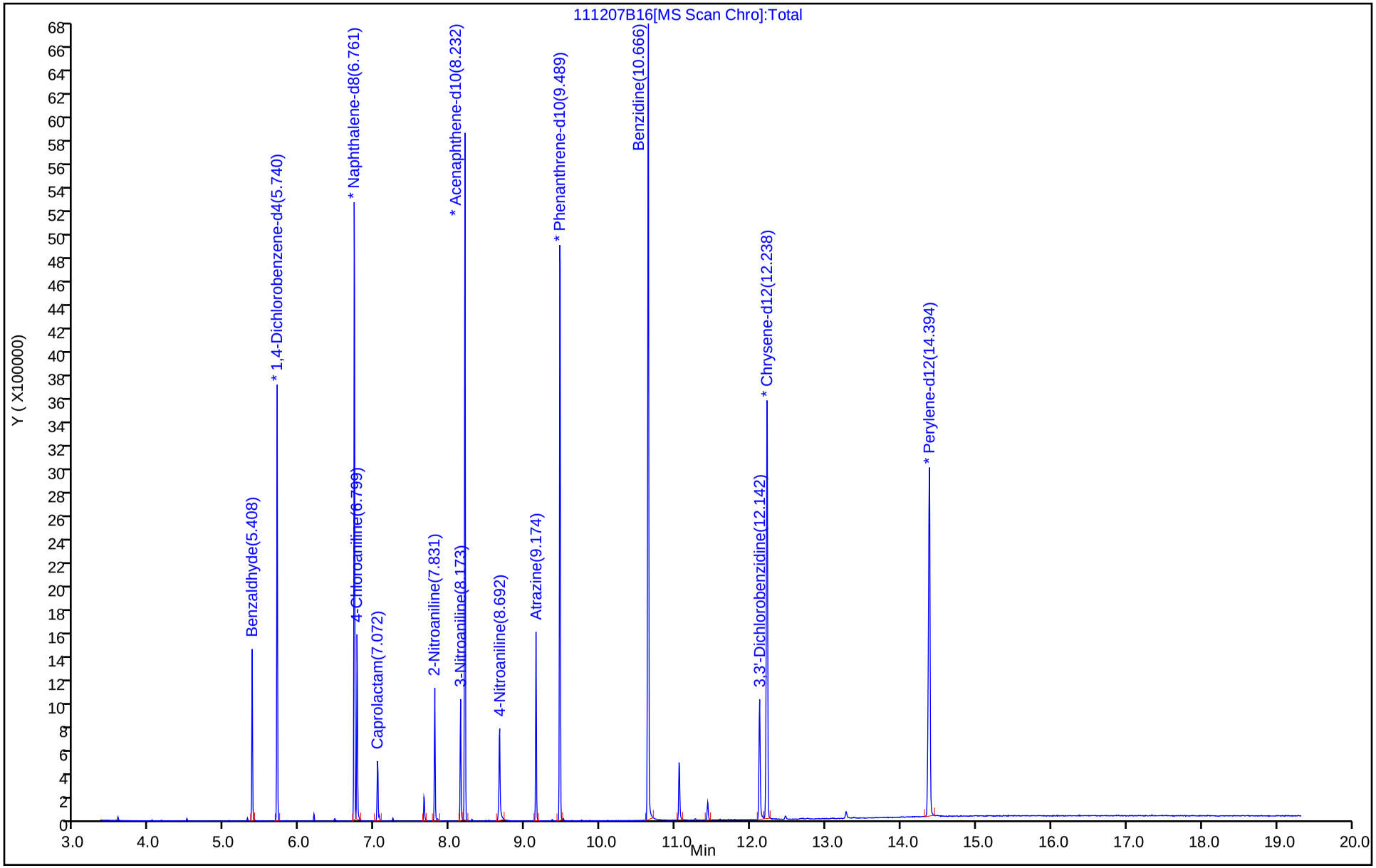
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B16.d				
Injection Date:	08-Dec-2019 01:20:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD010CC	Lab ID:	SVMS 4215		
Sample Info:	11120719B.b, SVMS 4215				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B17.d		
Lab Sample ID:	SVMS 4216	Client Sample ID:	3STD015CC
Injection Date:	08-Dec-2019 01:45:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120719B.b, SVMS 4216		
Misc. Info:	3STD015		
Method:	\\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m		
Method Date:	08-Dec-2019 13:04:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	Ical, Level: 6	ALS Bottle:	15
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 13:03:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	393968	15.000	14.613	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	411685	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1956114	20.000	20.000	
44 4-Chloroaniline	127.0	6.799	6.799	0.000	604293	15.000	16.551	
196 Caprolactam	113.0	7.077	7.077	0.000	148853	15.000	17.162	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	938721	20.000	20.000	
200 Atrazine	200.0	9.174	9.174	0.000	230577	15.000	17.115	
* 102 Phenanthrene-d10	188.0	9.489	9.489	0.000	1420604	20.000	20.000	
115 Benzidine	184.0	10.666	10.666	0.000	3870024	75.000	95.423	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	439760	15.000	18.357	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1382640	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1630375	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	253438	15.000	18.416	
66 3-Nitroaniline	138.0	8.173	8.173	0.000	205449	15.000	18.316	
83 4-Nitroaniline	138.0	8.692	8.692	0.000	206966	15.000	19.465	

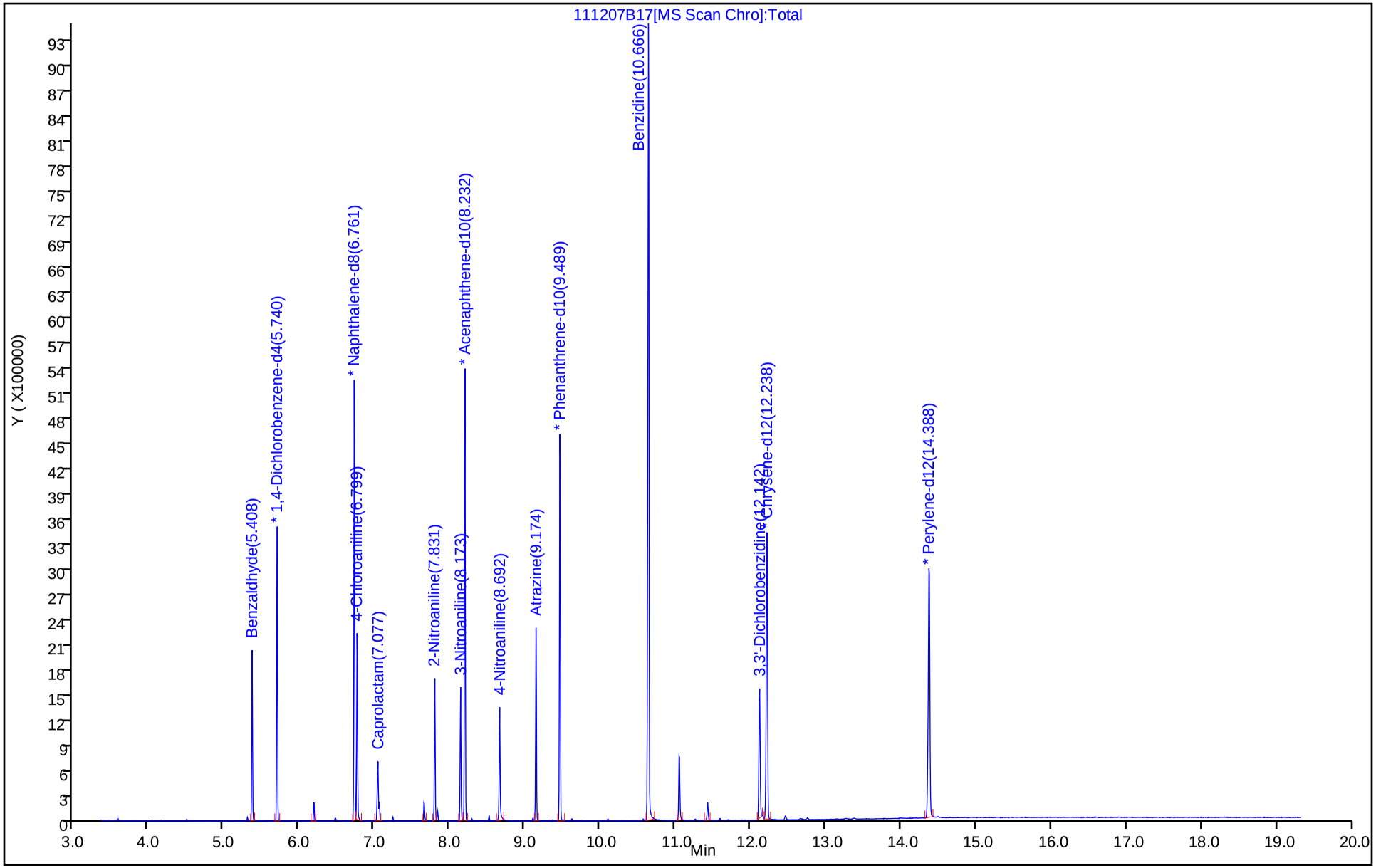
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:57 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B17.d				
Injection Date:	08-Dec-2019 01:45:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD015CC	Lab ID:	SVMS 4216		
Sample Info:	11120719B.b, SVMS 4216				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B18.d		
Lab Sample ID:	SVMS 4217	Client Sample ID:	3STD020CC
Injection Date:	08-Dec-2019 02:10:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120719B.b, SVMS 4217		
Misc. Info:	3STD020		
Method:	\\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m		
Method Date:	08-Dec-2019 13:04:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	Ical, Level: 7	ALS Bottle:	16
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	528878	20.000	20.029	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	410715	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1958102	20.000	20.000	
44 4-Chloroaniline	127.0	6.799	6.799	0.000	774067	20.000	20.555	
196 Caprolactam	113.0	7.082	7.082	0.000	197790	20.000	21.502	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	931408	20.000	20.000	
200 Atrazine	200.0	9.179	9.179	0.000	303996	20.000	21.554	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1419911	20.000	20.000	
115 Benzidine	184.0	10.671	10.671	0.000	4992528	100.00	102.75	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	622095	20.000	23.219	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1364059	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1597433	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	342557	20.000	22.718	
66 3-Nitroaniline	138.0	8.173	8.173	0.000	272889	20.000	21.278	
83 4-Nitroaniline	138.0	8.692	8.692	0.000	276376	20.000	19.977	

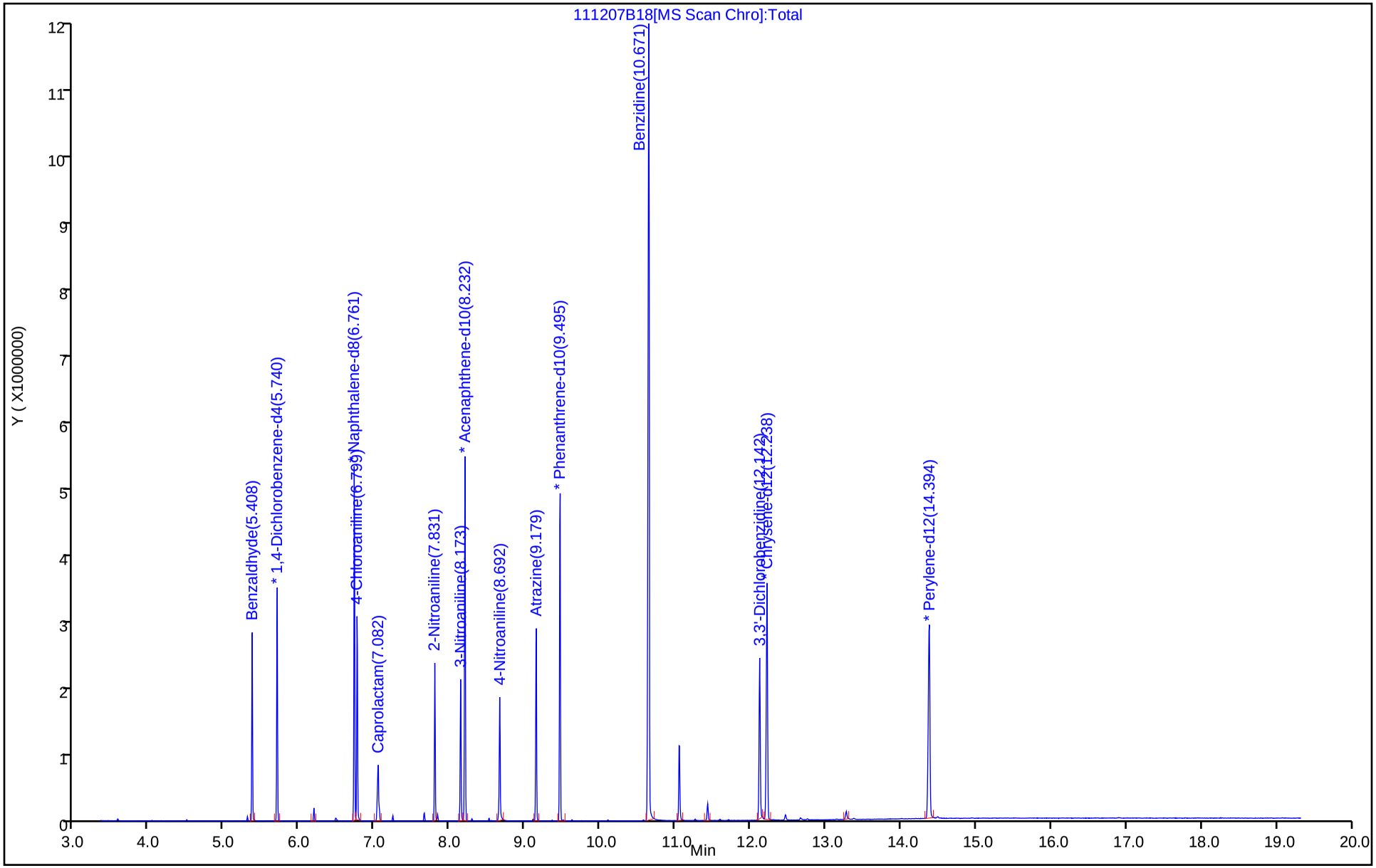
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:57 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B18.d				
Injection Date:	08-Dec-2019 02:10:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD020CC	Lab ID:	SVMS 4217		
Sample Info:	11120719B.b, SVMS 4217				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B19.d		
Lab Sample ID:	SVMS 4218	Client Sample ID:	3STD025CC
Injection Date:	08-Dec-2019 02:35:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120719B.b, SVMS 4218		
Misc. Info:	3STD025		
Method:	\\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m		
Method Date:	08-Dec-2019 13:04:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	Ical, Level: 8	ALS Bottle:	17
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	687839	25.000	23.893	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	447790	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	2010269	20.000	20.000	
44 4-Chloroaniline	127.0	6.804	6.804	0.000	1045102	25.000	27.032	
196 Caprolactam	113.0	7.082	7.082	0.000	265841	25.000	28.150	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	979705	20.000	20.000	
200 Atrazine	200.0	9.179	9.179	0.000	404451	25.000	27.311	
* 102 Phenanthrene-d10	188.0	9.489	9.489	0.000	1490883	20.000	20.000	
115 Benzidine	184.0	10.677	10.677	0.000	6269727	125.00	127.51	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	814184	25.000	30.181	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1373422	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1621276	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	458343	25.000	28.899	
66 3-Nitroaniline	138.0	8.173	8.173	0.000	377041	25.000	27.950	
83 4-Nitroaniline	138.0	8.698	8.698	0.000	371220	25.000	25.325	

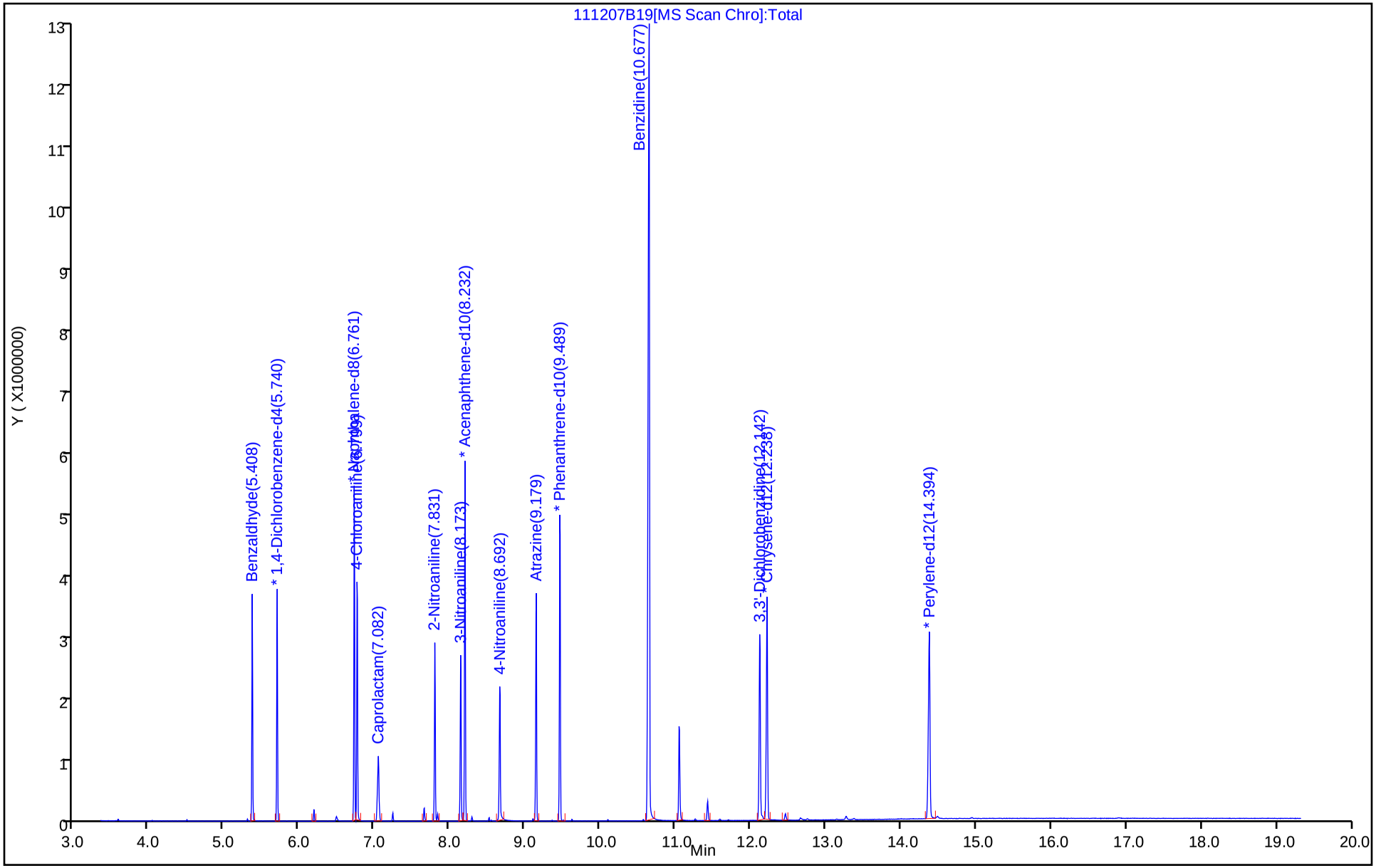
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:57 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B19.d				
Injection Date:	08-Dec-2019 02:35:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD025CC	Lab ID:	SVMS 4218		
Sample Info:	11120719B.b, SVMS 4218				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B20.d
Lab Sample ID: SVMS 4219 Client Sample ID: 3STD030CC
Injection Date: 08-Dec-2019 03:00:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4219
Misc. Info: 3STD030
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: Ical, Level: 9 ALS Bottle: 18
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 13:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	820302	30.000	28.493	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	447800	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	2116555	20.000	20.000	
44 4-Chloroaniline	127.0	6.804	6.804	0.000	1268007	30.000	31.151	
196 Caprolactam	113.0	7.088	7.088	0.000	322047	30.000	32.389	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	1001900	20.000	20.000	
200 Atrazine	200.0	9.179	9.179	0.000	492427	30.000	31.685	
* 102 Phenanthrene-d10	188.0	9.494	9.494	0.000	1564648	20.000	20.000	
115 Benzidine	184.0	10.676	10.676	0.000	7288645	150.00	141.77	
125 3,3'-Dichlorobenzidine	252.0	12.147	12.147	0.000	1031128	30.000	36.635	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1432992	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1708102	20.000	20.000	
60 2-Nitroaniline	138.0	7.836	7.836	0.000	574239	30.000	35.404	
66 3-Nitroaniline	138.0	8.179	8.179	0.000	466542	30.000	33.818	
83 4-Nitroaniline	138.0	8.697	8.697	0.000	464843	30.000	30.861	

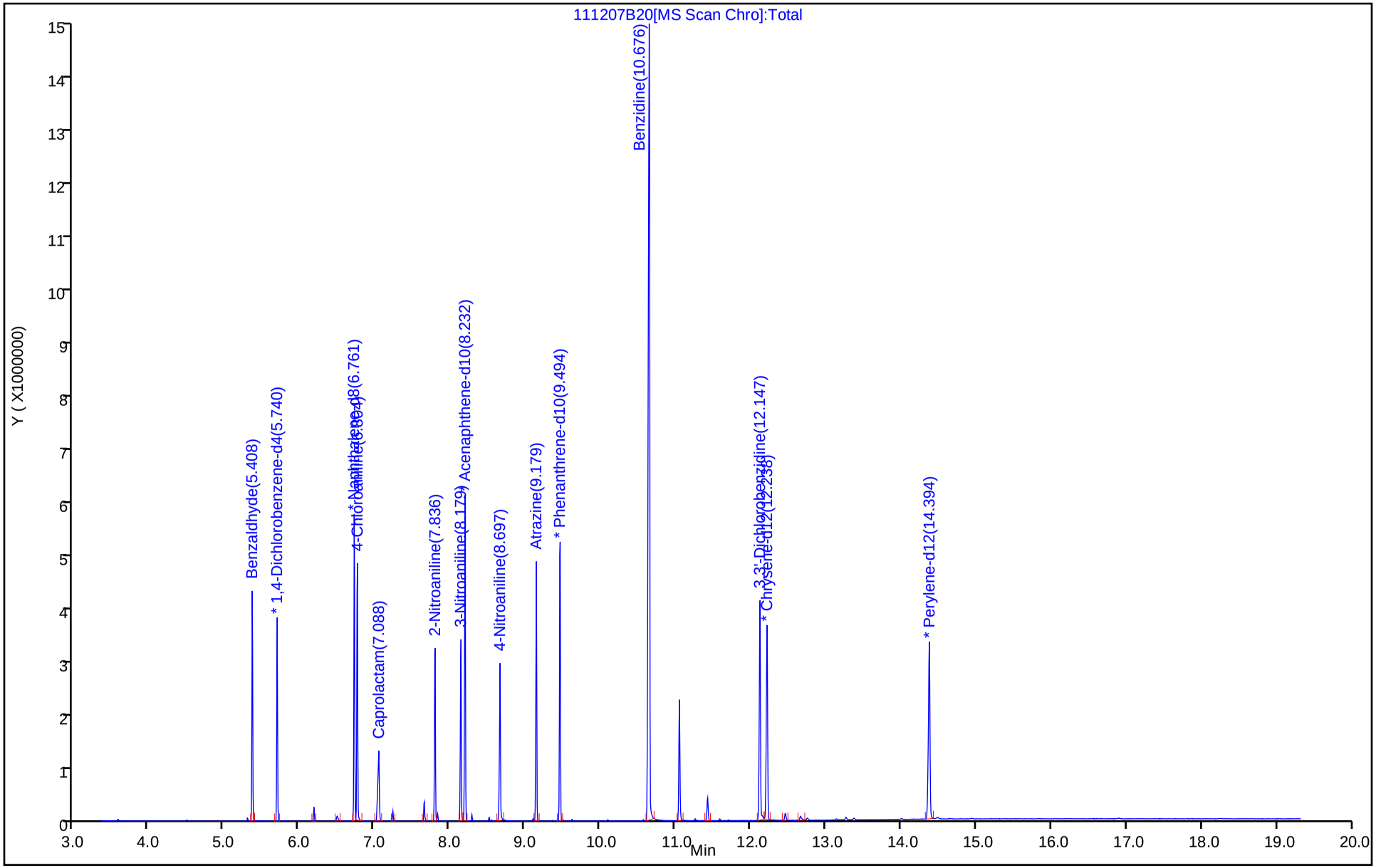
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B20.d				
Injection Date:	08-Dec-2019 03:00:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD030CC	Lab ID:	SVMS 4219		
Sample Info:	11120719B.b, SVMS 4219				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B12.d
Lab Sample ID: SVMS 4221 Client Sample ID: 1STDICV
Injection Date: 07-Dec-2019 23:40:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4221
Misc. Info: 1STDICV
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: LCS ALS Bottle: 10
Cpnd Sublist: 1STD.sub Spike List File: ICV1.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 pyridine	20	22.679	13.4	113	70- 130
2 N-Nitrosodimethylamine	20	16.588	-17.1	82.9	70- 130
10 Phenol	20	17.935	-10.3	89.7	70- 130
12 bis(2-Chloroethyl)ether	20	19.071	-4.6	95.4	70- 130
13 2-Chlorophenol	20	18.407	-8	92	70- 130
14 1,3-Dichlorobenzene	20	18.082	-9.6	90.4	70- 130
17 1,4-Dichlorobenzene	20	18.795	-6	94	70- 130
18 Benzyl alcohol	20	16.911	-15.4	84.6	70- 130
19 1,2-Dichlorobenzene	20	18.878	-5.6	94.4	70- 130
20 o-Cresol	20	18.424	-7.9	92.1	70- 130
23 m+p-Cresol	20	19.249	-3.8	96.2	70- 130
24 Acetophenone	20	19.225	-3.9	96.1	70- 130
26 n-Nitroso-di-n-propylamine	20	19.236	-3.8	96.2	70- 130
28 Hexachloroethane	20	17.361	-13.2	86.8	70- 130
30 Nitrobenzene	20	19.125	-4.4	95.6	70- 130
32 Isophorone	20	18.836	-5.8	94.2	70- 130
33 2-Nitrophenol	20	19.257	-3.7	96.3	70- 130
34 2,4-Dimethylphenol	20	20.018	0.1	100	70- 130
35 bis(2-Chloroethoxy)methane	20	17.568	-12.2	87.8	70- 130
38 2,4-Dichlorophenol	20	17.713	-11.4	88.6	70- 130
40 1,2,4-Trichlorobenzene	20	18.647	-6.8	93.2	70- 130
43 Naphthalene	20	19.246	-3.8	96.2	70- 130
45 2,6-Dichlorophenol	20	18.925	-5.4	94.6	70- 130
47 Hexachlorobutadiene	20	18.069	-9.7	90.3	70- 130
49 4-Chloro-3-methylphenol	20	17.088	-14.6	85.4	70- 130
51 2-Methylnaphthalene	20	17.43	-12.9	87.1	70- 130
52 1,2,4,5-Tetrachlorobenzene	20	17.322	-13.4	86.6	70- 130
53 Hexachlorocyclopentadiene	100	97.83	-2.2	97.8	70- 130
54 2,4,6-Trichlorophenol	20	16.983	-15.1	84.9	70- 130
55 2,4,5-Trichlorophenol	20	17.057	-14.7	85.3	70- 130
58 2-Chloronaphthalene	20	17.728	-11.4	88.6	70- 130
62 Dimethylphthalate	20	20.14	0.7	100	70- 130
64 Acenaphthylene	20	18.963	-5.2	94.8	70- 130
65 2,6-Dinitrotoluene	20	19.743	-1.3	98.7	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
68 Acenaphthene	20	18.245	-8.8	91.2	70- 130
69 2,4-Dinitrophenol	40	40.261	0.7	100	70- 130
70 4-Nitrophenol	40	35.421	-11.4	88.6	70- 130
71 Dibenzofuran	20	17.589	-12.1	87.9	70- 130
73 2,4-Dinitrotoluene	20	19.075	-4.6	95.4	70- 130
76 2,3,4,6-Tetrachlorophenol	20	16.12	-19.4	80.6	70- 130
78 Diethylphthalate	20	19.325	-3.4	96.6	70- 130
79 Fluorene	20	18.762	-6.2	93.8	70- 130
80 4-Chlorophenylphenylether	20	17.327	-13.4	86.6	70- 130
84 4,6-Dinitro-2-methylphenol	20	22.124	10.6	110	70- 130
86 n-Nitrosodiphenylamine	20	18.271	-8.6	91.4	70- 130
87 Azobenzene	20	18.529	-7.4	92.6	70- 130
94 4-Bromophenylphenylether	20	17.361	-13.2	86.8	70- 130
96 Hexachlorobenzene	20	17.589	-12.1	87.9	70- 130
99 Pentachlorophenol	40	34.321	-14.2	85.8	70- 130
103 Phenanthrene	20	18.408	-8	92	70- 130
104 Anthracene	20	19.407	-3	97	70- 130
106 Carbazole	20	18.901	-5.5	94.5	70- 130
109 Di-n-butylphthalate	20	19.751	-1.2	98.8	70- 130
114 Fluoranthene	20	18.477	-7.6	92.4	70- 130
116 Pyrene	20	18.587	-7.1	92.9	70- 130
122 Butylbenzylphthalate	20	19.569	-2.2	97.8	70- 130
127 Benzo(a)Anthracene	20	18.458	-7.7	92.3	70- 130
129 Chrysene	20	18.467	-7.7	92.3	70- 130
130 bis(2-Ethylhexyl)phthalate	20	18.532	-7.3	92.7	70- 130
131 Di-n-octylphthalate	20	17.209	-14	86	70- 130
132 Benzo(b)fluoranthene	20	18.246	-8.8	91.2	70- 130
134 Benzo(k)fluoranthene	20	18.021	-9.9	90.1	70- 130
135 Benzo(a)pyrene	20	19.739	-1.3	98.7	70- 130
138 Indeno(1,2,3-c,d)pyrene	20	18.326	-8.4	91.6	70- 130
139 Dibenzo(a,h)anthracene	20	17.755	-11.2	88.8	70- 130
140 Benzo(g,h,i)perylene	20	17.929	-10.4	89.6	70- 130
184 Biphenyl	20	17.816	-10.9	89.1	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B12.d
Lab Sample ID: SVMS 4221 Client Sample ID: 1STDICV
Injection Date: 07-Dec-2019 23:40:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4221
Misc. Info: 1STDICV
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: LCS ALS Bottle: 10
Cpnd Sublist: 1STD.sub Spike List File: ICV1.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 13:38:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
193 1,4-Dioxane	58.0	3.648	3.648	0.000	5798	3.7439	14.975	e
2 N-Nitrosodimethylamine	42.0	3.846	3.852	-0.004	29664	4.1470	16.588	e
1 pyridine	79.0	3.900	3.905	-0.005	65761	5.6698	22.679	
$ 6 2-Fluorophenol	112.0		4.766		ND			
$ 9 Phenol-d5	99.0		5.419		ND			
10 Phenol	94.0	5.419	5.430	-0.010	228783	4.4838	17.935	e
11 Aniline	66.0	5.478	5.483	-0.004	55492	13.075	52.302	Q
12 bis(2-Chloroethyl)ether	63.0	5.494	5.504	-0.010	103016	4.7677	19.071	Qe
201 n-Decane	57.0	5.558	5.563	-0.005	37140	3.6701	14.680	e
13 2-Chlorophenol	128.0	5.579	5.585	-0.004	170260	4.6019	18.407	e
14 1,3-Dichlorobenzene	146.0	5.697	5.702	-0.005	158764	4.5204	18.082	e
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	469388	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.750	5.756	-0.004	173292	4.6988	18.795	e
18 Benzyl alcohol	79.0	5.820	5.825	-0.005	115651	4.2278	16.911	e
20 o-Cresol	108.0	5.890	5.895	-0.004	162171	4.6061	18.424	Qe
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	164789	4.7196	18.878	e
21 bis(2Chloro1methylethyl)ether	45.0	5.906	5.911	-0.004	20526	4.1608	16.643	e
23 m+p-Cresol	107.0	6.002	6.013	-0.010	178419	4.8123	19.249	e
26 n-Nitroso-di-n-propylamine	70.0	6.013	6.023	-0.010	139822	4.8090	19.236	e
24 Acetophenone	105.0	6.034	6.045	-0.010	247795	4.8061	19.225	e
28 Hexachloroethane	117.0	6.146	6.152	-0.004	63537	4.3401	17.361	e
$ 29 Nitrobenzene-d5	82.0		6.173		ND			
30 Nitrobenzene	77.0	6.184	6.189	-0.005	199384	4.7812	19.125	e

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
32 Isophorone	82.0	6.360	6.371	-0.009	357829	4.7090	18.836	e
34 2,4-Dimethylphenol	107.0	6.430	6.440	-0.010	138215	5.0045	20.018	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	73908	4.8143	19.257	e
36 Benzoic acid	105.0	6.494	6.553	-0.058	167308	9.6672	38.669	e
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.510	-0.004	208445	4.3920	17.568	e
38 2,4-Dichlorophenol	162.0	6.633	6.638	-0.005	115247	4.4284	17.713	e
40 1,2,4-Trichlorobenzene	180.0	6.703	6.708	-0.004	138963	4.6618	18.647	e
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	2085172	20.000	20.000	
43 Naphthalene	128.0	6.783	6.788	-0.005	530677	4.8115	19.246	e
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	119983	4.7312	18.925	e
47 Hexachlorobutadiene	224.6	6.858	6.863	-0.004	80983	4.5172	18.069	e
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	129093	4.2721	17.088	e
51 2-Methylnaphthalene	142.0	7.344	7.350	-0.004	312886	4.3574	17.430	e
204 1-Methylnaphthalene	142.0	7.430	7.435	-0.005	287888	4.2212	16.885	e
53 Hexachlorocyclopentadiene	237.0	7.467	7.478	-0.010	429954	24.458	97.830	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.483	7.494	-0.010	122376	4.3304	17.322	e
54 2,4,6-Trichlorophenol	196.0	7.569	7.574	-0.004	72253	4.2459	16.983	e
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	74105	4.2642	17.057	e
$ 56 2-Fluorobiphenyl	172.0		7.638		ND			
184 Biphenyl	154.0	7.724	7.729	-0.004	356775	4.4540	17.816	e
58 2-Chloronaphthalene	162.0	7.762	7.767	-0.004	267132	4.4321	17.728	e
62 Dimethylphthalate	163.0	7.949	7.959	-0.010	316888	5.0350	20.140	
65 2,6-Dinitrotoluene	165.0	8.013	8.024	-0.010	63086	4.9356	19.743	e
64 Acenaphthylene	152.0	8.115	8.120	-0.004	436320	4.7407	18.963	e
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	1015935	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.264	-0.005	38129	10.065	40.261	
68 Acenaphthene	153.0	8.259	8.264	-0.005	293142	4.5613	18.245	e
70 4-Nitrophenol	109.0	8.296	8.302	-0.004	62115	8.8552	35.421	
73 2,4-Dinitrotoluene	165.0	8.361	8.366	-0.004	71500	4.7687	19.075	e
71 Dibenzofuran	168.0	8.398	8.403	-0.004	361458	4.3972	17.589	e
76 2,3,4,6-Tetrachlorophenol	232.0	8.494	8.500	-0.004	55478	4.0299	16.120	e
78 Diethylphthalate	149.0	8.526	8.537	-0.010	312239	4.8313	19.325	e
80 4-Chlorophenylphenylether	204.0	8.660	8.665	-0.004	132817	4.3317	17.327	e
79 Fluorene	166.0	8.692	8.698	-0.004	312462	4.6906	18.762	e
84 4,6-Dinitro-2-methylphenol	198.0	8.708	8.714	-0.004	26018	5.5310	22.124	
86 n-Nitrosodiphenylamine	169.0	8.756	8.762	-0.004	196529	4.5678	18.271	e
87 Azobenzene	77.0	8.794	8.799	-0.005	380804	4.6323	18.529	e
$ 88 2,4,6-Tribromophenol	330.0		8.901		ND			
94 4-Bromophenylphenylether	248.0	9.077	9.083	-0.004	84020	4.3403	17.361	e
96 Hexachlorobenzene	284.0	9.163	9.168	-0.005	110919	4.3973	17.589	e
202 Octadecane	57.0	9.281	9.286	-0.004	61136	4.2431	16.972	e
99 Pentachlorophenol	266.0	9.318	9.323	-0.005	85932	8.5802	34.321	
* 102 Phenanthrene-d10	188.0	9.495	9.494	0.000	1535591	20.000	20.000	
103 Phenanthrene	178.0	9.511	9.516	-0.004	399322	4.6021	18.408	e
104 Anthracene	178.0	9.553	9.559	-0.004	386770	4.8518	19.407	e
106 Carbazole	167.0	9.676	9.682	-0.004	355219	4.7254	18.901	e
109 Di-n-butylphthalate	149.0	9.890	9.896	-0.004	487411	4.9376	19.751	e
114 Fluoranthene	202.0	10.570	10.575	-0.004	409076	4.6193	18.477	e
116 Pyrene	202.0	10.805	10.816	-0.010	416780	4.6469	18.587	e
$ 117 Terphenyl-d14	244.0		10.907		ND			
122 Butylbenzylphthalate	149.0	11.404	11.409	-0.005	194522	4.8923	19.569	e

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
130 bis(2-Ethylhexyl)phthalate	149.0	12.094	12.099	-0.005	253650	4.6331	18.532	e
127 Benzo(a)Anthracene	228.0	12.222	12.228	-0.004	410912	4.6145	18.458	e
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1520984	20.000	20.000	
129 Chrysene	228.0	12.276	12.286	-0.010	381154	4.6169	18.467	e
131 Di-n-octylphthalate	149.0	13.030	13.035	-0.005	405311	4.3022	17.209	e
132 Benzo(b)fluoranthene	252.0	13.789	13.805	-0.015	423795	4.5615	18.246	e
134 Benzo(k)fluoranthene	252.0	13.832	13.848	-0.015	427448	4.5053	18.021	e
135 Benzo(a)pyrene	252.0	14.298	14.319	-0.020	394975	4.9347	19.739	e
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1692120	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.271	16.319	-0.047	547130	4.5815	18.326	e
139 Dibenzo(a,h)anthracene	278.0	16.282	16.325	-0.042	459401	4.4387	17.755	e
140 Benzo(g,h,i)perylene	276.0	16.838	16.881	-0.041	405628	4.4823	17.929	e

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

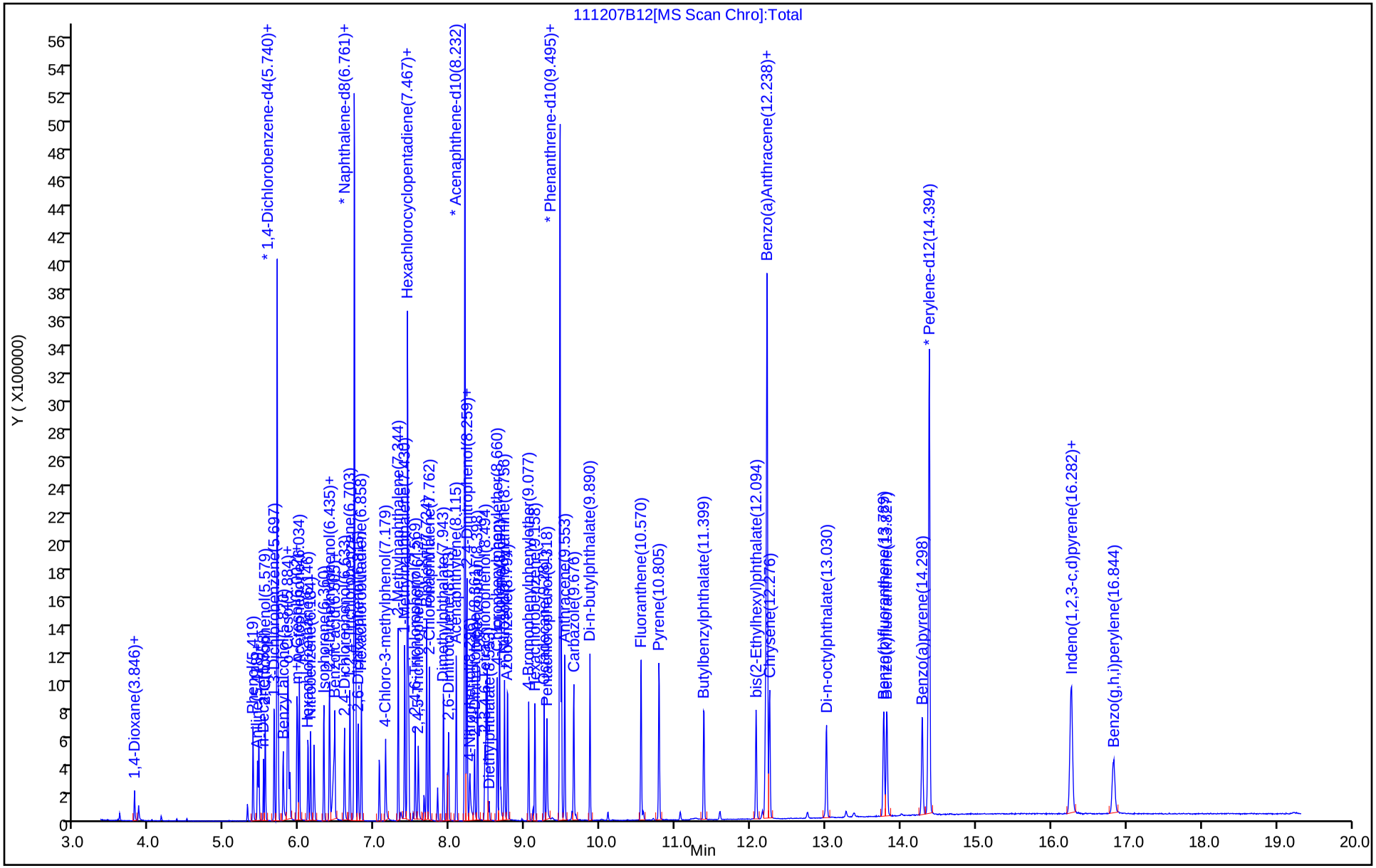
Q - Qualifier Signal(s) Fails Ratio Test

Review Flags

Report Date: 08-Dec-2019 13:38:46 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B12.d				
Injection Date:	07-Dec-2019 23:40:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STDICV	Lab ID:	SVMS 4221		
Sample Info:	11120719B.b, SVMS 4221				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B21.d
Lab Sample ID: SVMS 4220 Client Sample ID: 3STDICV
Injection Date: 08-Dec-2019 03:25:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, SVMS 4220
Misc. Info: 3STDICV
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: LCS ALS Bottle: 19
Cpnd Sublist: 3STD.sub Spike List File: ICV2.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
196 Caprolactam	40	46.748	16.9	116	70- 130
44 4-Chloroaniline	40	46.68	16.7	116	70- 130
60 2-Nitroaniline	40	49.435	23.6	123	70- 130
66 3-Nitroaniline	40	46.62	16.5	116	70- 130
83 4-Nitroaniline	40	42.57	6.4	106	70- 130
115 Benzidine	200	239.73	19.9	119	70- 130
125 3,3'-Dichlorobenzidine	40	45.318	13.3	113	70- 130
199 Benzaldhyde	40	44.324	10.8	110	70- 130
200 Atrazine	40	44.399	11	110	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B21.d		
Lab Sample ID:	SVMS 4220	Client Sample ID:	3STDICV
Injection Date:	08-Dec-2019 03:25:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120719B.b, SVMS 4220		
Misc. Info:	3STDICV		
Method:	\\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m		
Method Date:	08-Dec-2019 13:04:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	LCS	ALS Bottle:	19
Cpnd Sublist:	3STD.sub	Spike List File:	ICV2.spk
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 12:39:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
199 Benzaldhyde	77.0	5.408	5.408	0.000	290912	11.081	44.324	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	408357	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.761	0.000	1956531	20.000	20.000	
44 4-Chloroaniline	127.0	6.799	6.804	-0.005	439117	11.670	46.680	
196 Caprolactam	113.0	7.072	7.088	-0.015	107418	11.687	46.748	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	930678	20.000	20.000	
200 Atrazine	200.0	9.174	9.179	-0.004	159496	11.100	44.399	
* 102 Phenanthrene-d10	188.0	9.489	9.494	-0.004	1446640	20.000	20.000	
115 Benzidine	184.0	10.666	10.676	-0.010	2814903	59.934	239.73	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.147	-0.004	299060	11.330	45.318	
* 128 Chrysene-d12	240.0	12.238	12.238	0.000	1343904	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1598480	20.000	20.000	
60 2-Nitroaniline	138.0	7.831	7.836	-0.004	186205	12.359	49.435	
66 3-Nitroaniline	138.0	8.173	8.179	-0.004	149355	11.655	46.620	
83 4-Nitroaniline	138.0	8.692	8.698	-0.004	142692	10.642	42.570	

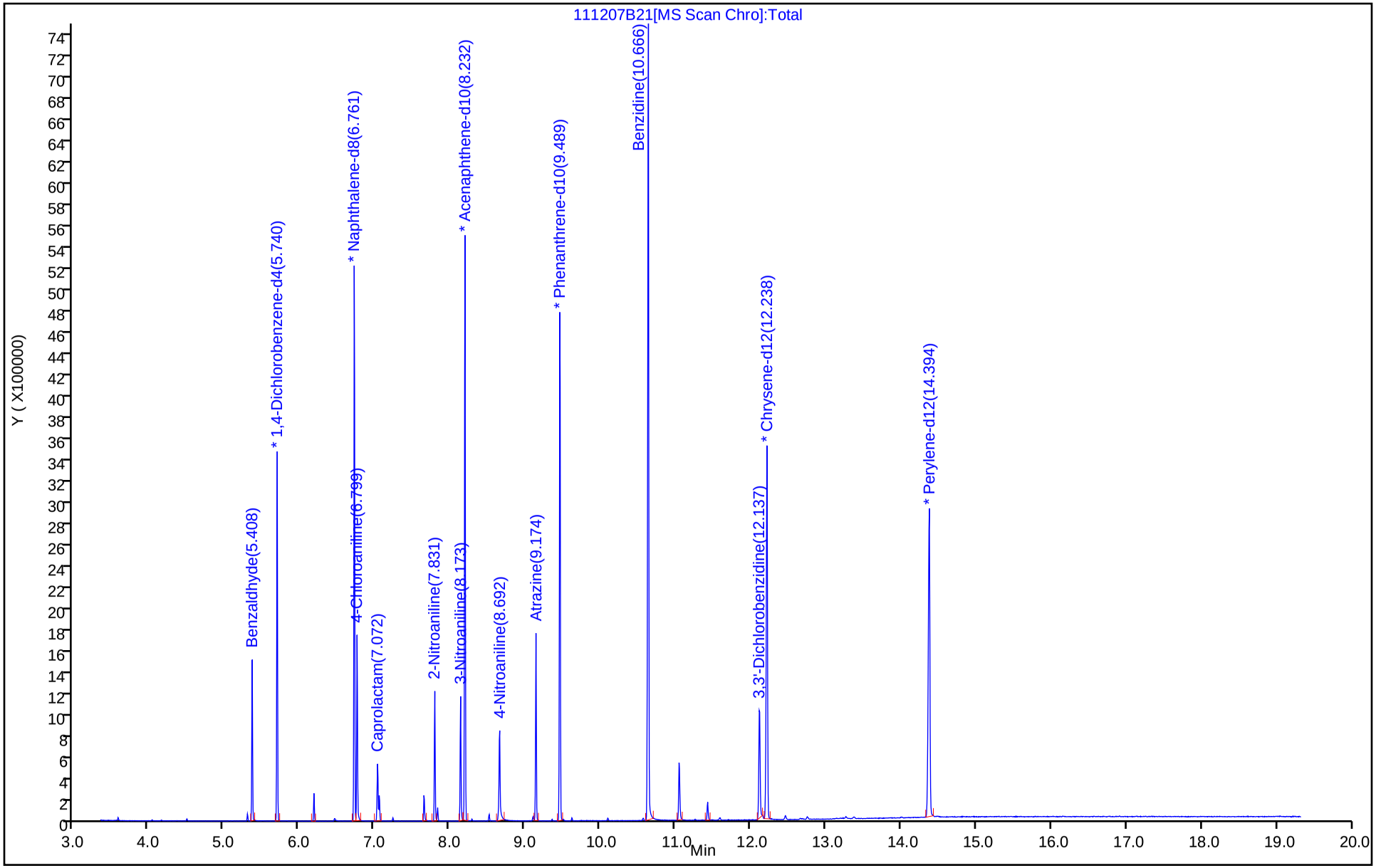
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 08-Dec-2019 13:08:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B21.d				
Injection Date:	08-Dec-2019 03:25:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STDICV	Lab ID:	SVMS 4220		
Sample Info:	11120719B.b, SVMS 4220				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120802.d
Lab Sample ID: SVMS 4281 Client Sample ID: 1STD010CE
Injection Date: 08-Dec-2019 12:31:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120819.b, SVMS 4281
Misc. Info: 1STD010
Method: \\Organics\HH\chem\msd11.i\11120819.b\8270DLVI-11.m
Method Date: 09-Dec-2019 12:31:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: CCV ALS Bottle: 97
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 pyridine	0.494194		0.440703	0.05	-10.8	20	89
193 1,4-Dioxane	0.065987		0.076939	0.05	16.6	20	117
2 N-Nitrosodimethylamine	0.304788		0.388913	0.05	* 27.6	20	128
$ 6 2-Fluorophenol	1.532085		1.70202	0.05	11.1	20	111
$ 9 Phenol-d5	1.971309		2.201608	0.05	11.7	20	112
10 Phenol	2.174088		2.340279	0.8	7.6	20	108
12 bis(2-Chloroethyl)ether	0.920647		1.137768	0.4	* 23.6	20	124
13 2-Chlorophenol	1.57644		1.691267	0.8	7.3	20	107
14 1,3-Dichlorobenzene	1.49649		1.510325	0.05	0.9	20	101
17 1,4-Dichlorobenzene	1.571413		1.645859	0.05	4.7	20	105
18 Benzyl alcohol	1.165561		1.36484	0.05	17.1	20	117
19 1,2-Dichlorobenzene	1.487716		1.564516	0.05	5.2	20	105
20 o-Cresol	1.500161		1.524937	0.7	1.7	20	102
21 bis(2Chloro1methylethyl)	0.210197		0.282576	0.05	* 34.4	20	134
23 m+p-Cresol	1.579754		1.666225	0.6	5.5	20	105
24 Acetophenone	2.196819		2.370207	0.01	7.9	20	108
26 n-Nitroso-di-n-propylami	1.238853		1.38508	0.5	11.8	20	112
28 Hexachloroethane	0.623765		0.618639	0.3	-0.8	20	99
$ 29 Nitrobenzene-d5	10	11.454	0.476419	0.05	14.5	20	115
30 Nitrobenzene	0.399981		0.461774	0.2	15.4	20	115
32 Isophorone	0.728852		0.748431	0.3	2.7	20	103
33 2-Nitrophenol	10	10.348	0.182384	0.05	3.5	20	103
34 2,4-Dimethylphenol	0.264902		0.236998	0.1	-10.5	20	89
35 bis(2-Chloroethoxy)metha	0.455213		0.481554	0.2	5.8	20	106
36 Benzoic acid	20	21.485	0.221694	0.05	7.4	20	107
38 2,4-Dichlorophenol	0.249617		0.253058	0.1	1.4	20	101
40 1,2,4-Trichlorobenzene	0.285915		0.287871	0.05	0.7	20	101
43 Naphthalene	1.057878		1.058511	0.7	0.1	20	100
45 2,6-Dichlorophenol	0.243242		0.239534	0.05	-1.5	20	98
47 Hexachlorobutadiene	0.171953		0.175088	0.01	1.8	20	102
49 4-Chloro-3-methylphenol	0.289837		0.314321	0.1	8.4	20	108
51 2-Methylnaphthalene	0.688728		0.676493	0.4	-1.8	20	98
52 1,2,4,5-Tetrachlorobenze	0.556324		0.559448	0.01	0.6	20	101
53 Hexachlorocyclopentadien	0.346077		0.414022	0.05	19.6	20	120

Report Date: 09-Dec-2019 12:32:10 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120802.d

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
54 2,4,6-Trichlorophenol	0.335008		0.357702	0.1	6.8	20	107
55 2,4,5-Trichlorophenol	0.342114		0.364822	0.1	6.6	20	107
$ 56 2-Fluorobiphenyl	1.388827		1.406674	0.05	1.3	20	101
58 2-Chloronaphthalene	1.186544		1.20611	0.7	1.6	20	102
62 Dimethylphthalate	1.238986		1.275861	0.01	3	20	103
64 Acenaphthylene	1.811885		1.835956	0.9	1.3	20	101
65 2,6-Dinitrotoluene	10	10.533	0.292882	0.1	5.3	20	105
68 Acenaphthene	1.265177		1.285994	0.7	1.6	20	102
69 2,4-Dinitrophenol	20	24.426	0.150088		22.1	0	0
70 4-Nitrophenol	20	22.412	0.188004	0.01	12.1	20	112
71 Dibenzofuran	1.618266		1.60233	0.8	-1	20	99
73 2,4-Dinitrotoluene	10	11.091	0.368423	0.1	10.9	20	111
76 2,3,4,6-Tetrachloropheno	0.271013		0.293428	0.01	8.3	20	108
78 Diethylphthalate	1.272288		1.35682	0.01	6.6	20	107
79 Fluorene	1.311389		1.285263	0.8	-2	20	98
80 4-Chlorophenylphenylethe	0.603611		0.604021	0.3	0.1	20	100
84 4,6-Dinitro-2-methylphen	10	12.566	0.131993	0.01	* 25.7	20	126
86 n-Nitrosodiphenylamine	0.560369		0.569818	0.01	1.7	20	102
87 Azobenzene	1.07069		1.159606	0.05	8.3	20	108
$ 88 2,4,6-Tribromophenol	10	10.505	0.17891	0.01	5	20	105
94 4-Bromophenylphenylether	0.252124		0.251413	0.1	-0.3	20	100
96 Hexachlorobenzene	0.328526		0.338005	0.1	2.9	20	103
99 Pentachlorophenol	20	20.803	0.165929	0.05	4	20	104
103 Phenanthrene	1.130112		1.131347	0.7	0.1	20	100
104 Anthracene	1.038247		1.02545	0.6	-1.2	20	99
106 Carbazole	0.979071		1.039382	0.01	6.2	20	106
109 Di-n-butylphthalate	1.285674		1.432757	0.01	11.4	20	111
114 Fluoranthene	1.153412		1.216534	0.6	5.5	20	105
116 Pyrene	1.179379		1.240275	0.6	5.2	20	105
$ 117 Terphenyl-d14	0.944185		1.024941	0.05	8.6	20	109
122 Butylbenzylphthalate	0.522831		0.580549	0.01	11	20	111
127 Benzo(a)Anthracene	1.170923		1.177016	0.8	0.5	20	101
129 Chrysene	1.085571		1.130747	0.7	4.2	20	104
130 bis(2-Ethylhexyl)phthala	10	10.086	0.781799	0.01	0.9	20	101
131 Di-n-octylphthalate	10	9.11	1.117835	0.01	-8.9	20	91
132 Benzo(b)fluoranthene	1.098119		1.109119	0.5	1	20	101
134 Benzo(k)fluoranthene	1.121399		1.106171	0.5	-1.4	20	99
135 Benzo(a)pyrene	0.946035		0.892051	0.5	-5.7	20	94
138 Indeno(1,2,3-c,d)pyrene	1.41151		1.413961	0.5	0.2	20	100
139 Dibenzo(a,h)anthracene	1.223301		1.2163	0.4	-0.6	20	99
140 Benzo(g,h,i)perylene	1.069611		1.060308	0.4	-0.9	20	99
184 Biphenyl	1.576926		1.599935	0.01	1.5	20	101
201 n-Decane	0.431187		0.522253	0.05	* 21.1	20	121
202 Octadecane	0.187659		0.212279	0.05	13.1	20	113
204 1-Methylnaphthalene	0.654154		0.633897	0.05	-3.1	20	97

Report Date: 09-Dec-2019 12:32:10 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120802.d
Lab Sample ID: SVMS 4281 Client Sample ID: 1STD010CE
Injection Date: 08-Dec-2019 12:31:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120819.b, SVMS 4281
Misc. Info: 1STD010
Method: \\Organics\HH\chem\msd11.i\11120819.b\8270DLVI-11.m
Method Date: 09-Dec-2019 12:31:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: CCV ALS Bottle: 97
Cpnd Sublist: 1STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:54:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
193 1,4-Dioxane	58.0	3.649	3.649	0.000	16407	10.000	11.660	
2 N-Nitrosodimethylamine	42.0	3.847	3.847	0.000	82934	10.000	12.760	
1 pyridine	79.0	3.906	3.906	0.000	93978	10.000	8.9176	
$ 6 2-Fluorophenol	112.0	4.761	4.761	0.000	362948	10.000	11.109	
$ 9 Phenol-d5	99.0	5.409	5.409	0.000	469483	10.000	11.168	
10 Phenol	94.0	5.419	5.419	0.000	499054	10.000	10.764	
12 bis(2-Chloroethyl)ether	63.0	5.500	5.500	0.000	242624	10.000	12.358	
201 n-Decane	57.0	5.558	5.558	0.000	111368	10.000	12.112	
13 2-Chlorophenol	128.0	5.580	5.580	0.000	360655	10.000	10.728	
14 1,3-Dichlorobenzene	146.0	5.697	5.697	0.000	322070	10.000	10.092	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	426491	20.000	20.000	
17 1,4-Dichlorobenzene	146.0	5.751	5.751	0.000	350972	10.000	10.474	
18 Benzyl alcohol	79.0	5.820	5.820	0.000	291046	10.000	11.710	
20 o-Cresol	108.0	5.890	5.890	0.000	325186	10.000	10.165	
19 1,2-Dichlorobenzene	146.0	5.879	5.879	0.000	333626	10.000	10.516	
21 bis(2Chloro1methylethyl)ether	45.0	5.906	5.906	0.000	60258	10.000	13.443	
23 m+p-Cresol	107.0	6.002	6.002	0.000	355315	10.000	10.547	
26 n-Nitroso-di-n-propylamine	70.0	6.013	6.013	0.000	295362	10.000	11.180	
24 Acetophenone	105.0	6.034	6.034	0.000	505436	10.000	10.789	
28 Hexachloroethane	117.0	6.147	6.147	0.000	131922	10.000	9.9178	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	435897	10.000	11.454	
30 Nitrobenzene	77.0	6.184	6.184	0.000	422498	10.000	11.545	
32 Isophorone	82.0	6.361	6.361	0.000	684773	10.000	10.269	

Report Date: 09-Dec-2019 12:32:10 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120802.d

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
34 2,4-Dimethylphenol	107.0	6.430	6.430	0.000	216840	10.000	8.9466	M
33 2-Nitrophenol	139.0	6.441	6.441	0.000	166871	10.000	10.348	
36 Benzoic acid	105.0	6.505	6.505	0.000	405676	20.000	21.485	
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	440595	10.000	10.579	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	231534	10.000	10.138	
40 1,2,4-Trichlorobenzene	180.0	6.703	6.703	0.000	263386	10.000	10.068	
* 41 Naphthalene-d8	136.0	6.762	6.762	0.000	1829890	20.000	20.000	
43 Naphthalene	128.0	6.783	6.783	0.000	968479	10.000	10.006	
45 2,6-Dichlorophenol	162.0	6.815	6.815	0.000	219160	10.000	9.8475	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	160196	10.000	10.182	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	287586	10.000	10.845	
51 2-Methylnaphthalene	142.0	7.345	7.345	0.000	618954	10.000	9.8224	
204 1-Methylnaphthalene	142.0	7.436	7.436	0.000	579981	10.000	9.6903	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	880708	50.000	59.816	
52 1,2,4,5-Tetrachlorobenzene	216.0	7.484	7.484	0.000	238012	10.000	10.056	
54 2,4,6-Trichlorophenol	196.0	7.569	7.569	0.000	152181	10.000	10.677	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	155210	10.000	10.664	
$ 56 2-Fluorobiphenyl	172.0	7.634	7.634	0.000	598456	10.000	10.129	
184 Biphenyl	154.0	7.725	7.725	0.000	680677	10.000	10.146	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	513128	10.000	10.165	
62 Dimethylphthalate	163.0	7.949	7.949	0.000	542803	10.000	10.298	
65 2,6-Dinitrotoluene	165.0	8.019	8.019	0.000	124604	10.000	10.533	
64 Acenaphthylene	152.0	8.115	8.115	0.000	781090	10.000	10.133	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	850881	20.000	20.000	
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	127707	20.000	24.426	
68 Acenaphthene	153.0	8.259	8.259	0.000	547114	10.000	10.165	
70 4-Nitrophenol	109.0	8.291	8.291	0.000	159969	20.000	22.412	
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	156742	10.000	11.091	
71 Dibenzofuran	168.0	8.404	8.404	0.000	681696	10.000	9.9015	
76 2,3,4,6-Tetrachlorophenol	232.0	8.495	8.495	0.000	124836	10.000	10.827	
78 Diethylphthalate	149.0	8.532	8.532	0.000	577246	10.000	10.664	
80 4-Chlorophenylphenylether	204.0	8.661	8.661	0.000	256975	10.000	10.007	
79 Fluorene	166.0	8.693	8.693	0.000	546803	10.000	9.8008	
84 4,6-Dinitro-2-methylphenol	198.0	8.709	8.709	0.000	85815	10.000	12.566	
86 n-Nitrosodiphenylamine	169.0	8.757	8.757	0.000	370467	10.000	10.169	
87 Azobenzene	77.0	8.800	8.800	0.000	753917	10.000	10.830	
$ 88 2,4,6-Tribromophenol	330.0	8.896	8.896	0.000	116318	10.000	10.505	
94 4-Bromophenylphenylether	248.0	9.078	9.078	0.000	163456	10.000	9.9718	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	219754	10.000	10.289	
202 Octadecane	57.0	9.281	9.281	0.000	138013	10.000	11.312	
99 Pentachlorophenol	266.0	9.324	9.324	0.000	215757	20.000	20.803	
* 102 Phenanthrene-d10	188.0	9.495	9.495	0.000	1300299	20.000	20.000	
103 Phenanthrene	178.0	9.511	9.511	0.000	735545	10.000	10.011	
104 Anthracene	178.0	9.559	9.559	0.000	666696	10.000	9.8767	
106 Carbazole	167.0	9.677	9.677	0.000	675754	10.000	10.616	
109 Di-n-butylphthalate	149.0	9.891	9.891	0.000	931506	10.000	11.144	
114 Fluoranthene	202.0	10.570	10.570	0.000	790929	10.000	10.547	
116 Pyrene	202.0	10.811	10.811	0.000	799171	10.000	10.516	
$ 117 Terphenyl-d14	244.0	10.907	10.907	0.000	660421	10.000	10.855	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	374077	10.000	11.104	
130 bis(2-Ethylhexyl)phthalate	149.0	12.100	12.100	0.000	503752	10.000	10.086	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
127 Benzo(a)Anthracene	228.0	12.223	12.223	0.000	758410	10.000	10.052	
* 128 Chrysene-d12	240.0	12.244	12.244	0.000	1288700	20.000	20.000	
129 Chrysene	228.0	12.276	12.276	0.000	728597	10.000	10.416	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	828866	10.000	9.1100	
132 Benzo(b)fluoranthene	252.0	13.795	13.795	0.000	822403	10.000	10.100	
134 Benzo(k)fluoranthene	252.0	13.838	13.838	0.000	820217	10.000	9.8642	
135 Benzo(a)pyrene	252.0	14.303	14.303	0.000	661449	10.000	9.4294	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1482984	20.000	20.000	
138 Indeno(1,2,3-c,d)pyrene	276.0	16.288	16.288	0.000	1048441	10.000	10.017	
139 Dibenzo(a,h)anthracene	278.0	16.293	16.293	0.000	901877	10.000	9.9428	
140 Benzo(g,h,i)perylene	276.0	16.855	16.855	0.000	786210	10.000	9.9130	

Compound Type Legend

$ - Surrogate

* - ISTD

QC Flag Legend

Processing Flags

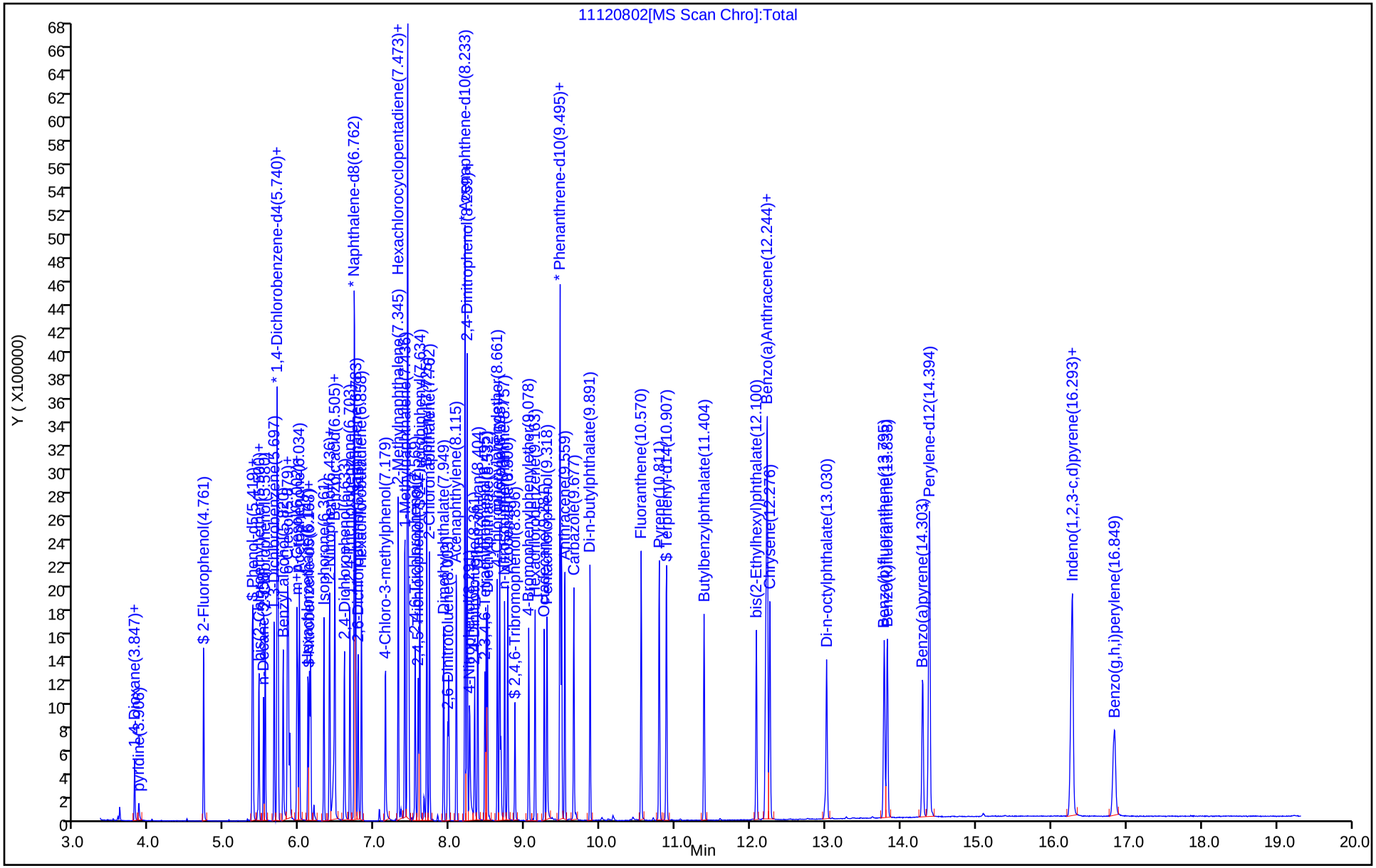
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 09-Dec-2019 12:32:10 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120802.d				
Injection Date:	08-Dec-2019 12:31:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	1STD010CE	Lab ID:	SVMS 4281		
Sample Info:	11120819.b, SVMS 4281				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Report Date: 09-Dec-2019 12:32:11 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

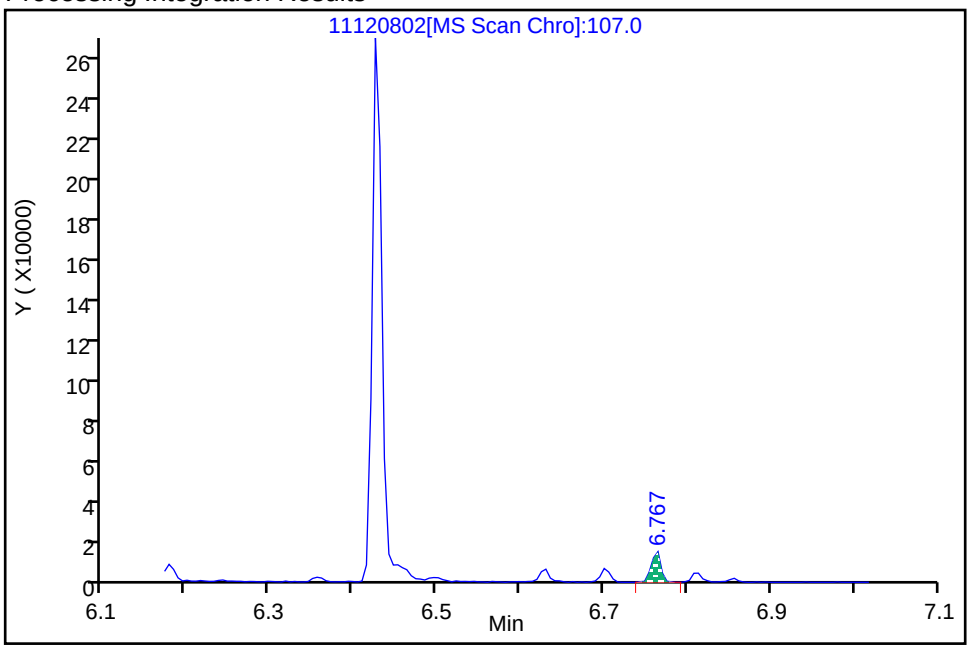
Manual Integration Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120802.d		
Injection Date:	08-Dec-2019 12:31:30	Inst. ID:	msd11.i
Client ID:	1STD010CE	Lab ID:	SVMS 4281
Sample Info:	11120819.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

34 2,4-Dimethylphenol, CAS: 105-67-9

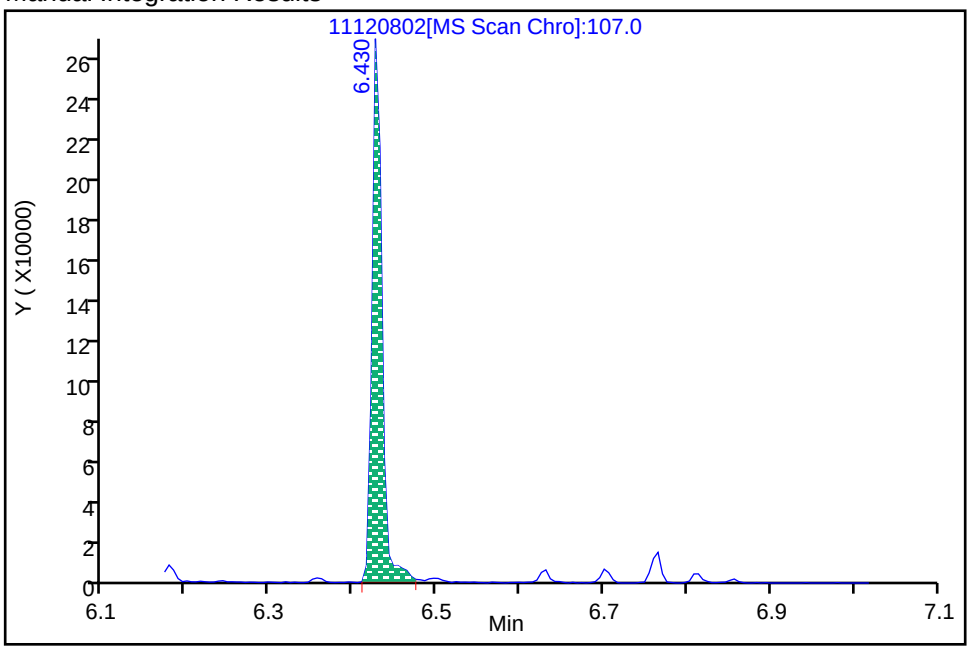
Processing Integration Results

RT: 6.767
Area: 12056
Amount: 0.49742
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.430
Area: 216840
Amount: 8.9466
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:54:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 09-Dec-2019 12:32:11 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

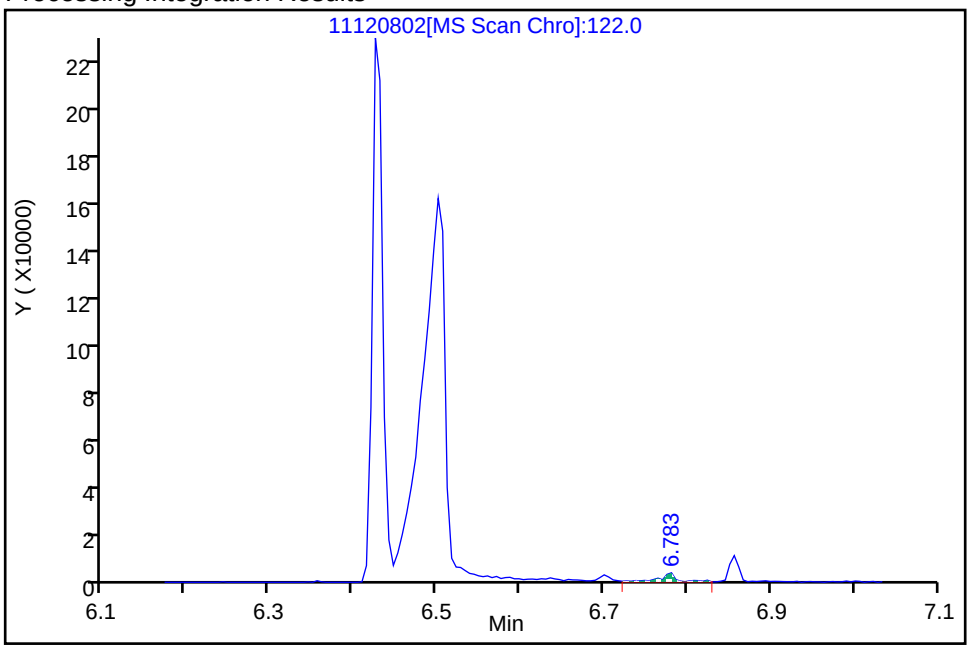
Manual Integration Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120802.d		
Injection Date:	08-Dec-2019 12:31:30	Inst. ID:	msd11.i
Client ID:	1STD010CE	Lab ID:	SVMS 4281
Sample Info:	11120819.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

34 2,4-Dimethylphenol, CAS: 105-67-9

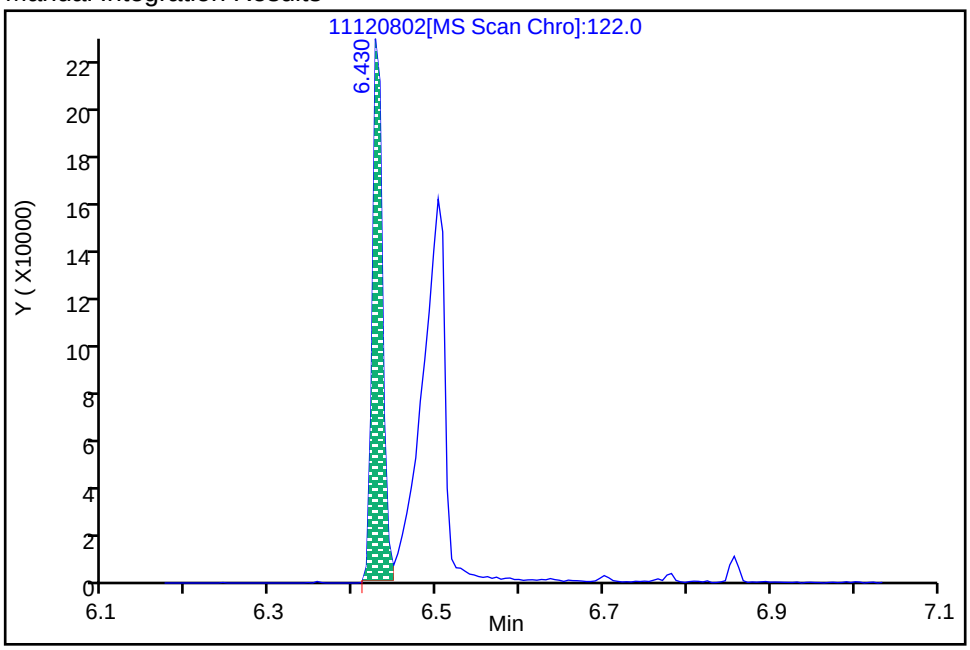
Processing Integration Results

RT: 6.783
Area: 5509
Amount: 0.49742
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.430
Area: 190115
Amount: 8.9466
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:54:30
Audit Action: Mint
Audit Reason: Manually Assigned

Report Date: 09-Dec-2019 12:32:11 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

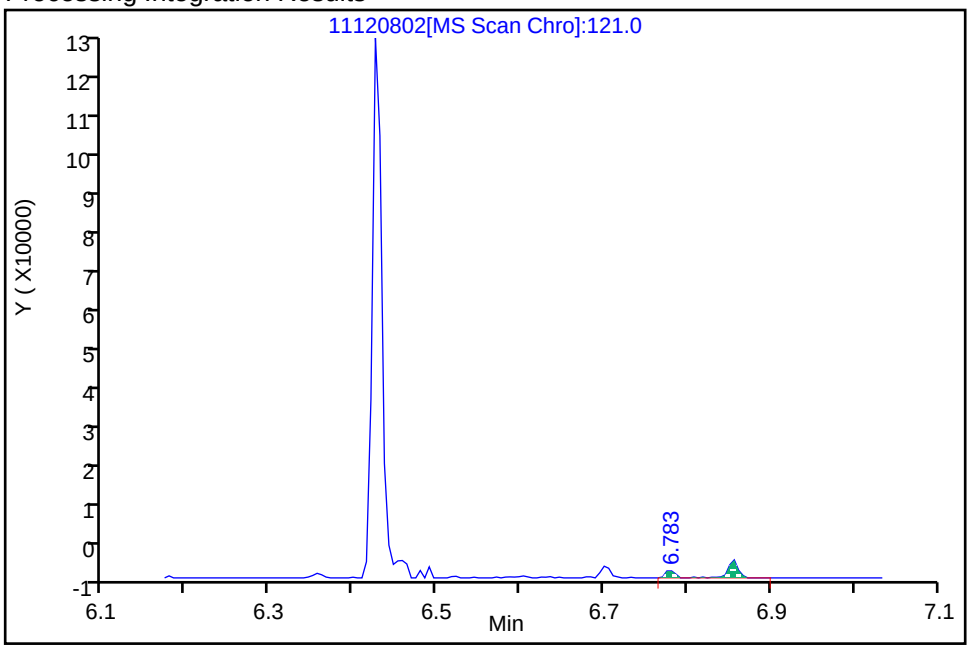
Manual Integration Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120802.d		
Injection Date:	08-Dec-2019 12:31:30	Inst. ID:	msd11.i
Client ID:	1STD010CE	Lab ID:	SVMS 4281
Sample Info:	11120819.b, SVMS 4281		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	JCG		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan

34 2,4-Dimethylphenol, CAS: 105-67-9

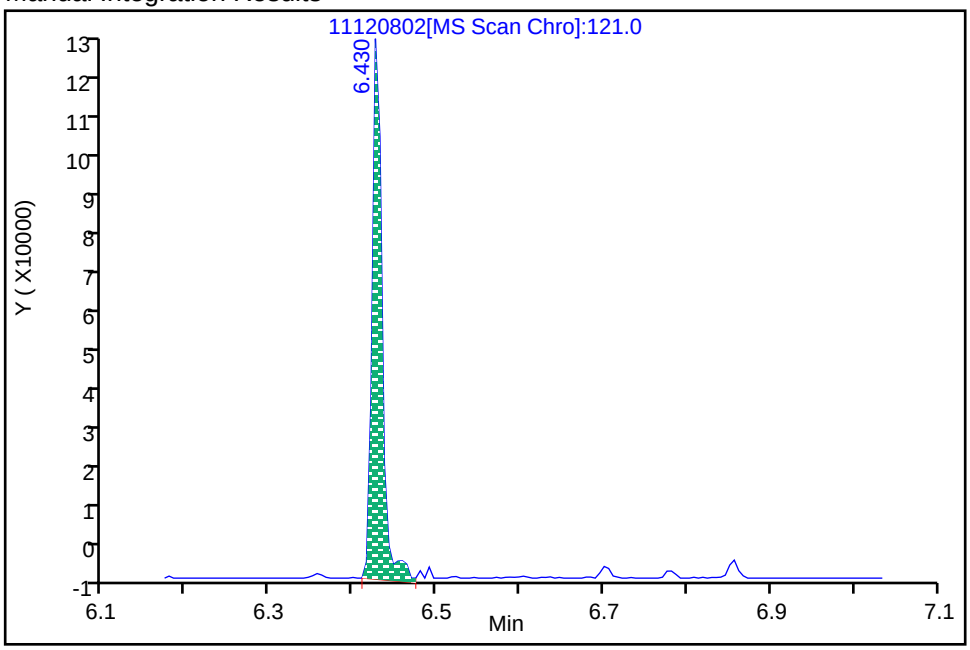
Processing Integration Results

RT: 6.783
Area: 5143
Amount: 0.49742
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.430
Area: 109173
Amount: 8.9466
Amount Units: ng



Data Editor: scd, 08-Dec-2019 12:54:30
Audit Action: Mint
Audit Reason: Manually Assigned

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120803.d
Lab Sample ID: SVMS 4215 Client Sample ID: 3STD010CF
Injection Date: 08-Dec-2019 12:56:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120819.b, SVMS 4215
Misc. Info: 3STD010
Method: \\Organics\HH\chem\msd11.i\11120819.b\8270DLVI-11.m
Method Date: 09-Dec-2019 12:31:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: CCV ALS Bottle: 98
Cpnd Sublist: 3STD.sub
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
196 Caprolactam	0.093955		0.098545	0.01	4.9	20	105
44 4-Chloroaniline	0.384637		0.390993	0.01	1.7	20	102
60 2-Nitroaniline	0.323776		0.370445	0.01	14.4	20	114
66 3-Nitroaniline	0.275386		0.288299	0.01	4.7	20	105
83 4-Nitroaniline	10	9.7092	0.277962	0.01	-2.9	20	97
115 Benzidine	50	52.884	0.734737	0.05	5.8	20	106
125 3,3'-Dichlorobenzidine	0.392833		0.370787	0.01	-5.6	20	94
199 Benzaldhyde	1.285805		1.421269	0.01	10.5	20	111
200 Atrazine	0.198659		0.203087	0.01	2.2	20	102

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120803.d		
Lab Sample ID:	SVMS 4215	Client Sample ID:	3STD010CF
Injection Date:	08-Dec-2019 12:56:30	Dil. Factor:	1.0
Operator:	JCG	Inst. ID:	msd11.i
Sample Info:	11120819.b, SVMS 4215		
Misc. Info:	3STD010		
Method:	\\Organics\HH\chem\msd11.i\11120819.b\8270DLVI-11.m		
Method Date:	09-Dec-2019 12:31:30	Quant Method:	ISTD
Calib Date:	08-Dec-2019 03:00:30	Calib File:	111207B20.d
Sample Type:	CCV	ALS Bottle:	98
Cpnd Sublist:	3STD.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan
Data Reviewer:	scd	Review Date:	08-Dec-2019 13:35:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
199 Benzaldhyde	77.0	5.409	5.409	0.000	252315	10.000	11.054	
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	355056	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.762	6.762	0.000	1798242	20.000	20.000	
44 4-Chloroaniline	127.0	6.799	6.799	0.000	351550	10.000	10.165	
196 Caprolactam	113.0	7.072	7.072	0.000	88604	10.000	10.489	
* 67 Acenaphthene-d10	164.0	8.233	8.233	0.000	844137	20.000	20.000	
200 Atrazine	200.0	9.174	9.174	0.000	128238	10.000	10.223	
* 102 Phenanthrene-d10	188.0	9.490	9.490	0.000	1262887	20.000	20.000	
115 Benzidine	184.0	10.661	10.661	0.000	2206596	50.000	52.884	
125 3,3'-Dichlorobenzidine	252.0	12.137	12.137	0.000	222713	10.000	9.4388	
* 128 Chrysene-d12	240.0	12.239	12.239	0.000	1201299	20.000	20.000	
* 136 Perylene-d12	264.0	14.389	14.389	0.000	1406649	20.000	20.000	
60 2-Nitroaniline	138.0	7.832	7.832	0.000	156353	10.000	11.441	
66 3-Nitroaniline	138.0	8.174	8.174	0.000	121682	10.000	10.469	
83 4-Nitroaniline	138.0	8.687	8.687	0.000	117319	10.000	9.7092	

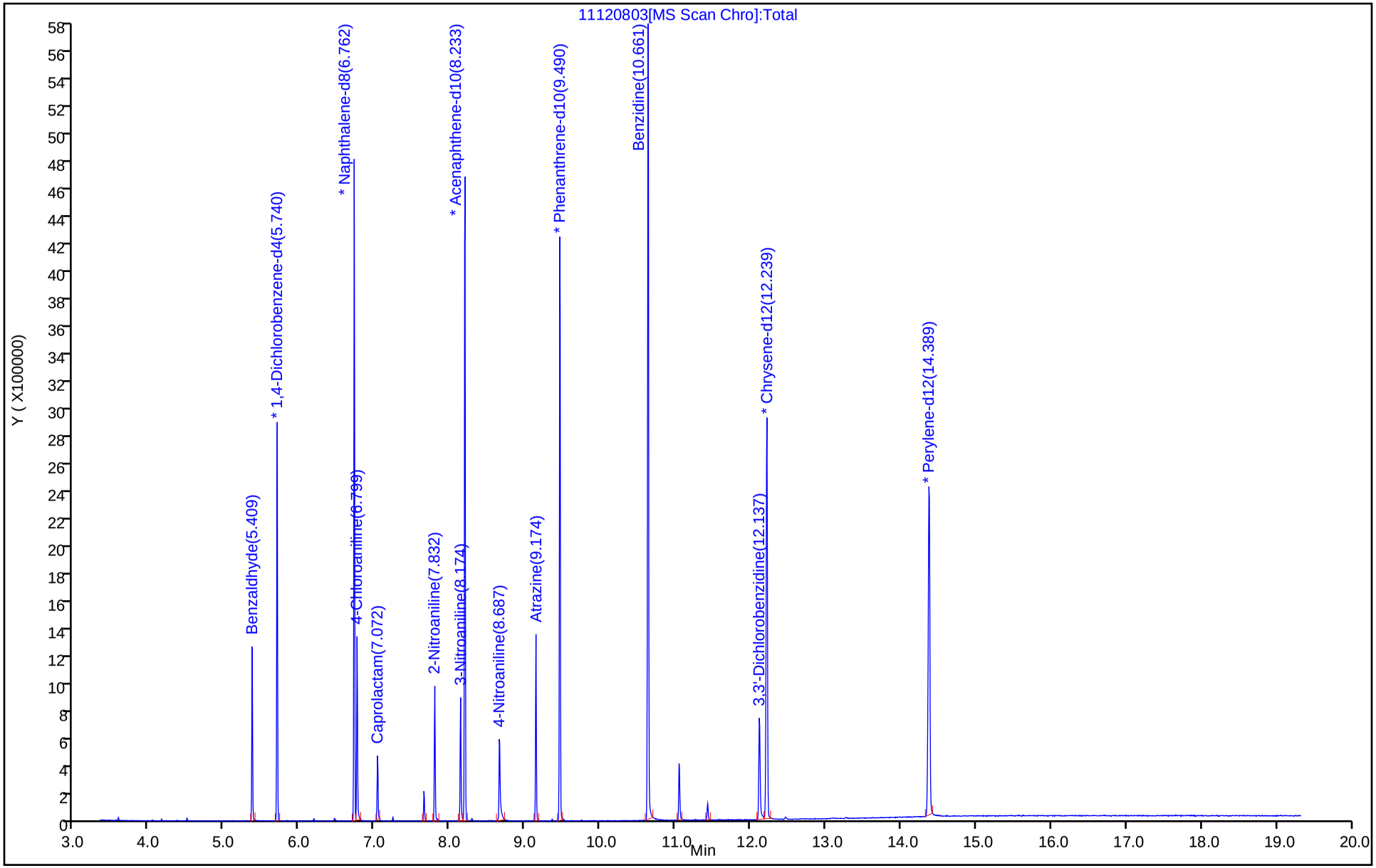
Compound Type Legend
* - ISTD

QC Flag Legend
Processing Flags
Review Flags

Report Date: 09-Dec-2019 12:32:11 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120803.d				
Injection Date:	08-Dec-2019 12:56:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	3STD010CF	Lab ID:	SVMS 4215		
Sample Info:	11120819.b, SVMS 4215				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		

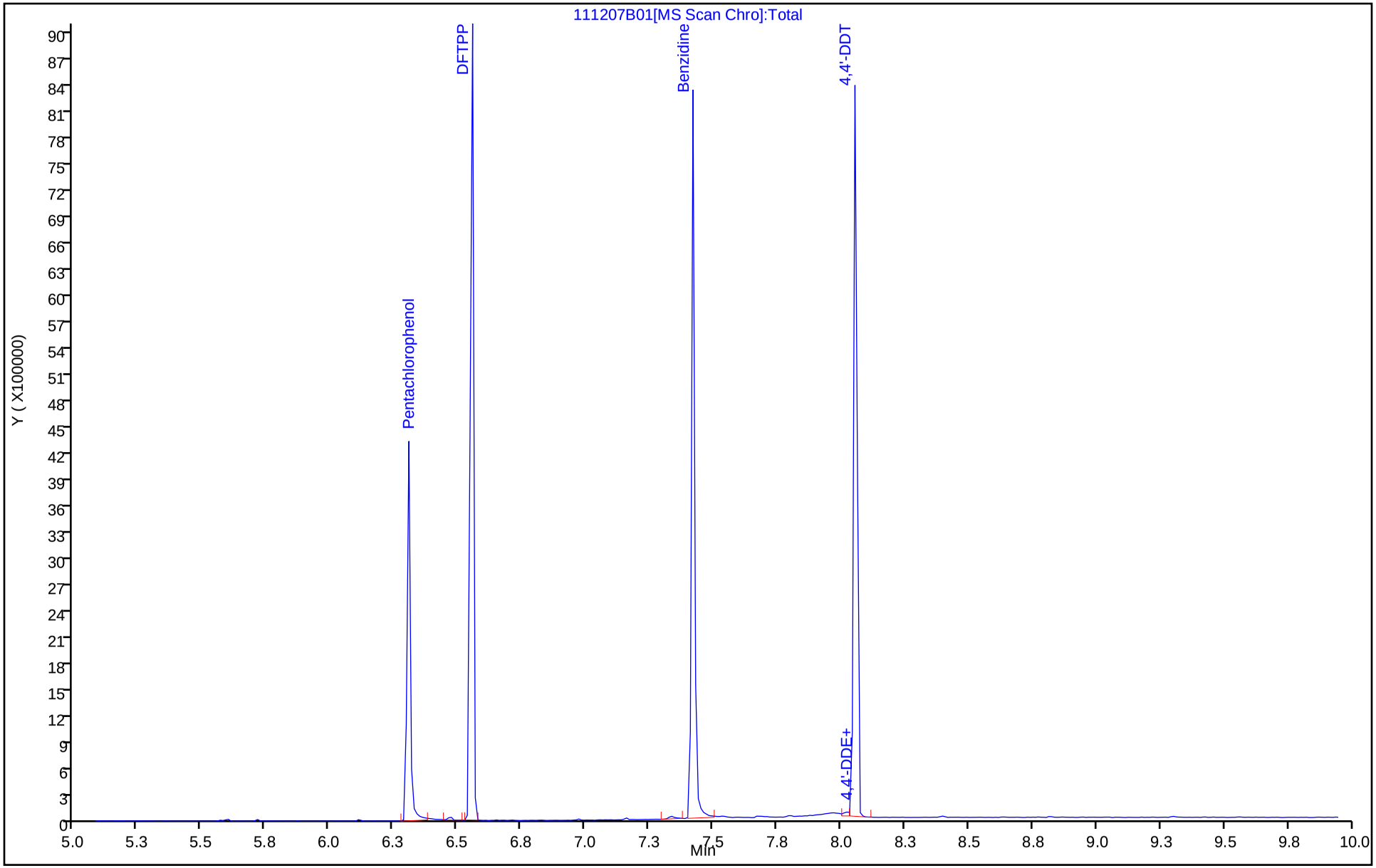


RAW QC DATA

Report Date: 07-Dec-2019 19:23:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d				
Injection Date:	07-Dec-2019 19:10:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:		Lab ID:	SVMS 4186		
Sample Info:	11120719B.b, SVMS 4186				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



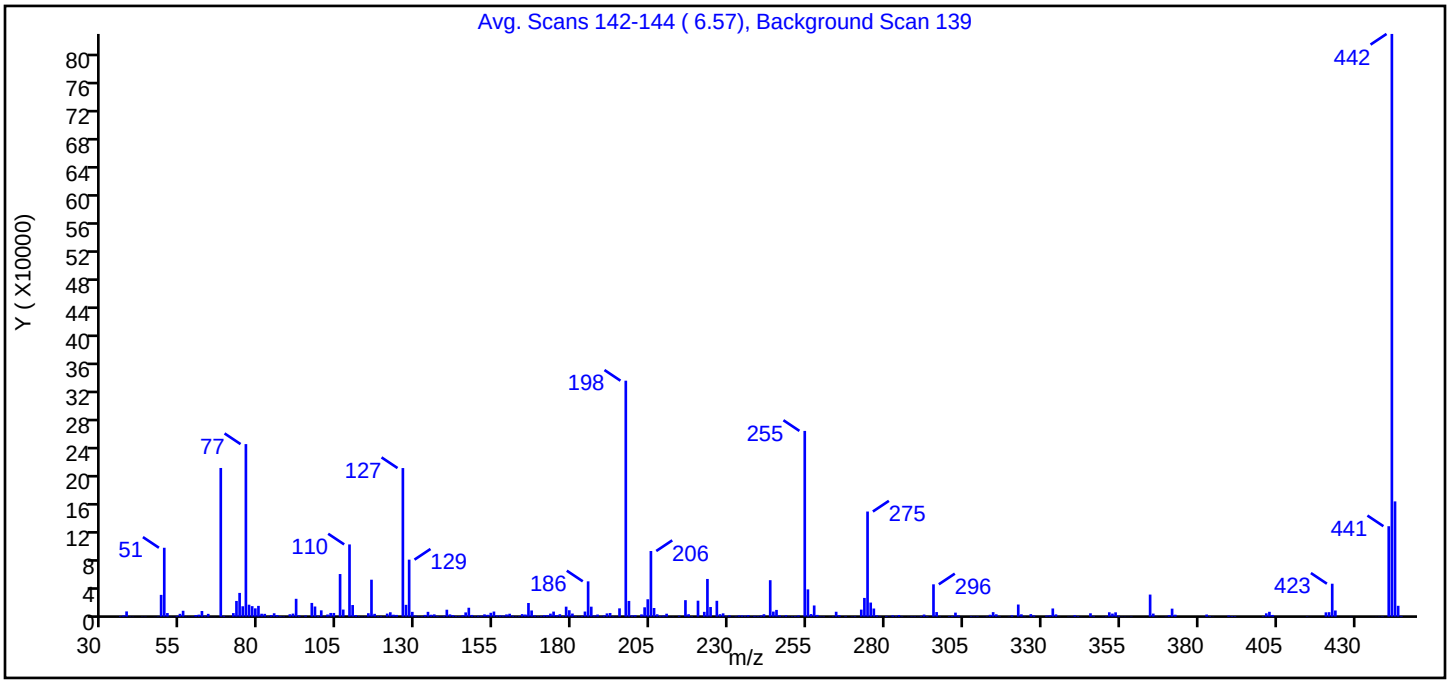
Report Date: 07-Dec-2019 19:23:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d		
Injection Date:	07-Dec-2019 19:10:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120719B.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

1 dftpp



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	29.2
68	Less than 2.00% of mass 69	0.0 (0.0) 1
69	Present	63.0
70	Less than 2.00% of mass 69	0.3 (0.5) 1
127	10.00 - 80.00% of mass 198	63.0
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	6.6
275	10.00 - 60.00% of mass 198	44.5
365	Greater than 1.00% of mass 198	9.3
441	0.01 - 24.00% of mass 442	38.3 (15.5) 2
442	Greater than 50.00% of mass 198	247.0
443	15.00 - 24.00% of mass 442	48.8 (19.8) 2

1-Value is % Mass 69 2-Value is % Mass 442

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d
Injection Date: 07-Dec-2019 19:10:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 331

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	64	123.00	6187	209.00	1119	303.00	5633
37.00	766	124.00	2685	210.00	1634	304.00	1493
38.00	1688	125.00	2376	211.00	4116	305.00	144
39.00	7385	127.00	211072	212.00	195	307.00	51
40.00	346	128.00	16728	213.00	283	308.00	740
41.00	255	129.00	80936	215.00	1213	309.00	438
42.00	58	130.00	6755	217.00	23344	310.00	575
43.00	37	131.00	1463	218.00	3401	311.00	90
44.00	243	132.00	565	219.00	644	312.00	203
45.00	282	133.00	701	221.00	22616	313.00	551
48.00	140	134.00	2392	222.00	143	314.00	2583
49.00	420	135.00	6776	223.00	6766	315.00	6336
50.00	30880	136.00	2655	224.00	53496	316.00	3260
51.00	97824	137.00	3181	225.00	13622	317.00	617
52.00	5075	138.00	1027	227.00	22456	319.00	64
53.00	304	139.00	564	228.00	3425	320.00	294
54.00	166	140.00	1197	229.00	4640	321.00	1812
55.00	985	141.00	9789	230.00	657	323.00	17168
56.00	3949	142.00	3128	231.00	1890	324.00	3254
57.00	8289	143.00	2152	232.00	266	325.00	415
58.00	408	144.00	832	233.00	577	326.00	65
59.00	359	145.00	714	234.00	1642	327.00	3506
60.00	438	146.00	1950	235.00	1686	328.00	1610
61.00	2257	147.00	5965	236.00	1308	332.00	1429
62.00	2763	148.00	12601	237.00	2101	333.00	1884
63.00	7932	149.00	2371	238.00	310	334.00	11550
64.00	1215	150.00	653	239.00	1094	335.00	3158
65.00	3918	151.00	1362	240.00	694	336.00	268
66.00	192	152.00	1175	241.00	1569	339.00	315
67.00	174	153.00	3172	242.00	3395	340.00	322
68.00	55	154.00	2532	244.00	51744	341.00	1967
69.00	211200	155.00	5394	245.00	7145	342.00	755
70.00	972	156.00	7195	246.00	9507	343.00	149

Report Date: 07-Dec-2019 19:23:56 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d
Injection Date: 07-Dec-2019 19:10:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 331

m/z	Y	m/z	Y	m/z	Y	m/z	Y
71.00	165	157.00	1749	247.00	1806	346.00	4729
72.00	261	158.00	1817	248.00	538	347.00	707
73.00	4997	159.00	1488	249.00	2010	350.00	198
74.00	22240	160.00	3095	250.00	433	351.00	529
75.00	33672	161.00	4082	251.00	598	352.00	6155
76.00	14710	162.00	1359	252.00	863	353.00	4297
77.00	245120	163.00	545	253.00	1604	354.00	6073
78.00	16904	164.00	679	255.00	263872	355.00	1198
79.00	14882	165.00	3513	256.00	38704	356.00	214
80.00	11729	166.00	2954	257.00	3597	357.00	257
81.00	15235	167.00	19344	258.00	15816	358.00	126
82.00	4081	168.00	8722	259.00	2408	359.00	401
83.00	3921	169.00	1666	260.00	524	363.00	58
84.00	530	170.00	627	261.00	537	365.00	31304
85.00	2071	171.00	1055	263.00	223	366.00	4293
86.00	4749	172.00	2044	264.00	622	367.00	278
87.00	2151	173.00	2116	265.00	6887	369.00	95
88.00	838	174.00	4237	266.00	1910	370.00	368
89.00	576	175.00	7117	268.00	704	371.00	1992
90.00	140	176.00	2169	270.00	357	372.00	11301
91.00	3326	177.00	3367	271.00	690	373.00	2690
92.00	4272	178.00	876	272.00	61	382.00	65
93.00	25296	179.00	14116	273.00	9929	383.00	2933
94.00	1690	180.00	9054	274.00	26544	384.00	774
95.00	237	181.00	4363	275.00	149312	385.00	263
96.00	1546	182.00	748	276.00	19936	390.00	1467
98.00	19432	183.00	461	277.00	11477	391.00	788
99.00	14347	184.00	1182	278.00	1812	392.00	719
100.00	1151	185.00	7203	279.00	522	401.00	696
101.00	8896	186.00	50104	281.00	974	402.00	4679
102.00	510	187.00	14102	282.00	337	403.00	6823
103.00	2947	188.00	1600	283.00	1741	404.00	2353
104.00	5189	189.00	2951	284.00	933	405.00	127
105.00	5180	190.00	505	285.00	2211	415.00	420

Report Date: 07-Dec-2019 19:23:56 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d
Injection Date: 07-Dec-2019 19:10:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 331

m/z	Y	m/z	Y	m/z	Y	m/z	Y
106.00	52	191.00	1727	286.00	511	416.00	75
107.00	60488	192.00	4545	287.00	76	421.00	6067
108.00	9997	193.00	5130	288.00	231	422.00	6284
110.00	102568	194.00	622	289.00	523	423.00	46736
111.00	16424	195.00	334	290.00	537	424.00	8695
112.00	2234	196.00	11730	291.00	305	429.00	204
113.00	683	198.00	335232	292.00	782	436.00	62
114.00	330	199.00	22280	293.00	2934	437.00	149
115.00	399	200.00	1751	294.00	751	438.00	245
116.00	4836	201.00	2012	295.00	139	439.00	519
117.00	52440	203.00	3153	296.00	45880	441.00	128448
118.00	3938	204.00	13206	297.00	6458	442.00	827968
119.00	744	205.00	24656	298.00	460	443.00	163712
120.00	972	206.00	93200	299.00	70	444.00	15348
121.00	369	207.00	12214	301.00	716	445.00	950
122.00	4291	208.00	3282	302.00	1008		

Report Date: 07-Dec-2019 19:23:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Breakdown Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d		
Injection Date:	07-Dec-2019 19:10:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120719B.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

5 4,4'-DDT

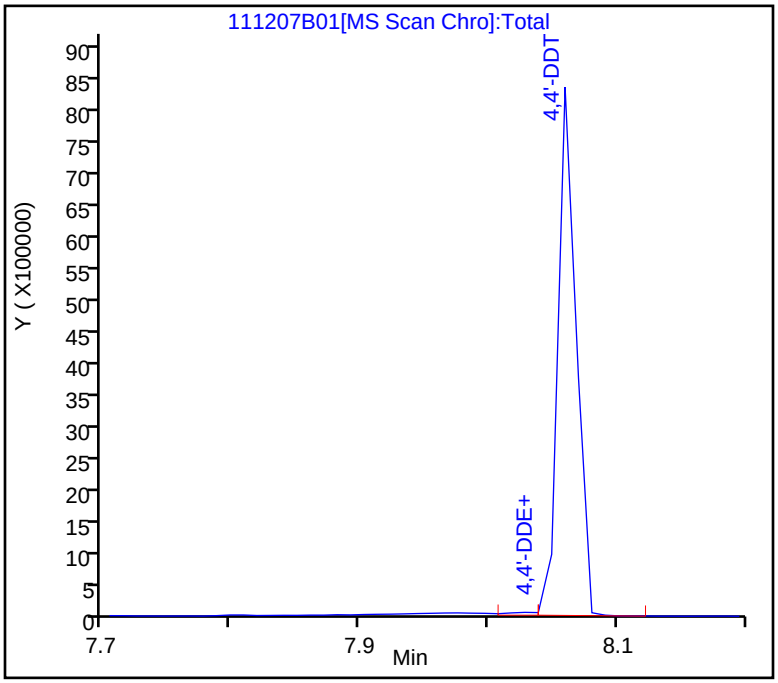
SW-846 Method

%Breakdown =
(Sum of Degrad. Peak Areas/
Total Area All Peaks) * 100

5 4,4'-DDT, Area = 1464252 @ 8.06

6 4,4'-DDE, Area = 994 @ 7.89
4 4,4'-DDD, Area = 2510 @ 7.81

%Breakdown:0.24%, Max Limit:20%
Passed



Report Date: 07-Dec-2019 19:23:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Peak Tailing Report

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B01.d		
Injection Date:	07-Dec-2019 19:10:30	Inst. ID:	msd11.i
Client ID:		Lab ID:	SVMS 4186
Sample Info:	11120719B.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

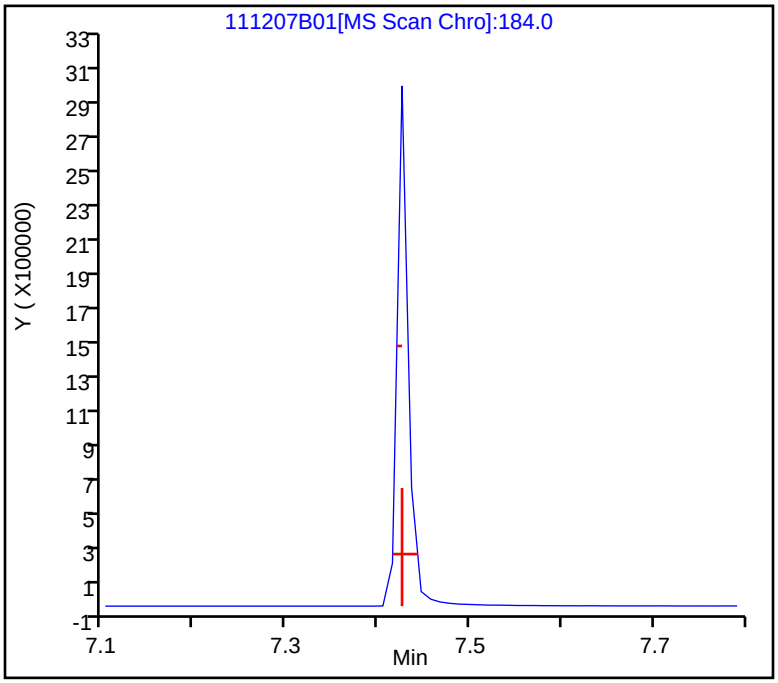
3 Benzidine

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.016 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.67, Max. Tailing < 2.00
Passed



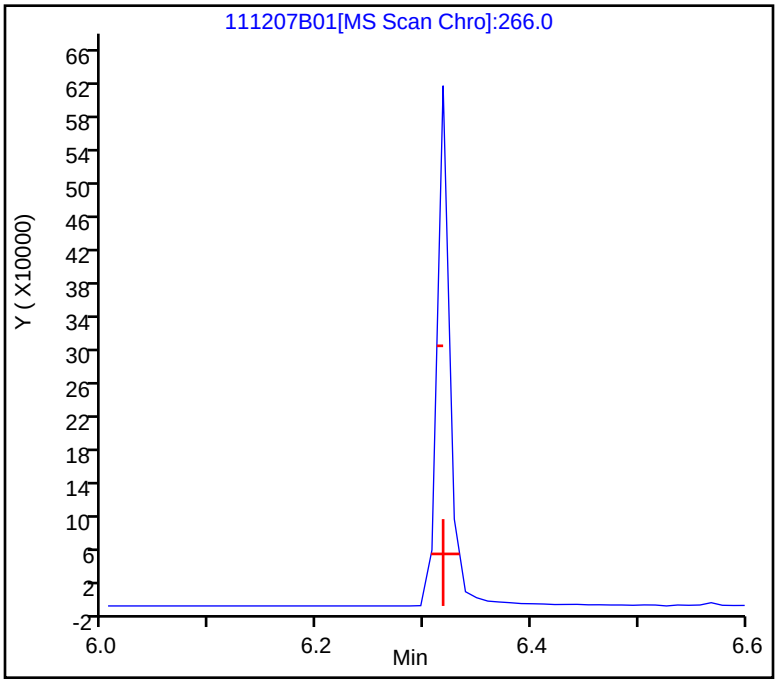
2 Pentachlorophenol

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.015 (min.)
Front Width = 0.011 (min.)

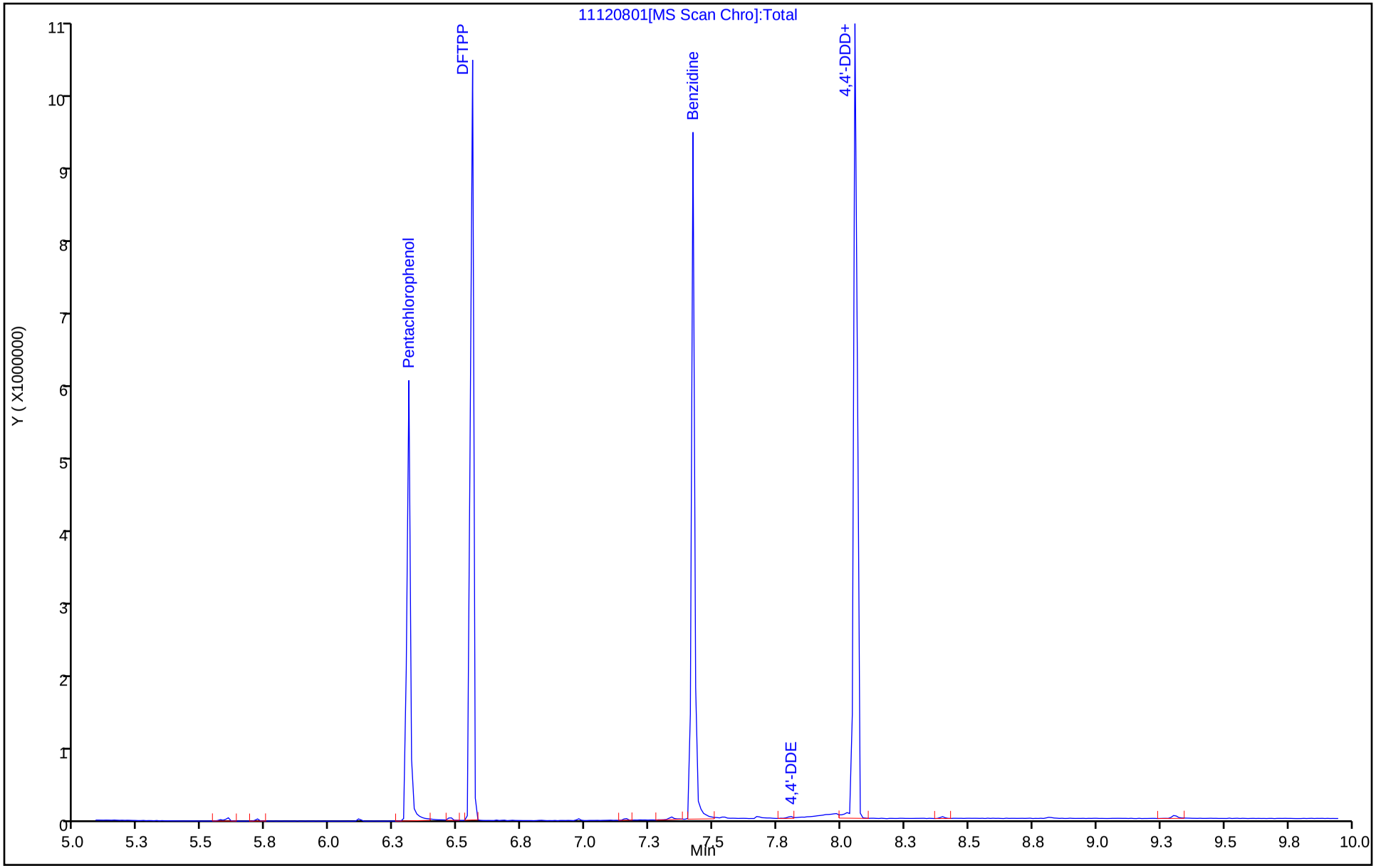
Tailing Factor = 1.38, Max. Tailing < 2.00
Passed



Report Date: 09-Dec-2019 12:32:09 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120801.d				
Injection Date:	08-Dec-2019 12:06:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	DFTPPCD	Lab ID:	SVMS 4186		
Sample Info:	11120819.b, SVMS 4186				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan		



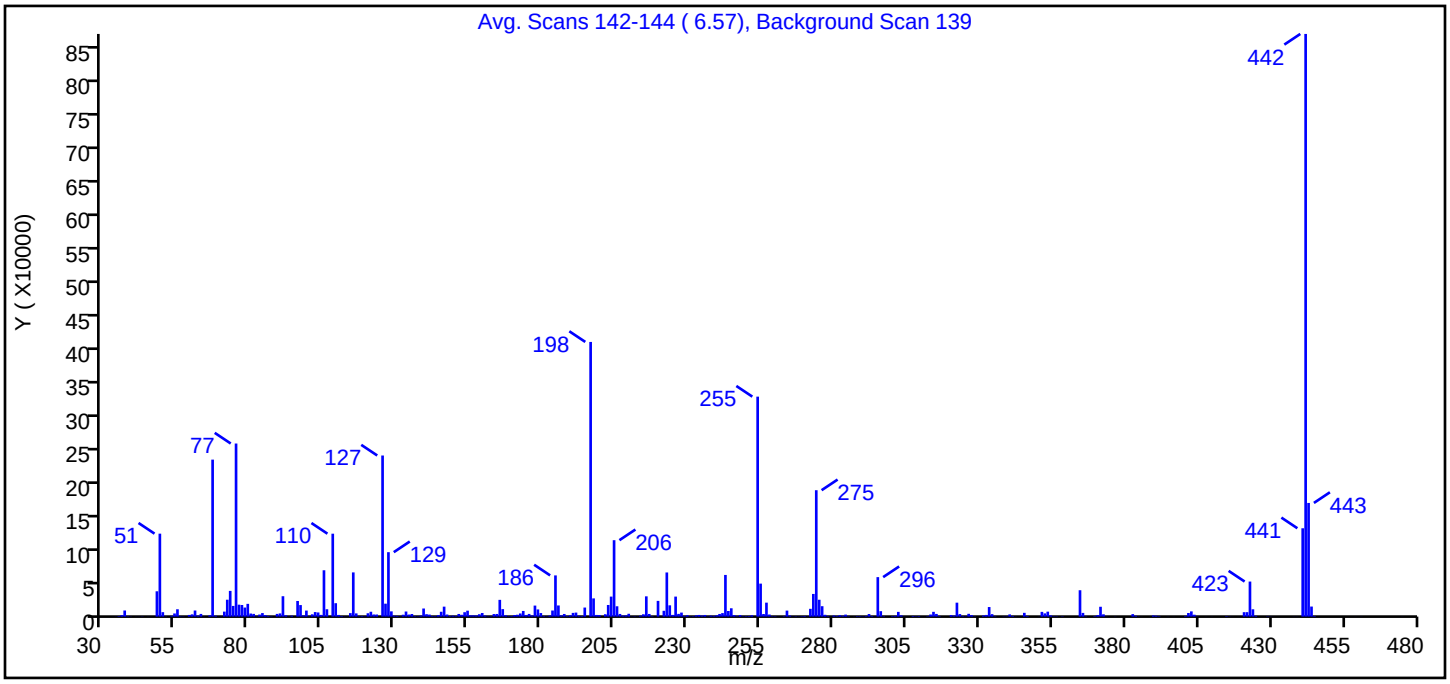
Report Date: 09-Dec-2019 12:32:09 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120801.d		
Injection Date:	08-Dec-2019 12:06:30	Inst. ID:	msd11.i
Client ID:	DFTPPCD	Lab ID:	SVMS 4186
Sample Info:	11120819.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

1 dftpp



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base Peak, 100% relative abundance	100.0
51	10.00 - 80.00% of mass 198	30.2
68	Less than 2.00% of mass 69	0.5 (0.8)
69	Present	57.2
70	Less than 2.00% of mass 69	0.3 (0.6)
127	10.00 - 80.00% of mass 198	58.7
197	Less than 2.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	6.6
275	10.00 - 60.00% of mass 198	46.0
365	Greater than 1.00% of mass 198	9.6
441	0.01 - 24.00% of mass 442	32.2 (15.2)
442	Greater than 50.00% of mass 198	212.1
443	15.00 - 24.00% of mass 442	41.4 (19.5)

Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120801.d
Injection Date: 08-Dec-2019 12:06:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	53	131.00	1363	221.00	23240	312.00	70
36.00	152	132.00	1014	222.00	188	313.00	571
37.00	742	133.00	318	223.00	8610	314.00	3101
38.00	2109	134.00	2768	224.00	65264	315.00	7058
39.00	9048	135.00	7525	225.00	16672	316.00	3959
40.00	518	136.00	3013	226.00	2505	317.00	716
41.00	263	137.00	3831	227.00	29584	318.00	55
43.00	110	138.00	734	228.00	4020	321.00	2304
44.00	120	139.00	491	229.00	5942	322.00	1380
45.00	271	140.00	1338	230.00	897	323.00	20600
47.00	120	141.00	11968	231.00	2116	324.00	3729
48.00	79	142.00	3590	232.00	443	325.00	736
50.00	37440	143.00	2969	233.00	668	326.00	402
51.00	122656	144.00	827	234.00	1887	327.00	4133
52.00	6566	145.00	677	235.00	2444	328.00	2195
53.00	314	146.00	2236	236.00	1561	329.00	401
55.00	1079	147.00	7178	237.00	2405	332.00	1610
56.00	4656	148.00	14720	238.00	388	333.00	2464
57.00	10853	149.00	3051	239.00	1431	334.00	14136
58.00	539	150.00	863	240.00	1035	335.00	3621
59.00	365	151.00	1468	241.00	1970	336.00	523
60.00	72	152.00	791	242.00	3895	339.00	297
61.00	2456	153.00	3909	243.00	5195	340.00	421
62.00	3327	154.00	2660	244.00	61600	341.00	3233
63.00	9021	155.00	6483	245.00	8290	342.00	982
64.00	1439	156.00	8760	246.00	12330	343.00	155
65.00	3963	157.00	1901	247.00	2219	346.00	5573
66.00	185	158.00	1955	248.00	635	347.00	928
68.00	1834	159.00	1677	249.00	2370	351.00	130
69.00	232128	160.00	3475	250.00	491	352.00	6994
70.00	1292	161.00	5333	251.00	741	353.00	4765
71.00	140	162.00	1481	252.00	903	354.00	7310
72.00	300	163.00	431	253.00	1951	355.00	1804

Report Date: 09-Dec-2019 12:32:09 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120801.d
Injection Date: 08-Dec-2019 12:06:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
73.00	7371	164.00	560	255.00	325248	356.00	463
74.00	24960	165.00	3773	256.00	48776	357.00	429
75.00	38008	166.00	3894	257.00	3847	358.00	73
76.00	15792	167.00	24776	258.00	20632	359.00	454
77.00	255936	168.00	11064	259.00	3042	365.00	38992
78.00	17624	169.00	1924	260.00	541	366.00	5468
79.00	17152	170.00	635	261.00	544	367.00	408
80.00	13389	171.00	875	262.00	109	370.00	752
81.00	18856	172.00	2322	263.00	166	371.00	2215
82.00	4537	173.00	2742	264.00	660	372.00	14549
83.00	4017	174.00	4641	265.00	8875	373.00	3397
84.00	465	175.00	8348	266.00	1511	374.00	197
85.00	3021	176.00	2408	267.00	219	377.00	170
86.00	5223	177.00	3950	268.00	489	383.00	3668
87.00	2225	178.00	1691	269.00	280	384.00	1206
88.00	896	179.00	16290	270.00	575	385.00	277
89.00	426	180.00	10593	271.00	953	386.00	73
91.00	3996	181.00	5260	272.00	276	389.00	70
92.00	4727	182.00	785	273.00	11508	390.00	1756
93.00	30136	183.00	416	274.00	33512	391.00	1322
94.00	1999	184.00	1513	275.00	186880	392.00	597
95.00	233	185.00	9004	276.00	24928	395.00	96
96.00	1362	186.00	60920	277.00	15381	397.00	77
98.00	23088	187.00	16480	278.00	2664	401.00	982
99.00	17048	188.00	1816	279.00	717	402.00	5315
100.00	1666	189.00	3885	280.00	98	403.00	7718
101.00	8910	190.00	833	281.00	1605	404.00	2790
102.00	437	191.00	1965	282.00	859	405.00	329
103.00	3387	192.00	5487	283.00	2098	408.00	71
104.00	6705	193.00	5951	284.00	1225	410.00	87
105.00	6119	194.00	1277	285.00	2965	415.00	632
106.00	2518	195.00	905	286.00	561	416.00	221
107.00	68512	196.00	13378	288.00	170	417.00	75
108.00	10880	198.00	406144	289.00	670	419.00	52

Report Date: 09-Dec-2019 12:32:09 AIM Revision: 1.0 27-Jun-2017 12:05:20
Data File: \\Organics\HH\chem\msd11.i\11120819.b\11120801.d
Injection Date: 08-Dec-2019 12:06:30
Spectrum: Avg. Scans 142-144 (6.57), Background Scan 139
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
110.00	122600	199.00	26928	290.00	624	420.00	71
111.00	19824	200.00	2454	291.00	378	421.00	6525
112.00	2471	201.00	2334	292.00	826	422.00	6576
113.00	868	203.00	3508	293.00	3814	423.00	51832
114.00	274	204.00	17176	294.00	866	424.00	10817
115.00	230	205.00	29576	295.00	151	425.00	1071
116.00	5152	206.00	112984	296.00	58376	429.00	395
117.00	65352	207.00	15274	297.00	8031	430.00	178
118.00	4741	208.00	3920	298.00	602	431.00	67
119.00	579	209.00	1494	299.00	69	438.00	114
120.00	841	210.00	1881	301.00	754	439.00	110
121.00	348	211.00	4189	302.00	1122	441.00	130624
122.00	4940	212.00	224	303.00	6980	442.00	861568
123.00	7188	213.00	454	304.00	1843	443.00	168064
124.00	3135	214.00	228	305.00	181	444.00	14860
125.00	3076	215.00	1392	306.00	63	445.00	838
127.00	238208	216.00	3450	308.00	960	459.00	54
128.00	19112	217.00	29968	309.00	491	461.00	97
129.00	95264	218.00	3910	310.00	770	475.00	77
130.00	7752	219.00	633	311.00	87		

Report Date: 09-Dec-2019 12:32:09 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Breakdown Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120801.d		
Injection Date:	08-Dec-2019 12:06:30	Inst. ID:	msd11.i
Client ID:	DFTPPCD	Lab ID:	SVMS 4186
Sample Info:	11120819.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

5 4,4'-DDT

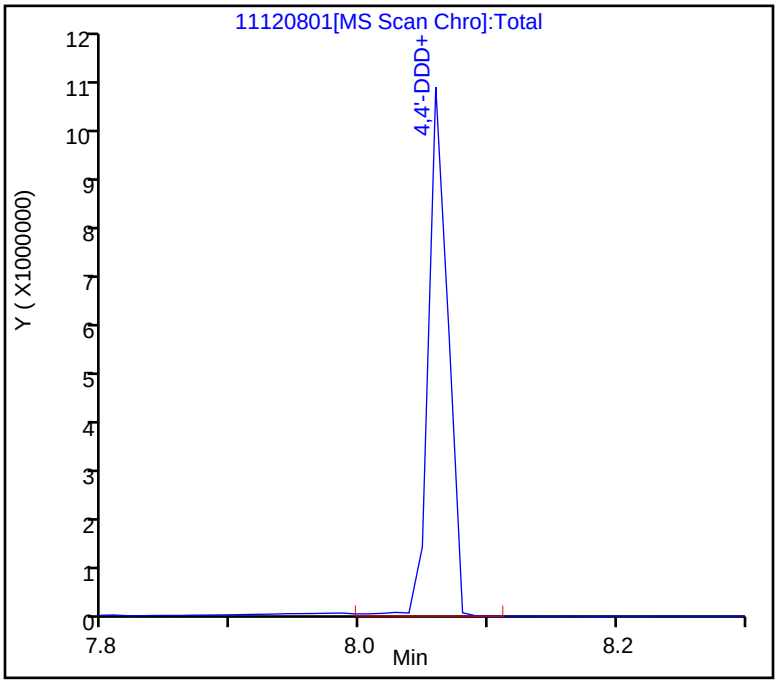
SW-846 Method

%Breakdown =
(Sum of Degrad. Peak Areas/
Total Area All Peaks) * 100

5 4,4'-DDT, Area = 2082199 @ 8.06

6 4,4'-DDE, Area = 947 @ 7.88
4 4,4'-DDD, Area = 261 @ 8.20

%Breakdown:0.06%, Max Limit:20%
Passed



Report Date: 09-Dec-2019 12:32:09 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services

Peak Tailing Report

Data File:	\\Organics\HH\chem\msd11.i\11120819.b\11120801.d		
Injection Date:	08-Dec-2019 12:06:30	Inst. ID:	msd11.i
Client ID:	DFTPPCD	Lab ID:	SVMS 4186
Sample Info:	11120819.b, SVMS 4186		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JCG		
Column1:	Zebron ZB-SV (0.25 mm)	Detector:	MS Scan

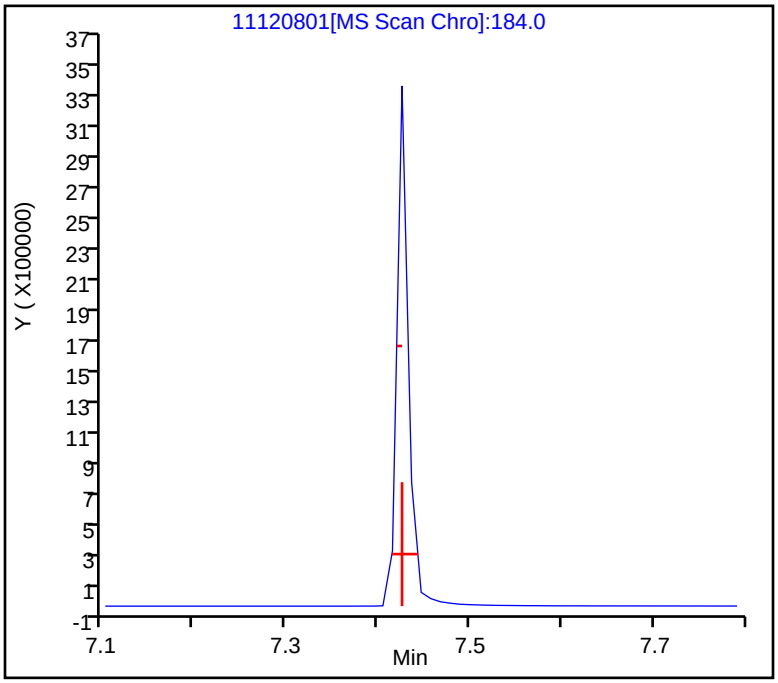
3 Benzidine

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.56, Max. Tailing < 2.00
Passed



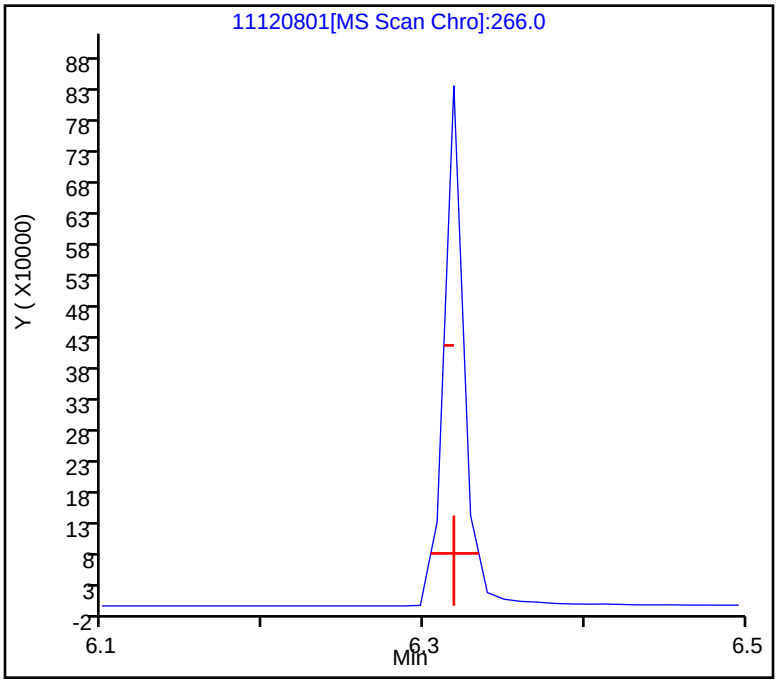
2 Pentachlorophenol

SW-846 Method

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.015 (min.)
Front Width = 0.014 (min.)

Tailing Factor = 1.08, Max. Tailing < 2.00
Passed



Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2,4,5-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2,4,6-Trichlorophenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2,4-Dichlorophenol	ND		1	8.0	1.0	ug/L	12/08/2019 0350
2,4-Dimethylphenol	ND		1	4.0	1.0	ug/L	12/08/2019 0350
2,4-Dinitrophenol	ND		1	20	1.0	ug/L	12/08/2019 0350
2,4-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/08/2019 0350
2,6-Dinitrotoluene	ND		1	8.0	0.50	ug/L	12/08/2019 0350
2-Chloronaphthalene	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2-Chlorophenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
2-Methylnaphthalene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
2-Methylphenol	ND		1	4.0	1.0	ug/L	12/08/2019 0350
2-Nitroaniline	ND		1	8.0	0.50	ug/L	12/08/2019 0350
2-Nitrophenol	ND		1	4.0	1.0	ug/L	12/08/2019 0350
3,3'-Dichlorobenzidine	ND		1	4.0	1.8	ug/L	12/08/2019 0350
3+4-Methylphenol	ND		1	4.0	1.5	ug/L	12/08/2019 0350
3-Nitroaniline	ND		1	8.0	1.0	ug/L	12/08/2019 0350
4,6-Dinitro-2-methylphenol	ND		1	20	1.0	ug/L	12/08/2019 0350
4-Bromophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
4-Chloro-3-methyl phenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
4-Chloroaniline	ND		1	8.0	0.50	ug/L	12/08/2019 0350
4-Chlorophenyl phenyl ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
4-Nitroaniline	ND		1	8.0	1.5	ug/L	12/08/2019 0350
4-Nitrophenol	ND		1	20	2.0	ug/L	12/08/2019 0350
Acenaphthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Acenaphthylene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Acetophenone	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Anthracene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Atrazine	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Benzaldehyde	ND		1	8.0	0.50	ug/L	12/08/2019 0350
Benzo(a)anthracene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(a)pyrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(b)fluoranthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(g,h,i)perylene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Benzo(k)fluoranthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
bis(2-Chloroethoxy)methane	ND		1	4.0	0.50	ug/L	12/08/2019 0350
bis(2-Chloroethyl)ether	ND		1	4.0	0.50	ug/L	12/08/2019 0350
bis(2-Ethylhexyl)phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Butyl benzyl phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Caprolactam	ND		1	8.0	2.0	ug/L	12/08/2019 0350
Carbazole	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Chrysene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Dibenzo(a,h)anthracene	ND		1	0.80	0.20	ug/L	12/08/2019 0350

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Dibenzofuran	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Diethylphthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Dimethyl phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Di-n-butyl phthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Di-n-octylphthalate	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Fluoranthene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Fluorene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Hexachlorobenzene	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Hexachlorobutadiene	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Hexachlorocyclopentadiene	ND		1	20	2.0	ug/L	12/08/2019 0350
Hexachloroethane	ND		1	4.0	1.0	ug/L	12/08/2019 0350
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Isophorone	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Naphthalene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Nitrobenzene	ND		1	4.0	1.5	ug/L	12/08/2019 0350
N-Nitrosodi-n-propylamine	ND		1	4.0	0.50	ug/L	12/08/2019 0350
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Pentachlorophenol	ND		1	20	2.0	ug/L	12/08/2019 0350
Phenanthrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350
Phenol	ND		1	4.0	0.50	ug/L	12/08/2019 0350
Pyrene	ND		1	0.80	0.20	ug/L	12/08/2019 0350

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		88	37-129
2-Fluorophenol		52	24-127
Nitrobenzene-d5		92	38-127
Phenol-d5		78	28-128
Terphenyl-d14		114	10-148
2,4,6-Tribromophenol		80	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B22.d
Lab Sample ID: UQ37996-001 Client Sample ID: SBLK96
Injection Date: 08-Dec-2019 03:50:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UQ37996-001
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: BLANK ALS Bottle: 20
Cpnd Sublist: sample.sb
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:57:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.734	5.740	-0.004	288088	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1805726	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	876110	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.489	9.495	-0.004	1299123	20.000	20.000	
* 128 Chrysene-d12	240.0	12.238	12.244	-0.004	1303434	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1470139	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.756	4.766	-0.010	114722	5.1984	20.794	
199 Benzaldhyde	77.0		5.408		ND			
$ 9 Phenol-d5	99.0	5.403	5.414	-0.010	221916	7.8152	31.261	
10 Phenol	94.0		5.424		ND			
12 bis(2-Chloroethyl)ether	63.0		5.499		ND			
13 2-Chlorophenol	128.0		5.585		ND			
20 o-Cresol	108.0		5.890		ND			
21 bis(2Chloro1methylethyl)ether	45.0		5.911		ND			
23 m+p-Cresol	107.0		6.002		ND			
26 n-Nitroso-di-n-propylamine	70.0		6.013		ND			
24 Acetophenone	105.0		6.039		ND			
28 Hexachloroethane	117.0		6.152		ND			
$ 29 Nitrobenzene-d5	82.0	6.162	6.168	-0.004	342565	9.1500	36.600	
30 Nitrobenzene	77.0		6.184		ND			
32 Isophorone	82.0		6.360		ND			
34 2,4-Dimethylphenol	107.0		6.435		ND			
33 2-Nitrophenol	139.0		6.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0		6.505		ND			
38 2,4-Dichlorophenol	162.0		6.633		ND			
43 Naphthalene	128.0		6.783		ND			
44 4-Chloroaniline	127.0		6.799		ND			
47 Hexachlorobutadiene	224.6		6.858		ND			
196 Caprolactam	113.0		7.072		ND			
49 4-Chloro-3-methylphenol	107.0		7.179		ND			
51 2-Methylnaphthalene	142.0		7.350		ND			
53 Hexachlorocyclopentadiene	237.0		7.473		ND			
54 2,4,6-Trichlorophenol	196.0		7.569		ND			
55 2,4,5-Trichlorophenol	196.0		7.612		ND			
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	538274	8.8476	35.390	
184 Biphenyl	154.0		7.724		ND			
58 2-Chloronaphthalene	162.0		7.762		ND			
60 2-Nitroaniline	138.0		7.831		ND			
62 Dimethylphthalate	163.0		7.949		ND			
65 2,6-Dinitrotoluene	165.0		8.018		ND			
64 Acenaphthylene	152.0		8.120		ND			
66 3-Nitroaniline	138.0		8.173		ND			
69 2,4-Dinitrophenol	184.0		8.259		ND			
68 Acenaphthene	153.0		8.259		ND			
70 4-Nitrophenol	109.0		8.291		ND			
73 2,4-Dinitrotoluene	165.0		8.361		ND			
71 Dibenzofuran	168.0		8.403		ND			
78 Diethylphthalate	149.0		8.532		ND			
80 4-Chlorophenylphenylether	204.0		8.660		ND			
83 4-Nitroaniline	138.0		8.692		ND			
79 Fluorene	166.0		8.692		ND			
84 4,6-Dinitro-2-methylphenol	198.0		8.708		ND			
86 n-Nitrosodiphenylamine	169.0		8.756		ND			
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	86254	7.9668	31.867	
94 4-Bromophenylphenylether	248.0		9.077		ND			
96 Hexachlorobenzene	284.0		9.163		ND			
200 Atrazine	200.0		9.174		ND			
99 Pentachlorophenol	266.0		9.318		ND			
103 Phenanthrene	178.0		9.511		ND			
104 Anthracene	178.0		9.553		ND			
106 Carbazole	167.0		9.676		ND			
109 Di-n-butylphthalate	149.0		9.890		ND			
114 Fluoranthene	202.0		10.570		ND			
116 Pyrene	202.0		10.810		ND			
$ 117 Terphenyl-d14	244.0	10.901	10.907	-0.004	700546	11.385	45.539	
122 Butylbenzylphthalate	149.0		11.404		ND			
130 bis(2-Ethylhexyl)phthalate	149.0		12.099		ND			
125 3,3'-Dichlorobenzidine	252.0		12.142		ND			
127 Benzo(a)Anthracene	228.0		12.222		ND			
129 Chrysene	228.0		12.276		ND			
131 Di-n-octylphthalate	149.0		13.030		ND			
132 Benzo(b)fluoranthene	252.0		13.795		ND			
134 Benzo(k)fluoranthene	252.0		13.838		ND			
135 Benzo(a)pyrene	252.0		14.303		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0		16.282		ND			
139 Dibenzo(a,h)anthracene	278.0		16.293		ND			
140 Benzo(g,h,i)perylene	276.0		16.849		ND			

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

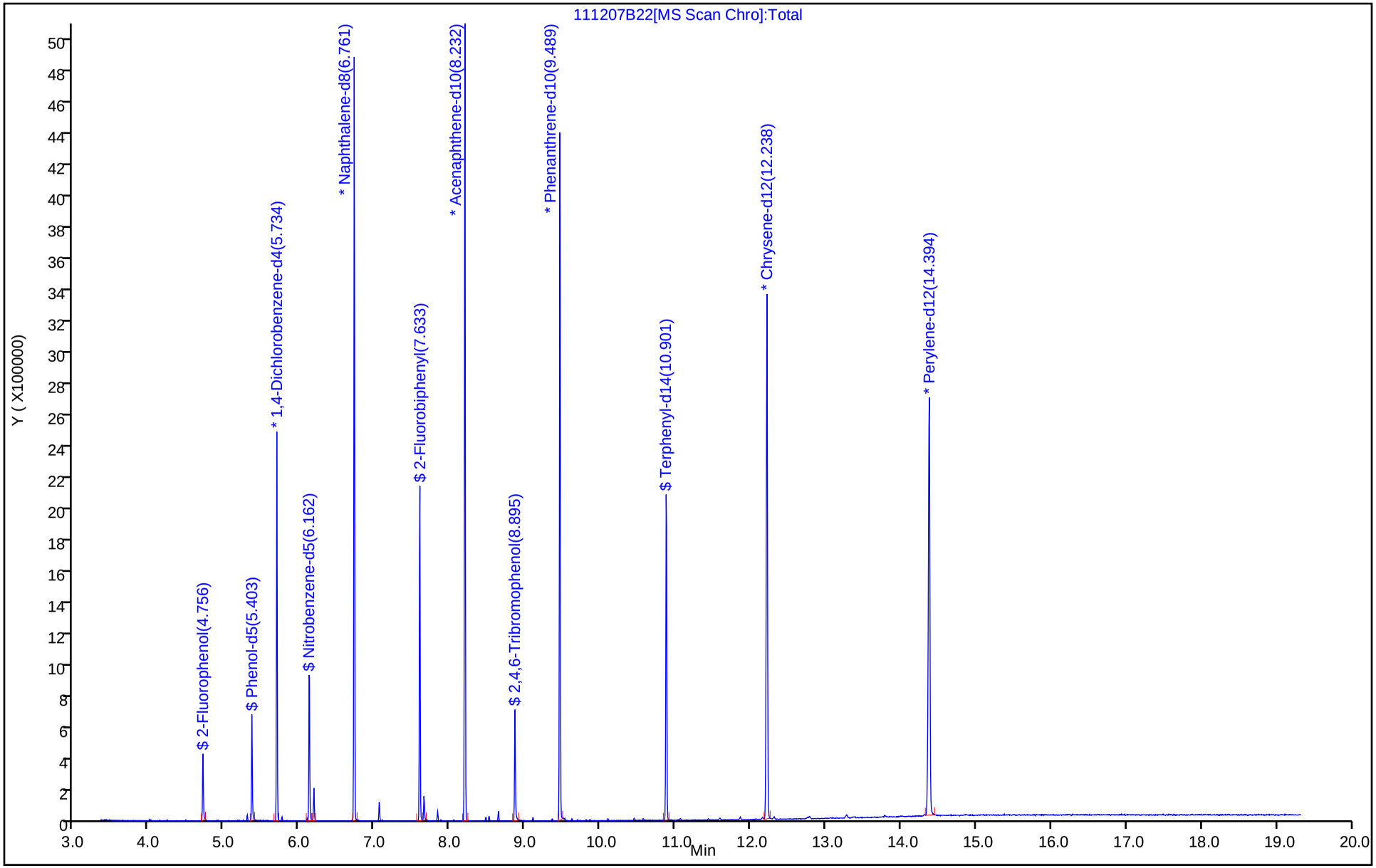
Processing Flags

Review Flags

Report Date: 08-Dec-2019 13:08:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B22.d				
Injection Date:	08-Dec-2019 03:50:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	SBLK96	Lab ID:	UQ37996-001		
Sample Info:	11120719B.b, UQ37996-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	35		1	87	30-130	12/08/2019 0415
2,4,5-Trichlorophenol	40	35		1	88	30-123	12/08/2019 0415
2,4,6-Trichlorophenol	40	36		1	90	30-130	12/08/2019 0415
2,4-Dichlorophenol	40	35		1	88	30-121	12/08/2019 0415
2,4-Dimethylphenol	40	34		1	86	20-125	12/08/2019 0415
2,4-Dinitrophenol	80	72		1	90	11-126	12/08/2019 0415
2,4-Dinitrotoluene	40	38		1	96	30-130	12/08/2019 0415
2,6-Dinitrotoluene	40	37		1	91	30-130	12/08/2019 0415
2-Chloronaphthalene	40	35		1	87	30-130	12/08/2019 0415
2-Chlorophenol	40	34		1	86	30-130	12/08/2019 0415
2-Methylnaphthalene	40	33		1	83	40-132	12/08/2019 0415
2-Methylphenol	40	35		1	88	30-130	12/08/2019 0415
2-Nitroaniline	40	40		1	101	30-130	12/08/2019 0415
2-Nitrophenol	40	36		1	89	30-130	12/08/2019 0415
3,3'-Dichlorobenzidine	40	28		1	70	10-126	12/08/2019 0415
3+4-Methylphenol	40	36		1	89	30-130	12/08/2019 0415
3-Nitroaniline	40	28		1	71	30-130	12/08/2019 0415
4,6-Dinitro-2-methylphenol	40	41		1	101	30-130	12/08/2019 0415
4-Bromophenyl phenyl ether	40	35		1	87	30-124	12/08/2019 0415
4-Chloro-3-methyl phenol	40	37		1	93	30-123	12/08/2019 0415
4-Chloroaniline	40	29		1	72	12-157	12/08/2019 0415
4-Chlorophenyl phenyl ether	40	35		1	87	30-121	12/08/2019 0415
4-Nitroaniline	40	38		1	96	30-135	12/08/2019 0415
4-Nitrophenol	80	75		1	94	30-130	12/08/2019 0415
Acenaphthene	40	36		1	89	30-122	12/08/2019 0415
Acenaphthylene	40	36		1	89	30-130	12/08/2019 0415
Acetophenone	40	36		1	90	30-130	12/08/2019 0415
Anthracene	40	37		1	91	30-123	12/08/2019 0415
Atrazine	40	37		1	92	30-130	12/08/2019 0415
Benzaldehyde	40	22		1	55	20-115	12/08/2019 0415
Benzo(a)anthracene	40	36		1	90	40-125	12/08/2019 0415
Benzo(a)pyrene	40	35		1	87	40-128	12/08/2019 0415
Benzo(b)fluoranthene	40	35		1	88	30-130	12/08/2019 0415
Benzo(g,h,i)perylene	40	36		1	89	30-130	12/08/2019 0415
Benzo(k)fluoranthene	40	35		1	87	30-130	12/08/2019 0415
bis (2-Chloro-1-methylethyl) ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Chloroethoxy)methane	40	36		1	90	30-130	12/08/2019 0415
bis(2-Chloroethyl)ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Ethylhexyl)phthalate	40	32		1	81	30-130	12/08/2019 0415
Butyl benzyl phthalate	40	39		1	97	30-130	12/08/2019 0415
Caprolactam	40	39		1	97	30-130	12/08/2019 0415
Carbazole	40	35		1	88	30-130	12/08/2019 0415
Chrysene	40	36		1	91	30-130	12/08/2019 0415
Dibenzo(a,h)anthracene	40	35		1	88	30-130	12/08/2019 0415

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002
Batch: 37996
Analytical Method: 8270D

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	35		1	88	30-118	12/08/2019 0415
Diethylphthalate	40	37		1	93	40-125	12/08/2019 0415
Dimethyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-butyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-octylphthalate	40	30		1	75	30-130	12/08/2019 0415
Fluoranthene	40	36		1	89	40-128	12/08/2019 0415
Fluorene	40	36		1	89	30-124	12/08/2019 0415
Hexachlorobenzene	40	36		1	90	30-125	12/08/2019 0415
Hexachlorobutadiene	40	31		1	78	24-110	12/08/2019 0415
Hexachlorocyclopentadiene	200	150		1	73	22-122	12/08/2019 0415
Hexachloroethane	40	32		1	79	30-130	12/08/2019 0415
Indeno(1,2,3-c,d)pyrene	40	35		1	87	30-130	12/08/2019 0415
Isophorone	40	38		1	95	30-130	12/08/2019 0415
Naphthalene	40	34		1	84	30-130	12/08/2019 0415
Nitrobenzene	40	39		1	98	30-130	12/08/2019 0415
N-Nitrosodi-n-propylamine	40	38		1	94	30-130	12/08/2019 0415
N-Nitrosodiphenylamine (Diphenylamine)	40	36		1	89	30-123	12/08/2019 0415
Pentachlorophenol	80	65		1	81	30-130	12/08/2019 0415
Phenanthrene	40	36		1	90	40-123	12/08/2019 0415
Phenol	40	36		1	89	30-130	12/08/2019 0415
Pyrene	40	37		1	93	40-126	12/08/2019 0415

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		86	37-129
2-Fluorophenol		82	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		87	28-128
Terphenyl-d14		101	10-148
2,4,6-Tribromophenol		90	35-144

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B23.d
Lab Sample ID: UQ37996-002 Client Sample ID: SLCS96
Injection Date: 08-Dec-2019 04:15:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UQ37996-002
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: LCS ALS Bottle: 21
Cpnd Sublist: sample.sb Spike List File: 8270water.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
196 Caprolactam	40	38.689	-3.3	96.7	70- 130
10 Phenol	40	35.524	-11.2	88.8	58- 122
12 bis(2-Chloroethyl)ether	40	36.803	-8	92	35- 114
13 2-Chlorophenol	40	34.251	-14.4	85.6	39- 115
20 o-Cresol	40	35.188	-12	88	37- 115
23 m+p-Cresol	40	35.753	-10.6	89.4	44- 112
24 Acetophenone	40	35.929	-10.2	89.8	70- 130
26 n-Nitroso-di-n-propylamine	40	37.546	-6.1	93.9	39- 119
28 Hexachloroethane	40	31.709	-20.7	79.3	28- 116
30 Nitrobenzene	40	39.224	-1.9	98.1	39- 123
32 Isophorone	40	38.115	-4.7	95.3	44- 123
33 2-Nitrophenol	40	35.718	-10.7	89.3	36- 123
34 2,4-Dimethylphenol	40	34.234	-14.4	85.6	38- 125
35 bis(2-Chloroethoxy)methane	40	35.852	-10.4	89.6	40- 119
38 2,4-Dichlorophenol	40	35.168	-12.1	87.9	45- 121
43 Naphthalene	40	33.535	-16.2	83.8	40- 122
44 4-Chloroaniline	40	28.814	-28	72	48- 101
47 Hexachlorobutadiene	40	31.053	-22.4	77.6	33- 120
49 4-Chloro-3-methylphenol	40	37.173	-7.1	92.9	54- 123
51 2-Methylnaphthalene	40	33.278	-16.8	83.2	44- 115
53 Hexachlorocyclopentadiene	200	145.24	-27.4	72.6	22- 122
54 2,4,6-Trichlorophenol	40	35.888	-10.3	89.7	41- 121
55 2,4,5-Trichlorophenol	40	35.132	-12.2	87.8	50- 126
58 2-Chloronaphthalene	40	34.72	-13.2	86.8	39- 128
60 2-Nitroaniline	40	40.204	0.5	100	49- 128
62 Dimethylphthalate	40	37.079	-7.3	92.7	52- 124
64 Acenaphthylene	40	35.694	-10.8	89.2	47- 129
65 2,6-Dinitrotoluene	40	36.571	-8.6	91.4	48- 133
66 3-Nitroaniline	40	28.258	-29.4	70.6	31- 128
68 Acenaphthene	40	35.67	-10.8	89.2	51- 121
69 2,4-Dinitrophenol	80	72.004	-10	90	37- 135
70 4-Nitrophenol	80	74.833	-6.5	93.5	31- 145
71 Dibenzofuran	40	35.325	-11.7	88.3	48- 118
73 2,4-Dinitrotoluene	40	38.386	-4	96	51- 128

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
78 Diethylphthalate	40	37.027	-7.4	92.6	55- 124
79 Fluorene	40	35.757	-10.6	89.4	52- 124
80 4-Chlorophenylphenylether	40	34.974	-12.6	87.4	50- 122
83 4-Nitroaniline	40	38.371	-4.1	95.9	40- 138
84 4,6-Dinitro-2-methylphenol	40	40.572	1.4	101	46- 134
86 n-Nitrosodiphenylamine	40	35.624	-10.9	89.1	46- 160
94 4-Bromophenylphenylether	40	34.636	-13.4	86.6	50- 122
96 Hexachlorobenzene	40	36.043	-9.9	90.1	49- 128
99 Pentachlorophenol	80	64.579	-19.3	80.7	34- 137
103 Phenanthrene	40	36.126	-9.7	90.3	54- 123
104 Anthracene	40	36.595	-8.5	91.5	55- 122
106 Carbazole	40	35.097	-12.3	87.7	42- 138
109 Di-n-butylphthalate	40	37.154	-7.1	92.9	57- 132
114 Fluoranthene	40	35.712	-10.7	89.3	55- 127
116 Pyrene	40	37.099	-7.3	92.7	51- 126
122 Butylbenzylphthalate	40	38.98	-2.5	97.5	49- 132
125 3,3'-Dichlorobenzidine	40	28.162	-29.6	70.4	53- 118
127 Benzo(a)Anthracene	40	35.85	-10.4	89.6	50- 127
129 Chrysene	40	36.483	-8.8	91.2	50- 130
130 bis(2-Ethylhexyl)phthalate	40	32.476	-18.8	81.2	50- 133
131 Di-n-octylphthalate	40	30.099	-24.8	75.2	55- 143
132 Benzo(b)fluoranthene	40	35.016	-12.5	87.5	32- 145
134 Benzo(k)fluoranthene	40	34.752	-13.1	86.9	50- 135
135 Benzo(a)pyrene	40	34.851	-12.9	87.1	59- 135
138 Indeno(1,2,3-c,d)pyrene	40	34.781	-13	87	50- 125
139 Dibenzo(a,h)anthracene	40	35.341	-11.6	88.4	66- 121
140 Benzo(g,h,i)perylene	40	35.663	-10.8	89.2	42- 128
184 Biphenyl	40	34.988	-12.5	87.5	70- 130
199 Benzaldhyde	40	21.985	-45	* 55	70- 130
200 Atrazine	40	36.803	-8	92	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\hh\chem\msd11.i\11120719B.b\111207B23.d
Lab Sample ID: UQ37996-002 Client Sample ID: SLCS96
Injection Date: 08-Dec-2019 04:15:30 Dil. Factor: 1.0
Operator: JCG Inst. ID: msd11.i
Sample Info: 11120719B.b, UQ37996-002
Misc. Info: 37996
Method: \\Organics\hh\chem\msd11.i\11120719B.b\8270DLVI-11.m
Method Date: 08-Dec-2019 13:04:30 Quant Method: ISTD
Calib Date: 08-Dec-2019 03:00:30 Calib File: 111207B20.d
Sample Type: LCS ALS Bottle: 21
Cpnd Sublist: sample.sb Spike List File: 8270water.spk
Matrix/Level: Water/Low
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * (Uf * Vt/Vo)/Vi * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	1.0000	ng unit correction factor
Vt	5000.00	Volume of final extract (uL)
Vo	250.00	Volume of sample extracted (mL)
Vi	5.0000	Volume injected (uL)
Cpnd Variable		Local Cpnd Variable

Column1: ZebronZB-SV (0.25 mm) Detector: MS Scan
Data Reviewer: scd Review Date: 08-Dec-2019 12:57:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
* 16 1,4-Dichlorobenzene-d4	152.0	5.740	5.740	0.000	456615	20.000	20.000	
* 41 Naphthalene-d8	136.0	6.761	6.767	-0.004	1893080	20.000	20.000	
* 67 Acenaphthene-d10	164.0	8.232	8.232	0.000	902479	20.000	20.000	
* 102 Phenanthrene-d10	188.0	9.494	9.495	0.000	1387690	20.000	20.000	
* 128 Chrysene-d12	240.0	12.244	12.244	0.000	1320294	20.000	20.000	
* 136 Perylene-d12	264.0	14.394	14.394	0.000	1525606	20.000	20.000	
$ 6 2-Fluorophenol	112.0	4.761	4.766	-0.005	285550	8.1635	32.654	
199 Benzaldhyde	77.0	5.403	5.408	-0.005	161346	5.4962	21.985	R
$ 9 Phenol-d5	99.0	5.408	5.414	-0.004	393505	8.7433	34.973	
10 Phenol	94.0	5.419	5.424	-0.005	440815	8.8809	35.524	
12 bis(2-Chloroethyl)ether	63.0	5.494	5.499	-0.005	193389	9.2006	36.803	
13 2-Chlorophenol	128.0	5.579	5.585	-0.004	308188	8.5628	34.251	
20 o-Cresol	108.0	5.890	5.890	0.000	301293	8.7969	35.188	Q
21 bis(2Chloro1methylethyl)ether	45.0	5.906	5.911	-0.004	44161	9.2022	36.809	
23 m+p-Cresol	107.0	6.002	6.002	0.000	322380	8.9384	35.753	
26 n-Nitroso-di-n-propylamine	70.0	6.013	6.013	0.000	265485	9.3864	37.546	
24 Acetophenone	105.0	6.034	6.039	-0.005	450509	8.9823	35.929	
28 Hexachloroethane	117.0	6.146	6.152	-0.004	112892	7.9272	31.709	
$ 29 Nitrobenzene-d5	82.0	6.168	6.168	0.000	350111	8.9235	35.694	
30 Nitrobenzene	77.0	6.184	6.184	0.000	371252	9.8060	39.224	
32 Isophorone	82.0	6.360	6.360	0.000	657371	9.5287	38.115	
34 2,4-Dimethylphenol	107.0	6.430	6.435	-0.005	214595	8.5585	34.234	
33 2-Nitrophenol	139.0	6.440	6.440	0.000	145577	8.9294	35.718	e

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
35 bis(2-Chloroethoxy)methane	93.0	6.505	6.505	0.000	386196	8.9630	35.852	
38 2,4-Dichlorophenol	162.0	6.633	6.633	0.000	207732	8.7921	35.168	
43 Naphthalene	128.0	6.783	6.783	0.000	839493	8.3838	33.535	
44 4-Chloroaniline	127.0	6.804	6.799	0.006	262262	7.2035	28.814	
47 Hexachlorobutadiene	224.6	6.858	6.858	0.000	126354	7.7632	31.053	
196 Caprolactam	113.0	7.082	7.072	0.011	86018	9.6723	38.689	
49 4-Chloro-3-methylphenol	107.0	7.179	7.179	0.000	254955	9.2933	37.173	
51 2-Methylnaphthalene	142.0	7.344	7.350	-0.004	542350	8.3194	33.278	
53 Hexachlorocyclopentadiene	237.0	7.473	7.473	0.000	567019	36.309	145.24	
54 2,4,6-Trichlorophenol	196.0	7.569	7.569	0.000	135628	8.9720	35.888	
55 2,4,5-Trichlorophenol	196.0	7.612	7.612	0.000	135589	8.7831	35.132	
$ 56 2-Fluorobiphenyl	172.0	7.633	7.633	0.000	537054	8.5696	34.279	
184 Biphenyl	154.0	7.724	7.724	0.000	622408	8.7470	34.988	
58 2-Chloronaphthalene	162.0	7.762	7.762	0.000	464745	8.6801	34.720	
60 2-Nitroaniline	138.0	7.831	7.831	0.000	146847	10.051	40.204	
62 Dimethylphthalate	163.0	7.949	7.949	0.000	518252	9.2697	37.079	
65 2,6-Dinitrotoluene	165.0	8.018	8.018	0.000	113251	9.1428	36.571	e
64 Acenaphthylene	152.0	8.115	8.120	-0.004	729588	8.9236	35.694	
66 3-Nitroaniline	138.0	8.173	8.173	0.000	87787	7.0645	28.258	e
69 2,4-Dinitrophenol	184.0	8.259	8.259	0.000	88251	18.001	72.004	e
68 Acenaphthene	153.0	8.259	8.259	0.000	509102	8.9176	35.670	
70 4-Nitrophenol	109.0	8.291	8.291	0.000	138394	18.708	74.833	e
73 2,4-Dinitrotoluene	165.0	8.361	8.361	0.000	141970	9.5966	38.386	e
71 Dibenzofuran	168.0	8.403	8.403	0.000	644887	8.8313	35.325	
78 Diethylphthalate	149.0	8.526	8.532	-0.004	531436	9.2567	37.027	
80 4-Chlorophenylphenylether	204.0	8.660	8.660	0.000	238149	8.7435	34.974	
83 4-Nitroaniline	138.0	8.692	8.692	0.000	123812	9.5927	38.371	e
79 Fluorene	166.0	8.692	8.692	0.000	528979	8.9392	35.757	
84 4,6-Dinitro-2-methylphenol	198.0	8.708	8.708	0.000	68141	10.143	40.572	e
86 n-Nitrosodiphenylamine	169.0	8.756	8.756	0.000	346269	8.9059	35.624	
$ 88 2,4,6-Tribromophenol	330.0	8.895	8.895	0.000	104807	8.9718	35.887	
94 4-Bromophenylphenylether	248.0	9.077	9.077	0.000	151476	8.6590	34.636	
96 Hexachlorobenzene	284.0	9.163	9.163	0.000	205395	9.0107	36.043	
200 Atrazine	200.0	9.174	9.174	0.000	126821	9.2007	36.803	
99 Pentachlorophenol	266.0	9.318	9.318	0.000	172101	16.145	64.579	e
103 Phenanthrene	178.0	9.511	9.511	0.000	708185	9.0316	36.126	
104 Anthracene	178.0	9.553	9.553	0.000	659064	9.1488	36.595	
106 Carbazole	167.0	9.676	9.676	0.000	596059	8.7743	35.097	
109 Di-n-butylphthalate	149.0	9.890	9.890	0.000	828596	9.2886	37.154	
114 Fluoranthene	202.0	10.570	10.570	0.000	714505	8.9281	35.712	
116 Pyrene	202.0	10.810	10.810	0.000	722095	9.2747	37.099	
$ 117 Terphenyl-d14	244.0	10.901	10.907	-0.004	630414	10.114	40.456	
122 Butylbenzylphthalate	149.0	11.404	11.404	0.000	336347	9.7451	38.980	e
130 bis(2-Ethylhexyl)phthalate	149.0	12.094	12.099	-0.005	409344	8.1189	32.476	
125 3,3'-Dichlorobenzidine	252.0	12.142	12.142	0.000	182580	7.0405	28.162	
127 Benzo(a)Anthracene	228.0	12.222	12.222	0.000	692779	8.9624	35.850	
129 Chrysene	228.0	12.276	12.276	0.000	653623	9.1207	36.483	
131 Di-n-octylphthalate	149.0	13.030	13.030	0.000	692038	7.5248	30.099	
132 Benzo(b)fluoranthene	252.0	13.789	13.795	-0.004	733286	8.7541	35.016	
134 Benzo(k)fluoranthene	252.0	13.832	13.838	-0.004	743181	8.6880	34.752	
135 Benzo(a)pyrene	252.0	14.303	14.303	0.000	628739	8.7127	34.851	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
138 Indeno(1,2,3-c,d)pyrene	276.0	16.287	16.282	0.006	936231	8.6953	34.781	
139 Dibenzo(a,h)anthracene	278.0	16.287	16.293	-0.004	824458	8.8353	35.341	
140 Benzo(g,h,i)perylene	276.0	16.844	16.849	-0.004	727442	8.9158	35.663	

Compound Type Legend

* - ISTD

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

Q - Qualifier Signal(s) Fails Ratio Test

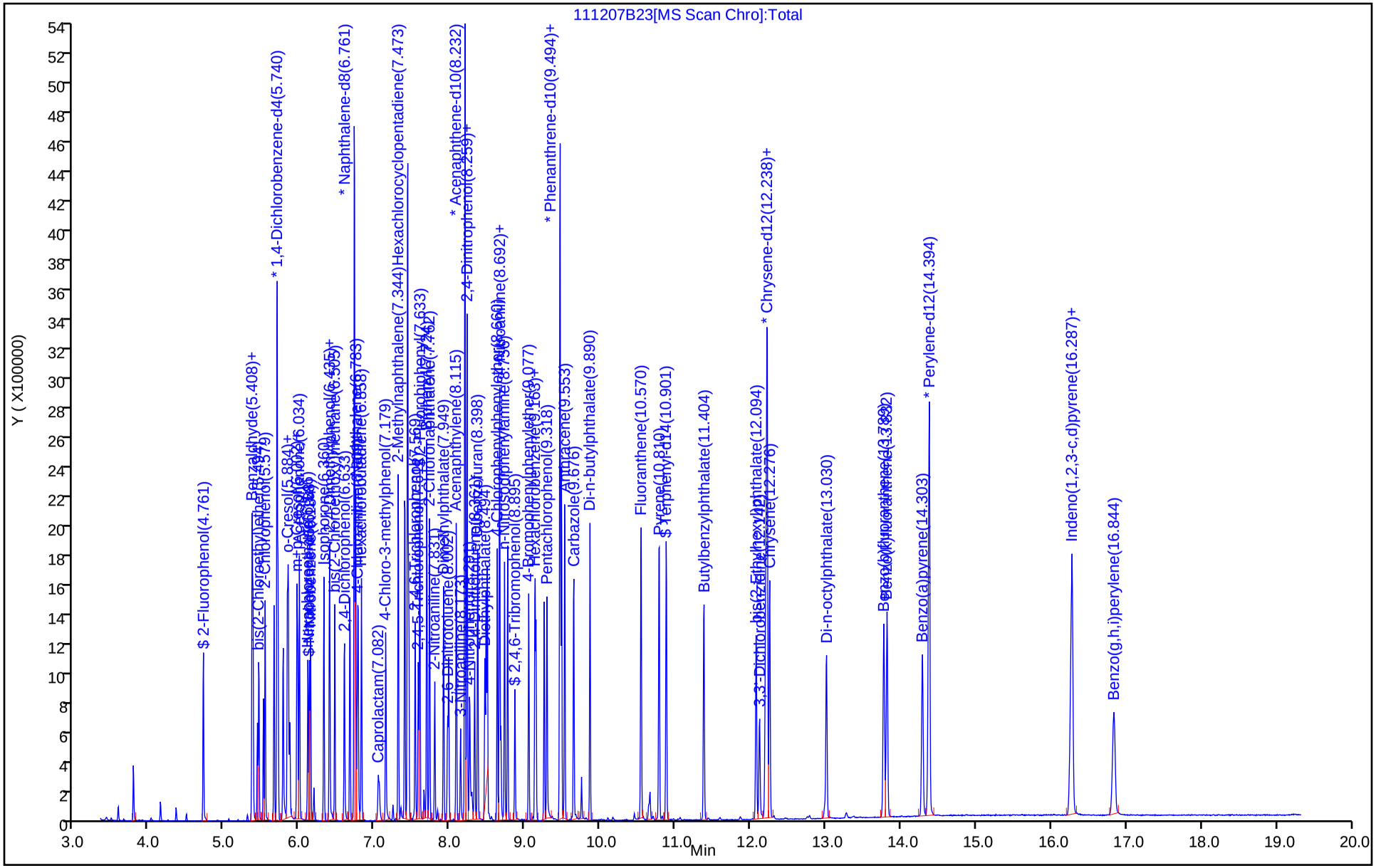
R - Spike/Surrogte Fails %Recovery Test

Review Flags

Report Date: 08-Dec-2019 13:08:58 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\hh\chem\msd11.i\11120719B.b\111207B23.d				
Injection Date:	08-Dec-2019 04:15:30	Inst. ID:	msd11.i	Operator:	JCG
Client ID:	SLCS96	Lab ID:	UQ37996-002		
Sample Info:	11120719B.b, UQ37996-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	ZebronZB-SV (0.25 mm)	Detector:	MS Scan		



MISC. DATA

Report Date: 08-Dec-2019 13:38:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\hh\chem\msd11.i\11120719B.b
Inst. ID: msd11.i Method: 8270DLVI-11
Matrix: Water Operator: JCG
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
96	SVMS 4186	07-Dec-2019 19:10:30	111207B01.D	DFTPP		DFTPPCA	Water	1	all				Yes	Yes			IS:19-1800	8270D-tun
100	IBLK	07-Dec-2019 19:28:30	111207B02.D	Client			Water	1	1STD									8270DLVI-11
1	SVMS 4157	07-Dec-2019 19:53:30	111207B03.D	Ical	1	1STD0.2CB	Water	1	PAH+								1STDICAL	8270DLVI-11
2	SVMS 4158	07-Dec-2019 20:19:30	111207B04.D	Ical	2	1STD001CB	Water	1	1STD									8270DLVI-11
3	SVMS 4159	07-Dec-2019 20:44:30	111207B05.D	Ical	3	1STD002CB	Water	1	1STD									8270DLVI-11
4	SVMS 4167	07-Dec-2019 21:09:30	111207B06.D	Ical	4	1STD005CB	Water	1	1STD									8270DLVI-11
5	SVMS 4281	07-Dec-2019 21:34:30	111207B07.D	Ical	5	1STD010CB	Water	1	1STD									8270DLVI-11
6	SVMS 4162	07-Dec-2019 21:59:30	111207B08.D	Ical	6	1STD015CB	Water	1	1STD									8270DLVI-11
7	SVMS 4168	07-Dec-2019 22:24:30	111207B09.D	Ical	7	1STD020CB	Water	1	1STD									8270DLVI-11
8	SVMS 4164	07-Dec-2019 22:49:30	111207B10.D	Ical	8	1STD025CB	Water	1	1STD									8270DLVI-11
9	SVMS 4165	07-Dec-2019 23:14:30	111207B11.D	Ical	9	1STD030CB	Water	1	1STD									8270DLVI-11
10	SVMS 4221	07-Dec-2019 23:40:30	111207B12.D	LCS		1STDICV	Water	1	1STD	ICV1								8270DLVI-11
11	SVMS 4212	08-Dec-2019 00:05:30	111207B13.D	Ical	2	3STD001CC	Water	1	3STD								3STDICAL	8270DLVI-11
12	SVMS 4213	08-Dec-2019 00:30:30	111207B14.D	Ical	3	3STD002CC	Water	1	3STD									8270DLVI-11
13	SVMS 4214	08-Dec-2019 00:55:30	111207B15.D	Ical	4	3STD005CC	Water	1	3STD									8270DLVI-11
14	SVMS 4215	08-Dec-2019 01:20:30	111207B16.D	Ical	5	3STD010CC	Water	1	3STD									8270DLVI-11
15	SVMS 4216	08-Dec-2019 01:45:30	111207B17.D	Ical	6	3STD015CC	Water	1	3STD									8270DLVI-11
16	SVMS 4217	08-Dec-2019 02:10:30	111207B18.D	Ical	7	3STD020CC	Water	1	3STD									8270DLVI-11
17	SVMS 4218	08-Dec-2019 02:35:30	111207B19.D	Ical	8	3STD025CC	Water	1	3STD									8270DLVI-11
18	SVMS 4219	08-Dec-2019 03:00:30	111207B20.D	Ical	9	3STD030CC	Water	1	3STD									8270DLVI-11
19	SVMS 4220	08-Dec-2019 03:25:30	111207B21.D	LCS		3STDICV	Water	1	3STD	ICV2								8270DLVI-11
20	UQ37996-001	08-Dec-2019 03:50:30	111207B22.D	BLANK		SBLK96	Water	1	sample								38244	8270DLVI-11
21	UQ37996-002	08-Dec-2019 04:15:30	111207B23.D	LCS		SLCS96	Water	1	sample	8270water								8270DLVI-11
22	UL04029-001	08-Dec-2019 04:40:30	111207B24.D	Client		MPGI-09-Water-RW-12	Water	1	sample									8270DLVI-11
23	UL04029-002	08-Dec-2019 05:05:30	111207B25.D	Client		MPGI-11-Water-RW-12	Water	1	sample									8270DLVI-11
24	UL04029-003	08-Dec-2019 05:30:30	111207B26.D	Client		MPGI-12-Water-RW-12	Water	1	sample									8270DLVI-11
25	UL04029-004	08-Dec-2019 05:56:30	111207B27.D	Client		MPGI-13-Water-RW-12	Water	1	sample									8270DLVI-11
26	UL04029-005	08-Dec-2019 06:21:30	111207B28.D	Client		MPGI-13-Water-RW-12	Water	1	sample									8270DLVI-11
27	UL04029-006	08-Dec-2019 06:46:30	111207B29.D	Client		MPGI-26-Water-RW-12	Water	5	sample								RR@1X	8270DLVI-11
28	UL04029-007	08-Dec-2019 07:11:30	111207B30.D	Client		MPGI-FB-120319	Water	1	sample								out of tune,RR	8270DLVI-11
29	UK22009-003	08-Dec-2019 07:36:30	111207B31.D	Client		Oak-mitsui Effluent	Water	1	sample								37272	8270DLVI-11
100	IBLK	08-Dec-2019 08:01:30	111207B32.D	Client			Water	1	1STD									8270DLVI-11
100	IBLK	08-Dec-2019 08:26:30	111207B33.D	Client			Water	1	1STD									8270DLVI-11
100	IBLK	08-Dec-2019 08:51:30	111207B34.D	Client			Water	1	1STD									8270DLVI-11

Report Date: 09-Dec-2019 12:33:40 AIM Revision: 1.0 27-Jun-2017 12:05:20

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\HH\chem\msd11.i\11120819.b
Inst. ID: msd11.i Method: 8270DLVI-11
Matrix: Water Operator: JCG
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
96	SVMS 4186	08-Dec-2019 12:06:30	11120801.D	DFTPP	DFTPPCD	Water	1	all				Yes	Yes			IS: 19-1800	8270D-tun
97	SVMS 4281	08-Dec-2019 12:31:30	11120802.D	Ccv	1STD010CE	Water	1	1STD									8270DLVI-11
98	SVMS 4215	08-Dec-2019 12:56:30	11120803.D	Ccv	3STD010CF	Water	1	3STD									8270DLVI-11
1	UQ37873-001	08-Dec-2019 13:30:30	11120804.D	BLANK	SBLK73	Water	1	sample									8270DLVI-11
2	UQ37873-002	08-Dec-2019 13:55:30	11120805.D	LCS	SLCS73	Water	1	sample	dodtclp							38268	8270DLVI-11
3	UQ37874-001	08-Dec-2019 14:20:30	11120806.D	BLANK	SBLK74	Water	1	sample									8270DLVI-11
4	UQ37874-002	08-Dec-2019 14:45:30	11120807.D	Client		Water	1	sample								IS-rr	8270DLVI-11
5	UQ37678-001	08-Dec-2019 15:10:30	11120808.D	BLANK	SBLK78	Soil	1	sample								38270	8270DLVI-11
6	UQ37678-002	08-Dec-2019 15:35:30	11120809.D	LCS	SLCS78	Soil	1	sample	dodpahsoils								8270DLVI-11
7	UL04029-006	08-Dec-2019 16:00:30	11120810.D	Client	MPGI-26-Water-RW-12	Water	1	sample								38244	8270DLVI-11
25	UQ37874-002	08-Dec-2019 16:25:30	11120811.D	LCS	SLCS74	Water	1	sample	tclp								8270DLVI-11
8	UL04029-007	08-Dec-2019 16:51:30	11120812.D	Client	MPGI-FB-120319	Water	1	sample									8270DLVI-11
9	UL02023-008	08-Dec-2019 17:16:30	11120813.D	Client	EB-01-120219	Water	1	sample									8270DLVI-11
10	UK20003-012	08-Dec-2019 17:41:30	11120814.D	Client	PAI10SB118-0103	Soil	1	sample									8270DLVI-11
11	UK20003-016	08-Dec-2019 18:06:30	11120815.D	Client	PAI10SB112-0103	Soil	5	sample								37481	8270DLVI-11
12	UK25008-001	08-Dec-2019 18:31:30	11120816.D	Client	G+L-Tank Farm J	Water	1	sample								38072	8270DLVI-11
13	UK20003-018	08-Dec-2019 18:56:30	11120817.D	Client	PAI10IDWSB-1119	Water	1	sample									8270DLVI-11
14	UK20003-018MS	08-Dec-2019 19:22:30	11120818.D	Client		Water	1	sample	tclp								8270DLVI-11
15	UK27050-001	08-Dec-2019 19:47:30	11120819.D	Client	040-CPWC0001-WA-ER0	Water	1	sample									8270DLVI-11
16	UK27050-001MS	08-Dec-2019 20:12:30	11120820.D	MS		Water	1	sample	tclp								8270DLVI-11
17	UK20005-003	08-Dec-2019 20:37:30	11120821.D	Client	PAI10SB123-0103	Soil	1	sample									8270DLVI-11
18	UK20005-003MS	08-Dec-2019 21:02:30	11120822.D	MS		Soil	1	sample	pahsoil								8270DLVI-11
19	UK20005-003MD	08-Dec-2019 21:27:30	11120823.D	Client		Soil	1	sample	pahsoil								8270DLVI-11
20	UK20005-008	08-Dec-2019 21:52:30	11120824.D	Client	PAI10SB111-0103	Soil	10	sample									8270DLVI-11
21	UK20005-009	08-Dec-2019 22:17:30	11120825.D	Client	PAI10SB110-0.502.5	Soil	5	sample									8270DLVI-11
22	UK20005-010	08-Dec-2019 22:43:30	11120826.D	Client	PAI10SB109-0103	Soil	10	sample									8270DLVI-11
23	UK20005-011	08-Dec-2019 23:08:30	11120827.D	Client	PAI10SB108-0103	Soil	50	sample									8270DLVI-11
24	UK20005-012	08-Dec-2019 23:33:30	11120828.D	Client	PAI10SB116-0103	Soil	5	sample									8270DLVI-11
97	SVMS 4281	08-Dec-2019 23:58:30	11120829.D	Ccv	1STD010CG	Water	1	TCLP	ccv1std5								8270DLVI-11
100	IBLK	09-Dec-2019 00:23:30	11120830.D	Client		Water	1	1STD									8270DLVI-11
100	IBLK	09-Dec-2019 00:48:30	11120831.D	Client		Water	1	1STD									8270DLVI-11
100	IBLK	09-Dec-2019 01:13:30	11120832.D	Client		Water	1	1STD									8270DLVI-11

Analyst: NFB **Level 2 Analyst:** JBK

Status: Level 2 review released

Matrix: Aqueous

Printed: 12/09/19 1503

Prep Batch: 37996

3520C RVE (5.0 mL FV - Acid Only) - Continuous Liquid-Liquid Extraction

Start Date: 12/05/2019 1618
End Date: 12/06/2019 1024

Conc Analyst: BFP
Conc Start Date: 12/06/2019 1148
Conc End Date: 12/06/2019 1246

Surrogate: extw-5527exp051820
Surrogate Vol. (mL): 0.5

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 170
Chem ID: 19-2577>19-2577

Sodium Sulfate ID: extr-5439

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Adj. pH (SU)	Comments
UQ37996-001	MB		1	8270D	250		0.0	5.0	2	witness:ALM /QC shared with batch 37995
UQ37996-002	LCS		1	8270D	250	extw-5417exp011115	0.5	5.0	2	extw-5474exp031320/extw-5419exp011620/extw-5428exp012920
UL02023-008	Sample	EB-01-120219	1	8270D	250		0.0	5.0	2	glass wool: 19-668
UL04029-001	Sample	MPG1-09-Water-RW-120319	1	8270D	250		0.0	5.0	2	boiling chip: extr-5431
UL04029-002	Sample	MPG1-11-Water-RW-120319	1	8270D	250		0.0	5.0	2	1:1 sulfuric acid; extr-5459
UL04029-003	Sample	MPG1-12-Water-RW-120319	1	8270D	250		0.0	5.0	2	pH strip 16-454
UL04029-004	Sample	MPG1-13-Water-RW-120319	1	8270D	250		0.0	5.0	2	
UL04029-005	Sample	MPG1-13-Water-RW-120319-D	1	8270D	250		0.0	5.0	2	
UL04029-006	Sample	MPG1-26-Water-RW-120319	1	8270D	250		0.0	5.0	2	
UL04029-007	Sample	MPG1-FB-120319	1	8270D	250		0.0	5.0	2	
UL04029-007MS	MS		1	8270D	250		0.0	5.0	0	MS/D associated with batch 37995
UL04029-007MD	MSD		1	8270D	250		0.0	5.0	0	MS/D associated with batch 37995

(end of report) **Total Samples: 8**

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL04032**

Date Completed:12/06/2019

N. Saikaly

12/06/2019 4:01 PM
Approved and released by:
Project Manager: Nisreen Saikaly

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL04032

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL04032

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-09-Water-RW-120319	Aqueous	12/03/2019 1138	12/04/2019
002	MPGI-11-Water-RW-120319	Aqueous	12/03/2019 1100	12/04/2019
003	MPGI-12-Water-RW-120319	Aqueous	12/03/2019 0817	12/04/2019
004	MPGI-13-Water-RW-120319	Aqueous	12/03/2019 1006	12/04/2019
005	MPGI-13-Water-RW-120319-D	Aqueous	12/03/2019 1008	12/04/2019
006	MPGI-26-Water-RW-120319	Aqueous	12/03/2019 0906	12/04/2019
007	MPGI-FB-120319	Aqueous	12/03/2019 0840	12/04/2019
008	MPGI-TB-120319	Aqueous	12/03/2019	12/04/2019

(8 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL04032

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
006	MPGI-26-Water-RW-120319	Aqueous	Acetone	8260B	1300		ug/L	15
006	MPGI-26-Water-RW-120319	Aqueous	2-Butanone (MEK)	8260B	12		ug/L	15
006	MPGI-26-Water-RW-120319	Aqueous	Methyl acetate	8260B	1.6		ug/L	15

(3 detections)

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1207	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1207	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1231	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1231	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1255	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1255	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		107	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1320	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1320	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1344	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1344	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1407	TML		38003
2	5030B	8260B	10	12/06/2019 1138	TML		38152

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	1300		200	50	ug/L	2
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	12		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	1.6		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1407	TML		38003
2	5030B	8260B	10	12/06/2019 1138	TML		38152

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130		111	70-130
Bromofluorobenzene		104	70-130		96	70-130
Toluene-d8		103	70-130		106	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1120	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1120	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-008
Description: MPGI-TB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1144	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-008
Description: MPGI-TB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1144	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38003-001
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	5.0	ug/L	12/05/2019 0951
Benzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Bromodichloromethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Bromoform	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	12/05/2019 0951
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/05/2019 0951
Carbon disulfide	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Chlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Chloroethane	ND		1	2.0	0.40	ug/L	12/05/2019 0951
Chloroform	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	12/05/2019 0951
Cyclohexane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Dibromochloromethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	12/05/2019 0951
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Ethylbenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
2-Hexanone	ND		1	10	2.0	ug/L	12/05/2019 0951
Isopropylbenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Methyl acetate	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	12/05/2019 0951
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	12/05/2019 0951
Methylcyclohexane	ND		1	5.0	0.40	ug/L	12/05/2019 0951
Methylene chloride	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Styrene	ND		1	1.0	0.41	ug/L	12/05/2019 0951
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Tetrachloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Toluene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	12/05/2019 0951
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38003-001
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Vinyl chloride	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Xylenes (total)	ND		1	1.0	0.40	ug/L	12/05/2019 0951

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38003-002
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	105	60-140	12/05/2019 0904
Benzene	50	51		1	102	70-130	12/05/2019 0904
Bromodichloromethane	50	52		1	104	70-130	12/05/2019 0904
Bromoform	50	46		1	92	70-130	12/05/2019 0904
Bromomethane (Methyl bromide)	50	55		1	110	70-130	12/05/2019 0904
2-Butanone (MEK)	100	99		1	99	70-130	12/05/2019 0904
Carbon disulfide	50	54		1	108	70-130	12/05/2019 0904
Carbon tetrachloride	50	51		1	102	70-130	12/05/2019 0904
Chlorobenzene	50	50		1	100	70-130	12/05/2019 0904
Chloroethane	50	59		1	117	70-130	12/05/2019 0904
Chloroform	50	53		1	106	70-130	12/05/2019 0904
Chloromethane (Methyl chloride)	50	55		1	111	60-140	12/05/2019 0904
Cyclohexane	50	53		1	106	70-130	12/05/2019 0904
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	70-130	12/05/2019 0904
Dibromochloromethane	50	51		1	102	70-130	12/05/2019 0904
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	12/05/2019 0904
1,2-Dichlorobenzene	50	48		1	96	70-130	12/05/2019 0904
1,3-Dichlorobenzene	50	49		1	97	70-130	12/05/2019 0904
1,4-Dichlorobenzene	50	49		1	98	70-130	12/05/2019 0904
Dichlorodifluoromethane	50	56		1	112	60-140	12/05/2019 0904
1,1-Dichloroethane	50	54		1	107	70-130	12/05/2019 0904
1,2-Dichloroethane	50	50		1	99	70-130	12/05/2019 0904
1,1-Dichloroethene	50	62		1	123	70-130	12/05/2019 0904
cis-1,2-Dichloroethene	50	52		1	104	70-130	12/05/2019 0904
trans-1,2-Dichloroethene	50	57		1	113	70-130	12/05/2019 0904
1,2-Dichloropropane	50	51		1	101	70-130	12/05/2019 0904
cis-1,3-Dichloropropene	50	56		1	111	70-130	12/05/2019 0904
trans-1,3-Dichloropropene	50	55		1	109	70-130	12/05/2019 0904
Ethylbenzene	50	50		1	100	70-130	12/05/2019 0904
2-Hexanone	100	90		1	90	70-130	12/05/2019 0904
Isopropylbenzene	50	51		1	102	70-130	12/05/2019 0904
Methyl acetate	50	53		1	106	70-130	12/05/2019 0904
Methyl tertiary butyl ether (MTBE)	50	52		1	103	70-130	12/05/2019 0904
4-Methyl-2-pentanone	100	93		1	93	70-130	12/05/2019 0904
Methylcyclohexane	50	52		1	104	70-130	12/05/2019 0904
Methylene chloride	50	53		1	105	70-130	12/05/2019 0904
Styrene	50	53		1	106	70-130	12/05/2019 0904
1,1,2,2-Tetrachloroethane	50	51		1	101	70-130	12/05/2019 0904
Tetrachloroethene	50	47		1	94	70-130	12/05/2019 0904
Toluene	50	49		1	97	70-130	12/05/2019 0904
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	70-130	12/05/2019 0904
1,2,4-Trichlorobenzene	50	46		1	92	70-130	12/05/2019 0904
1,1,1-Trichloroethane	50	51		1	103	70-130	12/05/2019 0904
1,1,2-Trichloroethane	50	48		1	96	70-130	12/05/2019 0904

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38003-002
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	12/05/2019 0904
Trichlorofluoromethane	50	53		1	106	70-130	12/05/2019 0904
Vinyl chloride	50	53		1	105	70-130	12/05/2019 0904
Xylenes (total)	100	100		1	102	70-130	12/05/2019 0904

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		98	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38152-001
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	5.0	ug/L	12/06/2019 0955

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		110	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38152-002
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	101	60-140	12/06/2019 0906

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: UL04032-006MS
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	1300	1000	2200		10	87	60-140	12/06/2019 1203

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		113	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: UL04032-006MD
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	1300	1000	2200		10	89	0.81	60-140	20	12/06/2019 1228

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		111	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		109	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Chain of Custody Record

Number

Client	Report to Contact	Telephone No. / E-mail	Quote No.
Tetra Tech	Andre Baker and Brendan Martin	andre.baker@tetratech.com, brendan.martin@tetratech.com	

Address	Sampler's Signature	Analysis (Attach list if more space is needed)	Page
1 S. Wacker Drive, Suite 3700	x Brendan Martin		___ of ___

City	State	Zip Code	Printed Name
Chicago	IL	60606	Brendan Martin

Project Name: Joliet Chemical Fire PRP Cleanup Site

Project Number: 103X9051008890002AJ001

P.O No.: SHLY-1

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	
MPBI-09-Water-RW-120319	120319	1138		X			1			3			X	X	
MPBI-11-Water-RW-120319	120319	1100		X			1			3			X	X	
MPBI-12-Water-RW-120319	120319	0817		X			1			3			X	X	
MPBI-13-Water-RW-120319	120319	1006		X			1			3			X	X	
MPBI-13-Water-RW-120319-D	120319	1008		X			1			3			X	X	
MPBI-26-Water-RW-120319	120319	0906		X			1			3			X	X	
MPBI-FB-120319	120319	0840		X			1			3			X	X	Field Blank
MPBI-TB-120319	120319	—		X			2						X		Trip Blank

UL04029 NMS

UL04032 NMS

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	Possible Hazard Identification (List any known hazards in the remarks)	QC Requirements
☐ Standard ☒ Rush (Please Specify) 2/3 day	☐ Return to Client ☒ Disposal by Lab	☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown	

	Relinquished by	Date	Time	Received by	Date	Time
1.	Brendan Martin Brendan Martin	120319	1300			
2.						
3.						
4.	FedEx	12.4.19	1106	L Hale (Laboratory Received by)	12/04/19	1106

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack

Receipt Temp. 1.2 °C

Document Number: ME002OW-01

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: MS0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: LKH / 12/4/19 Lot #: UL04029, UL04032

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.2 / 1.2 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☐ Yes	☑ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☑ No	☐ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: DMN Date: 12/4/19

Comments: -008 MPG1-TB-120319 received in HCl vials, COC says unpreserved.

VOLATILE

QC SUMMARY

FORM 2
DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

AnalyticalMethod: 8260B-TCL Matrix: Water

CLIENT SAMPLE ID	DMC1	DMC2	DMC3						TOT OUT
MPG1-09-Water-RW-12	97	105	102						0
MPG1-11-Water-RW-12	98	103	106						0
MPG1-12-Water-RW-12	100	104	107						0
MPG1-13-Water-RW-12	99	106	103						0
MPG1-13-Water-RW-12	100	105	100						0
MPG1-26-Water-RW-12	99	104	103						0
MPG1-26-Water-RW-12	111	96	106						0
MPG1-FB-120319	98	105	104						0
MPG1-TB-120319	100	105	105						0
VBLKCV	98	105	106						0
50uL/100mL 15608/11	97	106	98						0
VBLKDM	110	89	101						0
50uL/100mL 15608/11	103	91	100						0
MPG1-26-Water-RW-12MS	112	106	113						0
MPG1-26-Water-RW-12MSD	111	97	109						0

	QC LIMITS
DMC1 = 1,2-Dichloroethane-d4	70-130
DMC2 = Bromofluorobenzene	70-130
DMC3 = Toluene-d8	70-130

* Values outside of contract required QC limits
D DMC diluted out

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-26-Water-RW-12

Instrument ID: Agilent_8860 / 5977B_MSD18 Lab Sample ID: UL04032-006MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC #	QC LIMITS REC.
Acetone	1000	1300	2200	87	60-140
Benzene	500		530	105	70-130
Bromodichloromethane	500		520	104	70-130
Bromoform	500		480	97	70-130
Bromomethane (Methyl	500		610	121	70-130
2-Butanone (MEK)	1000	12	930	92	70-130
Carbon disulfide	500		500	100	70-130
Carbon tetrachloride	500		530	106	70-130
Chlorobenzene	500		500	100	70-130
Chloroethane	500		630	127	70-130
Chloroform	500		540	107	70-130
Chloromethane (Methyl	500		500	101	60-140
Cyclohexane	500		520	103	70-130
1,2-Dibromo-3-chloropropane	500		450	90	70-130
Dibromochloromethane	500		490	98	70-130
1,2-Dibromoethane (EDB)	500		490	99	70-130
1,2-Dichlorobenzene	500		510	101	70-130
1,3-Dichlorobenzene	500		490	98	70-130
1,4-Dichlorobenzene	500		490	97	70-130
Dichlorodifluoromethane	500		470	95	60-140
1,1-Dichloroethane	500		530	106	70-130
1,2-Dichloroethane	500		510	103	70-130
1,1-Dichloroethene	500		590	118	70-130
cis-1,2-Dichloroethene	500		520	103	70-130
trans-1,2-Dichloroethene	500		540	109	70-130
1,2-Dichloropropane	500		510	102	70-130
cis-1,3-Dichloropropene	500		510	103	70-130
trans-1,3-Dichloropropene	500		530	106	70-130
Ethylbenzene	500		520	104	70-130
2-Hexanone	1000		990	99	70-130
Isopropylbenzene	500		540	107	70-130
Methyl acetate	500	1.6	450	90	70-130
Methyl tertiary butyl ether	500		550	110	70-130
4-Methyl-2-pentanone	1000		970	97	70-130
Methylcyclohexane	500		570	113	70-130
Methylene chloride	500		520	104	70-130
Styrene	500		510	102	70-130

* Values outside of QC Limits

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-26-Water-RW-12

Instrument ID: Agilent_8860 / 5977B_MSD18 Lab Sample ID: UL04032-006MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC #	QC LIMITS REC.
1,1,2,2-Tetrachloroethane	500		480	95	70-130
Tetrachloroethene	500		540	107	70-130
Toluene	500		510	102	70-130
1,1,2-Trichloro-1,2,2-	500		540	109	70-130
1,2,4-Trichlorobenzene	500		450	91	70-130
1,1,1-Trichloroethane	500		540	108	70-130
1,1,2-Trichloroethane	500		500	100	70-130
Trichloroethene	500		510	102	70-130
Trichlorofluoromethane	500		590	118	70-130
Vinyl chloride	500		580	116	70-130
Xylenes (total)	1000		1000	101	70-130

* Values outside of QC Limits

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-26-Water-RW-12

Instrument ID: Agilent_8860 / 5977B_MSD18 Lab Sample ID: UL04032-006MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R #	RPD #	QC LIMITS	
					RPD	%R
Acetone	1000	2200	89	0.81	0-20	60-140
Benzene	500	530	106	0.94	0-20	70-130
Bromodichloromethane	500	530	106	1.7	0-20	70-130
Bromoform	500	480	97	0.29	0-20	70-130
Bromomethane (Methyl	500	610	122	0.24	0-20	70-130
2-Butanone (MEK)	1000	930	92	0.27	0-20	70-130
Carbon disulfide	500	500	101	0.69	0-20	70-130
Carbon tetrachloride	500	540	108	1.5	0-20	70-130
Chlorobenzene	500	500	100	0.47	0-20	70-130
Chloroethane	500	670	133 *	5.0	0-20	70-130
Chloroform	500	540	107	0.05	0-20	70-130
Chloromethane (Methyl	500	510	102	1.4	0-20	60-140
Cyclohexane	500	530	106	2.3	0-20	70-130
1,2-Dibromo-3-chloropropane	500	430	85	5.8	0-20	70-130
Dibromochloromethane	500	500	100	1.9	0-20	70-130
1,2-Dibromoethane (EDB)	500	490	99	0.21	0-20	70-130
1,2-Dichlorobenzene	500	500	99	1.7	0-20	70-130
1,3-Dichlorobenzene	500	490	98	0.07	0-20	70-130
1,4-Dichlorobenzene	500	480	96	0.91	0-20	70-130
Dichlorodifluoromethane	500	500	100	5.5	0-20	60-140
1,1-Dichloroethane	500	540	108	1.4	0-20	70-130
1,2-Dichloroethane	500	520	105	2.2	0-20	70-130
1,1-Dichloroethene	500	600	119	0.85	0-20	70-130
cis-1,2-Dichloroethene	500	530	106	2.4	0-20	70-130
trans-1,2-Dichloroethene	500	550	111	2.1	0-20	70-130
1,2-Dichloropropane	500	510	102	0.24	0-20	70-130
cis-1,3-Dichloropropene	500	530	105	2.2	0-20	70-130
trans-1,3-Dichloropropene	500	530	106	0.04	0-20	70-130
Ethylbenzene	500	530	105	1.2	0-20	70-130
2-Hexanone	1000	980	98	1.8	0-20	70-130
Isopropylbenzene	500	530	107	0.20	0-20	70-130
Methyl acetate	500	460	91	1.3	0-20	70-130
Methyl tertiary butyl ether	500	570	113	3.2	0-20	70-130
4-Methyl-2-pentanone	1000	980	98	0.48	0-20	70-130

* Values outside of QC Limits

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-26-Water-RW-12

Instrument ID: Agilent_8860 / 5977B_MSD18 Lab Sample ID: UL04032-006MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R #	RPD #	QC LIMITS	
					RPD	%R
Methylcyclohexane	500	570	114	0.16	0-20	70-130
Methylene chloride	500	520	105	0.89	0-20	70-130
Styrene	500	520	104	1.7	0-20	70-130
1,1,2,2-Tetrachloroethane	500	470	93	2.3	0-20	70-130
Tetrachloroethene	500	550	110	2.1	0-20	70-130
Toluene	500	520	103	1.5	0-20	70-130
1,1,2-Trichloro-1,2,2-	500	550	110	1.3	0-20	70-130
1,2,4-Trichlorobenzene	500	430	85	6.2	0-20	70-130
1,1,1-Trichloroethane	500	550	110	1.6	0-20	70-130
1,1,2-Trichloroethane	500	500	100	0.32	0-20	70-130
Trichloroethene	500	510	103	1.0	0-20	70-130
Trichlorofluoromethane	500	630	126	6.1	0-20	70-130
Vinyl chloride	500	600	120	2.9	0-20	70-130
Xylenes (total)	1000	1000	103	1.4	0-20	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID: 50uL/100mL 15608/11 Lab Sample ID: UQ38003-002

Instrument ID: _GC 7890B / MS 5977B_MSD17

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Acetone	100	100	105	60-140
Benzene	50	51	102	70-130
Bromodichloromethane	50	52	104	70-130
Bromoform	50	46	92	70-130
Bromomethane (Methyl	50	55	110	70-130
2-Butanone (MEK)	100	99	99	70-130
Carbon disulfide	50	54	108	70-130
Carbon tetrachloride	50	51	102	70-130
Chlorobenzene	50	50	100	70-130
Chloroethane	50	59	117	70-130
Chloroform	50	53	106	70-130
Chloromethane (Methyl	50	55	111	60-140
Cyclohexane	50	53	106	70-130
1,2-Dibromo-3-chloropropane	50	47	94	70-130
Dibromochloromethane	50	51	102	70-130
1,2-Dibromoethane (EDB)	50	50	100	70-130
1,2-Dichlorobenzene	50	48	96	70-130
1,3-Dichlorobenzene	50	49	97	70-130
1,4-Dichlorobenzene	50	49	98	70-130
Dichlorodifluoromethane	50	56	112	60-140
1,1-Dichloroethane	50	54	107	70-130
1,2-Dichloroethane	50	50	99	70-130
1,1-Dichloroethene	50	62	123	70-130
cis-1,2-Dichloroethene	50	52	104	70-130
trans-1,2-Dichloroethene	50	57	113	70-130
1,2-Dichloropropane	50	51	101	70-130
cis-1,3-Dichloropropene	50	56	111	70-130
trans-1,3-Dichloropropene	50	55	109	70-130
Ethylbenzene	50	50	100	70-130
2-Hexanone	100	90	90	70-130
Isopropylbenzene	50	51	102	70-130
Methyl acetate	50	53	106	70-130
Methyl tertiary butyl ether	50	52	103	70-130
4-Methyl-2-pentanone	100	93	93	70-130
Methylcyclohexane	50	52	104	70-130
Methylene chloride	50	53	105	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID: 50uL/100mL 15608/11 Lab Sample ID: UQ38003-002

Instrument ID: _GC 7890B / MS 5977B_MSD17

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Styrene	50	53	106	70-130
1,1,2,2-Tetrachloroethane	50	51	101	70-130
Tetrachloroethene	50	47	94	70-130
Toluene	50	49	97	70-130
1,1,2-Trichloro-1,2,2-	50	53	105	70-130
1,2,4-Trichlorobenzene	50	46	92	70-130
1,1,2-Trichloroethane	50	48	96	70-130
1,1,1-Trichloroethane	50	51	103	70-130
Trichloroethene	50	49	98	70-130
Trichlorofluoromethane	50	53	106	70-130
Vinyl chloride	50	53	105	70-130
Xylenes (total)	100	100	102	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID: 50uL/100mL 15608/11 Lab Sample ID: UQ38152-002

Instrument ID: Agilent_8860 / 5977B_MSD18

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Acetone	100	100	101	60-140
Benzene	50	47	94	70-130
Bromodichloromethane	50	48	97	70-130
Bromoform	50	46	91	70-130
Bromomethane (Methyl	50	56	112	70-130
2-Butanone (MEK)	100	93	93	70-130
Carbon disulfide	50	44	87	70-130
Carbon tetrachloride	50	47	93	70-130
Chlorobenzene	50	44	88	70-130
Chloroethane	50	58	115	70-130
Chloroform	50	48	97	70-130
Chloromethane (Methyl	50	47	95	60-140
Cyclohexane	50	47	93	70-130
1,2-Dibromo-3-chloropropane	50	39	79	70-130
Dibromochloromethane	50	45	90	70-130
1,2-Dibromoethane (EDB)	50	45	90	70-130
1,4-Dichlorobenzene	50	42	85	70-130
1,3-Dichlorobenzene	50	43	86	70-130
1,2-Dichlorobenzene	50	44	87	70-130
Dichlorodifluoromethane	50	41	82	60-140
1,2-Dichloroethane	50	48	96	70-130
1,1-Dichloroethane	50	48	95	70-130
trans-1,2-Dichloroethene	50	49	98	70-130
cis-1,2-Dichloroethene	50	48	95	70-130
1,1-Dichloroethene	50	50	101	70-130
1,2-Dichloropropane	50	47	93	70-130
trans-1,3-Dichloropropene	50	49	98	70-130
cis-1,3-Dichloropropene	50	48	96	70-130
Ethylbenzene	50	45	90	70-130
2-Hexanone	100	94	94	70-130
Isopropylbenzene	50	46	93	70-130
Methyl acetate	50	43	87	70-130
Methyl tertiary butyl ether	50	53	106	70-130
4-Methyl-2-pentanone	100	94	94	70-130
Methylcyclohexane	50	48	96	70-130
Methylene chloride	50	47	94	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006

Analytical Method: 8260B-TCL Matrix: Water

Client Sample ID: 50uL/100mL 15608/11 Lab Sample ID: UQ38152-002

Instrument ID: Agilent_8860 / 5977B_MSD18

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
Styrene	50	46	92	70-130
1,1,2,2-Tetrachloroethane	50	43	85	70-130
Tetrachloroethene	50	46	93	70-130
Toluene	50	45	91	70-130
1,1,2-Trichloro-1,2,2-	50	48	95	70-130
1,2,4-Trichlorobenzene	50	35	71	70-130
1,1,2-Trichloroethane	50	46	92	70-130
1,1,1-Trichloroethane	50	48	97	70-130
Trichloroethene	50	46	91	70-130
Trichlorofluoromethane	50	48	96	70-130
Vinyl chloride	50	50	100	70-130
Xylenes (total)	100	91	91	70-130

* Values outside of QC Limits

CLIENT SAMPLE ID

VBLKCV

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc.
Lot No.: UL04032

Project No.: 103X9031006
Lab Sample ID: UQ38003-001

Analytical Method: 8260B-TCL
Matrix: Water

Instrument ID: GC 7890B / MS 5977B_MSD17
Lab File ID: 171205A05

Extraction Type:
Date Extracted:

GC Column(1): DB-624 ID: 0.25 (mm)
Date Analyzed: 12/05/2019

GC Column(2): ID: (mm)
Time Analyzed: 09:51

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPG1-09-Water-RW-12	UL04032-001	171205A10	12/05/2019
MPG1-11-Water-RW-12	UL04032-002	171205A11	12/05/2019
MPG1-12-Water-RW-12	UL04032-003	171205A12	12/05/2019
MPG1-13-Water-RW-12	UL04032-004	171205A13	12/05/2019
MPG1-13-Water-RW-12	UL04032-005	171205A14	12/05/2019
MPG1-26-Water-RW-12	UL04032-006	171205A15	12/05/2019
MPG1-FB-120319	UL04032-007	171205A08	12/05/2019
MPG1-TB-120319	UL04032-008	171205A09	12/05/2019
50uL/100mL 15608/11	UQ38003-002	171205A03	12/05/2019

CLIENT SAMPLE ID

VBLKDM

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL04032

Project No.: 103X9031006 Lab Sample ID: UQ38152-001

Analytical Method: 8260B-TCL Matrix: Water

Instrument ID: Agilent_8860 / 5977B_MSD18 Lab File ID: 181206A05

Extraction Type: Date Extracted:

GC Column(1): DB-624 ID: 0.25 (mm) Date Analyzed: 12/06/2019

GC Column(2): ID: (mm) Time Analyzed: 09:55

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPG1-26-Water-RW-12	UL04032-006	181206A06	12/06/2019
50uL/100mL 15608/11	UQ38152-002	181206A03	12/06/2019
MPG1-26-Water-RW-12MS	UL04032-006MS	181206A07	12/06/2019
MPG1-26-Water-RW-12MSD	UL04032-006MD	181206A08	12/06/2019

Report Date: 04-Dec-2019 13:04:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B01.d		
Injection Date:	02-Dec-2019 23:45:30	Inst. ID:	msd17.i
Method:	BFB-17.m	Tune Type:	BFB
Client ID:	15547	Lab ID:	BFBBQ
Sample Info:	17120219B, BFBBQ		
Injection Vol.		Dil. Factor:	1.0
Operator:	JTH		
Column:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.6
75	30.00 - 60.00% of mass 95	50.9
96	5.00 - 9.00% of mass 95	7.0
173	Less than 2.00% of mass 174	0.9 (0.9) 1
174	50.00 - 150.00% of mass 95	95.9
175	5.00 - 9.00% of mass 174	7.4 (7.7) 1
176	95.00 - 101.00% of mass 174	94.0 (98.0) 1
177	5.00 - 9.00% of mass 176	6.4 (6.8) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	171202B01.d	BFBBQ	15547	02-Dec-2019 23:45:30	00:00:00
Client	171202B02.d	VIBLK	VIBLK	03-Dec-2019 00:10:30	00:25:00
Client	171202B03.d	VIBLK	VIBLK	03-Dec-2019 00:34:30	00:49:00
Client	171202B04.d	VIBLK	VIBLK	03-Dec-2019 00:58:30	01:13:00
Ical	171202B05.d	VSTD0.5BQ	1mL/100mL VSTD050	03-Dec-2019 01:21:30	01:36:00
Ical	171202B06.d	VSTD001BQ	2mL/100mL VSTD050	03-Dec-2019 01:44:30	01:59:00
Ical	171202B07.d	VSTD005BQ	5uL/100mL 15613/10	03-Dec-2019 02:08:30	02:23:00
Ical	171202B08.d	VSTD020BQ	20uL/100mL 15613/10	03-Dec-2019 02:32:30	02:47:00
Ical	171202B09.d	VSTD050BQ	50uL/100mL 15613/10	03-Dec-2019 02:56:30	03:11:00
Ical	171202B10.d	VSTD100BQ	100uL/100mL15613/10	03-Dec-2019 03:19:30	03:34:00
Ical	171202B11.d	VSTD200BQ	200uL/100mL15613/10	03-Dec-2019 03:43:30	03:58:00
Client	171202B12.d	VIBLK	VIBLK	03-Dec-2019 04:07:30	04:22:00
ICV	171202B13.d	VICV050BQ	50uL/100mL 15608/11	03-Dec-2019 04:30:30	04:45:00
ICV	171202B13_dodICV.d	VICV050BQ	50uL/100mL 15608/11	03-Dec-2019 04:30:30	04:45:00

Report Date: 06-Dec-2019 10:06:26 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A01.d		
Injection Date:	05-Dec-2019 08:04:30	Inst. ID:	msd17.i
Method:	BFB-17.m	Tune Type:	BFB
Client ID:	15547	Lab ID:	BFBCV
Sample Info:	17120519, BFBCV		
Injection Vol.		Dil. Factor:	1.0
Operator:	TML		
Column:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.9
75	30.00 - 60.00% of mass 95	50.9
96	5.00 - 9.00% of mass 95	6.9
173	Less than 2.00% of mass 174	0.8 (0.9) 1
174	50.00 - 150.00% of mass 95	88.9
175	5.00 - 9.00% of mass 174	6.9 (7.7) 1
176	95.00 - 101.00% of mass 174	86.5 (97.3) 1
177	5.00 - 9.00% of mass 176	5.9 (6.9) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	171205A01.d	BFBCV	15547	05-Dec-2019 08:04:30	00:00:00
Ccv	171205A02.d	VSTD050CV	50uL/100mL 15613/10	05-Dec-2019 08:28:30	00:24:00
LCS	171205A02_lcs.d	VLCS050CV	50uL/100mL 15613/10	05-Dec-2019 08:28:30	00:24:00
LCS	171205A03.d	VLCS050CV	50uL/100mL 15608/11	05-Dec-2019 09:04:30	01:00:00
Client	171205A04.d	VIBLK	VIBLK	05-Dec-2019 09:28:30	01:24:00
BLANK	171205A05.d	VBLKCV	VBLKCV	05-Dec-2019 09:51:30	01:47:00
Client	171205A06.d	UL03013-004	Trip Blank	05-Dec-2019 10:32:30	02:28:00
Client	171205A07.d	UL04123-001	Trip Blanks	05-Dec-2019 10:56:30	02:52:00
Client	171205A08.d	UL04032-007	MPG1-FB-120319	05-Dec-2019 11:20:30	03:16:00
Client	171205A09.d	UL04032-008	MPG1-TB-120319	05-Dec-2019 11:44:30	03:40:00
Client	171205A10.d	UL04032-001	MPG1-09-Water-RW-12	05-Dec-2019 12:07:30	04:03:00
Client	171205A11.d	UL04032-002	MPG1-11-Water-RW-12	05-Dec-2019 12:31:30	04:27:00
Client	171205A12.d	UL04032-003	MPG1-12-Water-RW-12	05-Dec-2019 12:55:30	04:51:00
Client	171205A13.d	UL04032-004	MPG1-13-Water-RW-12	05-Dec-2019 13:20:30	05:16:00
Client	171205A14.d	UL04032-005	MPG1-13-Water-RW-12	05-Dec-2019 13:44:30	05:40:00
Client	171205A15.d	UL04032-006	MPG1-26-Water-RW-12	05-Dec-2019 14:07:30	06:03:00
Client	171205A16.d	UL03065-005	DPT-5	05-Dec-2019 14:31:30	06:27:00
Client	171205A17.d	UL03065-007	DPT-7	05-Dec-2019 14:55:30	06:51:00
Client	171205A18.d	UL04133-001	TW-3	05-Dec-2019 15:18:30	07:14:00
Client	171205A19.d	UL04133-002	TW-4	05-Dec-2019 15:41:30	07:37:00
Client	171205A20.d	UL04133-003	TW-5	05-Dec-2019 16:05:30	08:01:00
Client	171205A21.d	UL03013-003	SW-3	05-Dec-2019 16:29:30	08:25:00
Client	171205A22.d	UL04123-002	2071 Dallas	05-Dec-2019 16:54:30	08:50:00
Client	171205A23.d	UL04123-003	2083 Dallas	05-Dec-2019 17:18:30	09:14:00

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
Client	171205A24.d	UL04054-002	EFFLUENT	05-Dec-2019 17:41:30	09:37:00
Client	171205A25.d	UL04054-001	INFLUENT	05-Dec-2019 18:05:30	10:01:00
MS	171205A26.d	UL04054-001	INFLUENTMS	05-Dec-2019 18:29:30	10:25:00
MSD	171205A27.d	UL04054-001	INFLUENTMSD	05-Dec-2019 18:53:30	10:49:00

Report Date: 07-Nov-2019 09:17:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A01.d		
Injection Date:	04-Nov-2019 13:33:30	Inst. ID:	msd18.i
Method:	BFB-18.m	Tune Type:	BFB
Client ID:	15567	Lab ID:	BFBIK
Sample Info:	18110419, BFBIK		
Injection Vol.		Dil. Factor:	1.0
Operator:	ECB		
Column:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	17.5
75	30.00 - 60.00% of mass 95	47.4
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	1.0 (1.1) 1
174	50.00 - 150.00% of mass 95	92.9
175	5.00 - 9.00% of mass 174	7.1 (7.7) 1
176	95.00 - 101.00% of mass 174	91.1 (98.0) 1
177	5.00 - 9.00% of mass 176	6.1 (6.7) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	181104A01.d	BFBIK	15567	04-Nov-2019 13:33:30	00:00:00
Client	181104A02.d	VSTD050IK	50ul/100ml 15576/74	04-Nov-2019 13:59:30	00:26:00
Client	181104A03.d	VIBLK		04-Nov-2019 14:24:30	00:51:00
Client	181104A04.d	VIBLK		04-Nov-2019 14:50:30	01:17:00
Client	181104A05.d	VIBLK		04-Nov-2019 15:15:30	01:42:00
Ical	181104A06.d	VSTD0.5IK	1ml/100ml VSTD050IK	04-Nov-2019 15:40:30	02:07:00
Ical	181104A07.d	VSTD001IK	2ml/100ml VSTD050IK	04-Nov-2019 16:05:30	02:32:00
Ical	181104A08.d	VSTD005IK	5ul/100ml 15576/74	04-Nov-2019 16:30:30	02:57:00
Ical	181104A09.d	VSTD020IK	20ul/100ml 15576/74	04-Nov-2019 16:55:30	03:22:00
Ical	181104A10.d	VSTD050IK	50ul/100ml 15576/74	04-Nov-2019 17:20:30	03:47:00
Ical	181104A11.d	VSTD100IK	50ul/50ml 15576/74	04-Nov-2019 17:45:30	04:12:00
Ical	181104A12.d	VSTD200IK	100ul/50ml 15576/74	04-Nov-2019 18:09:30	04:36:00
Client	181104A13.d	VIBLK		04-Nov-2019 18:34:30	05:01:00
LCS	181104A14.d	VICV050IK	50ul/100ml 15578/73	04-Nov-2019 18:59:30	05:26:00
LCS	181104A14_dod.d	VICV050IK	50ul/100ml 15578/73	04-Nov-2019 18:59:30	05:26:00
Client	181104A15.d	VIBLK		04-Nov-2019 19:23:30	05:50:00
Client	181104A16.d	UK06015-001	MDLb XLL MSD18 Day	04-Nov-2019 19:48:30	06:15:00
Client	181104A17.d	UK01016-001	MDLv XLL MSD18 Day	04-Nov-2019 20:12:30	06:39:00
Client	181104A18.d	UK01016-001	MDLv XLL MSD18 Day	04-Nov-2019 20:37:30	07:04:00
Client	181104A19.d	UK06015-001	MDLb XLL MSD18 Day	04-Nov-2019 21:02:30	07:29:00

Report Date: 06-Dec-2019 14:13:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 5 MS Tune Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A01.d		
Injection Date:	06-Dec-2019 08:16:30	Inst. ID:	msd18.i
Method:	BFB-18.m	Tune Type:	BFB
Client ID:	15588	Lab ID:	BFBDM
Sample Info:	18120619, BFBDM		
Injection Vol.		Dil. Factor:	1.0
Operator:	TML		
Column:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.3
75	30.00 - 60.00% of mass 95	49.1
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	1.3 (1.3) 1
174	50.00 - 150.00% of mass 95	97.4
175	5.00 - 9.00% of mass 174	7.5 (7.7) 1
176	95.00 - 101.00% of mass 174	94.4 (96.9) 1
177	5.00 - 9.00% of mass 176	6.1 (6.5) 2

1-Value is % Mass 174 2-Value is % Mass 176

Sample Type	Data File	Lab Sample ID	Client Sample ID	Injection Date/Time	Tune Clock (HH:MM:SS)
BFB	181206A01.d	BFBDM	15588	06-Dec-2019 08:16:30	00:00:00
Ccv	181206A02.d	VSTD050DM	50uL/100mL 15613/10	06-Dec-2019 08:42:30	00:26:00
LCS	181206A03.d	VLCS050DM	50uL/100mL 15608/11	06-Dec-2019 09:06:30	00:50:00
Client	181206A04.d	VIBLK		06-Dec-2019 09:31:30	01:15:00
BLANK	181206A05.d	VBLKDM	VBLKDM	06-Dec-2019 09:55:30	01:39:00
Client	181206A06.d	UL04032-006	MPGI-26-Water-RW-12	06-Dec-2019 11:38:30	03:22:00
MS	181206A07.d	UL04032-006	MPGI-26-Water-RW-12	06-Dec-2019 12:03:30	03:47:00
MSD	181206A08.d	UL04032-006	MPGI-26-Water-RW-12	06-Dec-2019 12:28:30	04:12:00

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd17.i\17120219B.b

Instrument: msd17.m Method: 8260B-17.m

Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

Initial Calibration Samples

Standard File: /chem/msd17.i/17120219B.b/171202B08.D.d

Injection Date: 03-Dec-2019 02:32:30 Lab ID: VSTD020BQ

Sublist: std.sub Sample Type: IcalIS, Level: 4

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3251337	6.18	4509793	7.13	3742570	10.86	1283920	13.22
Upper Limit	6502674	6.68	9019586	7.63	7485140	11.36	2567840	13.72
Lower Limit	1625669	5.68	2254897	6.63	1871285	10.36	641960	12.72
VSTD0.5BQ	3369394	6.18	4589286	7.13	3527512	10.86	1177587	13.23
VSTD001BQ	3358266	6.18	4566594	7.13	3613790	10.86	1181830	13.23
VSTD005BQ	3240441	6.18	4545769	7.13	3690473	10.86	1260968	13.23
VSTD020BQ	3251337	6.18	4509793	7.13	3742570	10.86	1283920	13.22
VSTD050BQ	3182314	6.18	4447059	7.13	3682563	10.86	1317460	13.23
VSTD100BQ	3347696	6.18	4520476	7.13	3487938	10.86	1212249	13.23
VSTD200BQ	3241688	6.18	4344084	7.13	3297677	10.86	1166250	13.23
VICV050BQ	3282259	6.18	4565509	7.13	3793008	10.86	1331546	13.22
VICV050BQ	3282259	6.18	4565509	7.13	3793008	10.86	1331546	13.22

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd17.i/17120219B.b/171202B09.D.d

Injection Date: 03-Dec-2019 02:56:30 Lab ID: VSTD050BQ

Sublist: std.sub Sample Type: CCV

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3182314	6.18	4447059	7.13	3682563	10.86	1317460	13.23
Upper Limit	6364628	6.68	8894118	7.63	7365126	11.36	2634920	13.73
Lower Limit	1591157	5.68	2223530	6.63	1841282	10.36	658730	12.73
VIBLK	3366940	6.17	4533892	7.12	3479092	10.86	1178828	13.23
VIBLK	3239479	6.18	4471345	7.13	3657806	10.86	1231056	13.22
VIBLK	3394016	6.18	4645082	7.13	3638256	10.86	1209472	13.22
VIBLK	3368580	6.18	4676055	7.13	3843266	10.86	1294029	13.23

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Report Date: 06-Dec-2019 10:06:27 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd17.i\17120519.b

Instrument: msd17.m Method: 8260B-17.m

Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

CCV Samples

Standard File: /chem/msd17.i/17120219B.b/171202B09.D.d

Injection Date: 03-Dec-2019 02:56:30 Lab ID: VSTD050BQ

Sublist: std.sub Sample Type: Ical, Level: 5

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	3182314	6.16	4447059	7.12	3682563	10.85	1317460	13.22
Upper Limit	6364628	6.66	8894118	7.62	7365126	11.35	2634920	13.72
Lower Limit	1591157	5.66	2223530	6.62	1841282	10.35	658730	12.72
VSTD050CV	2977614	6.16	4227735	7.12	3481945	10.85	1173038	13.22

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd17.i/17120519.b/171205A02.D.d

Injection Date: 05-Dec-2019 08:28:30 Lab ID: VSTD050CV

Sublist: std.sub Sample Type: LCS

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	2977614	6.16	4227735	7.12	3481945	10.85	1173038	13.22
Upper Limit	5955228	6.66	8455470	7.62	6963890	11.35	2346076	13.72
Lower Limit	1488807	5.66	2113868	6.62	1740973	10.35	586519	12.72
VLCS050CV	2977614	6.16	4227735	7.12	3481945	10.85	1173038	13.22
VLCS050CV	3033802	6.17	4327031	7.12	3545149	10.85	1253185	13.22
VIBLK	3218249	6.17	4418009	7.12	3442590	10.85	1153346	13.22
VBLKCV	3111126	6.17	4294363	7.12	3353116	10.85	1118958	13.22
UL03013-004	2979018	6.16	4211987	7.11	3339324	10.85	1142025	13.22
UL04123-001	3004170	6.16	4194199	7.12	3327908	10.85	1143357	13.22
UL04032-007	2970135	6.17	4175930	7.12	3329673	10.85	1133217	13.22
UL04032-008	2965933	6.17	4164405	7.12	3301695	10.85	1109346	13.22
UL04032-001	2962204	6.17	4177128	7.12	3454279	10.85	1142339	13.22
UL04032-002	2993152	6.17	4180751	7.12	3271220	10.85	1103209	13.22
UL04032-003	2975197	6.17	4166313	7.12	3204796	10.85	1061635	13.22
UL04032-004	2894332	6.17	4130369	7.12	3257660	10.85	1111602	13.22
UL04032-005	2847223	6.17	4073997	7.12	3345970	10.85	1122211	13.22
UL04032-006	2908708	6.17	4144840	7.12	3321572	10.85	1139105	13.22
UL03065-005	2908589	6.17	4100751	7.12	3243289	10.85	1084611	13.22
UL03065-007	2841130	6.17	4081745	7.12	3389025	10.85	1156707	13.22
UL04133-001	2947841	6.17	4148059	7.12	3258757	10.85	1104025	13.22
UL04133-002	2933438	6.17	4168048	7.12	3309320	10.85	1097850	13.22
UL04133-003	2934737	6.17	4156529	7.12	3318407	10.85	1099368	13.22
UL03013-003	2904310	6.17	4095975	7.12	3250159	10.85	1107755	13.22
UL04123-002	2951202	6.17	4094118	7.12	3183941	10.85	1096447	13.22

IS-1: * 41 Pentafluorobenzene
IS-2: * 52 1,4-Difluorobenzene
IS-3: * 76 Chlorobenzene-d5
IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
UL04123-003	2809103	6.17	4033982	7.12	3296214	10.85	1123584	13.22
UL04054-002	2871097	6.17	4081375	7.12	3248244	10.85	1097964	13.22
UL04054-001	2856694	6.17	4098468	7.12	3300013	10.85	1099378	13.22
UL04054-001	2846703	6.17	4047966	7.12	3308619	10.85	1153200	13.22
UL04054-001	2910627	6.16	4150150	7.12	3362740	10.85	1154604	13.22

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.5 minutes of internal standard RT.
RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\dd\chem\msd18.i\18110419.b

Instrument: msd18.m Method: 8260B-18.m

Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

Initial Calibration Samples

Standard File: /chem/msd18.i/18110419.b/181104A09.D.d

Injection Date: 04-Nov-2019 16:55:30 Lab ID: VSTD020IK

Sublist: std.sub Sample Type: IcalIS, Level: 4

IS-1: * 41 Pentafluorobenzene IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	1300866	6.13	1942418	7.07	1876072	10.78	1046455	13.14
Upper Limit	2601732	6.63	3884836	7.57	3752144	11.28	2092910	13.64
Lower Limit	650433	5.63	971209	6.57	938036	10.28	523228	12.64
VSTD0.5IK	1347711	6.13	2010902	7.07	1919065	10.78	1052312	13.14
VSTD001IK	1361942	6.13	2020943	7.07	1890640	10.78	1047476	13.14
VSTD005IK	1309501	6.13	1962074	7.07	1905701	10.78	1070132	13.14
VSTD020IK	1300866	6.13	1942418	7.07	1876072	10.78	1046455	13.14
VSTD050IK	1318632	6.13	1942595	7.07	1889615	10.78	1051275	13.14
VSTD100IK	1202969	6.13	1785764	7.07	1745386	10.78	960531	13.14
VSTD200IK	1299003	6.13	1916185	7.07	1880340	10.78	1038489	13.14

AREA UPPER LIMIT = +100% of internal standard area. AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT. RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd18.i/18110419.b/181104A10.D.d

Injection Date: 04-Nov-2019 17:20:30 Lab ID: VSTD050IK

Sublist: std.sub Sample Type: CCV

IS-1: * 41 Pentafluorobenzene IS-4: * 100 1,4-Dichlorobenzene-d4

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	1318632	6.13	1942595	7.07	1889615	10.78	1051275	13.14
Upper Limit	2637264	6.63	3885190	7.57	3779230	11.28	2102550	13.64
Lower Limit	659316	5.63	971298	6.57	944808	10.28	525638	12.64
VSTD050IK	1367913	6.13	2022938	7.07	1952262	10.78	1103104	13.14
VIBLK	1402610	6.13	2048655	7.07	1945186	10.78	1077228	13.14
VIBLK	1408416	6.13	2038122	7.07	1943481	10.78	1087166	13.14
VIBLK	1366947	6.13	2034496	7.07	1943729	10.78	1072856	13.14
VIBLK	1352881	6.13	1993780	7.07	1940512	10.78	1069775	13.14
VICV050IK	1376690	6.13	2040627	7.07	1957616	10.78	1088457	13.14
VICV050IK	1376690	6.13	2040627	7.07	1957616	10.78	1088457	13.14
VIBLK	1346519	6.13	2012208	7.07	1938572	10.78	1069585	13.14
UK06015-001	1364323	6.13	2031164	7.07	1939011	10.78	1065962	13.14
UK01016-001	1388406	6.13	2047921	7.07	1964310	10.78	1083874	13.14
UK01016-001	1373770	6.13	2033187	7.07	1931079	10.78	1058988	13.14
UK06015-001	1336787	6.13	1992414	7.07	1909467	10.78	1052347	13.14

AREA UPPER LIMIT = +100% of internal standard area. AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.5 minutes of internal standard RT. RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Report Date: 06-Dec-2019 14:13:27 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Istd Recovery Report

Batch Path: \\Organics\DD\chem\msd18.i\18120619.b

Instrument: msd18.m Method: 8260B-18.m

Column: Rxi-624Sil (0.25 mm) Detector: MS Scan

CCV Samples

Standard File: /chem/msd18.i/18110419.b/181104A10.D.d

Injection Date: 04-Nov-2019 17:20:30 Lab ID: VSTD050IK

Sublist: std.sub Sample Type: Ical, Level: 5

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	1318632	6.12	1942595	7.07	1889615	10.78	1051275	13.14
Upper Limit	2637264	6.62	3885190	7.57	3779230	11.28	2102550	13.64
Lower Limit	659316	5.62	971298	6.57	944808	10.28	525638	12.64
VSTD050DM	784235	6.12	1154489	7.07	1081824	10.78	544702	13.14

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

Non-CCV Samples

Standard File: /chem/msd18.i/18120619.b/181206A02.D.d

Injection Date: 06-Dec-2019 08:42:30 Lab ID: VSTD050DM

Sublist: std.sub Sample Type: CCVIS

IS-1: * 41 Pentafluorobenzene

IS-2: * 52 1,4-Difluorobenzene

IS-3: * 76 Chlorobenzene-d5

IS-4: * 100 1,4-Dichlorobenzene-d4

Lab Sample ID	IS-1 Area	RT	IS-2 Area	RT	IS-3 Area	RT	IS-4 Area	RT
Std. Results	784235	6.12	1154489	7.07	1081824	10.78	544702	13.14
Upper Limit	1568470	6.62	2308978	7.57	2163648	11.28	1089404	13.64
Lower Limit	392118	5.62	577245	6.57	540912	10.28	272351	12.64
VLCS050DM	800860	6.13	1182054	7.07	1162969	10.78	674468	13.14
VIBLK	789693	6.13	1162319	7.07	1139351	10.78	629938	13.14
VBLKDM	782866	6.13	1140314	7.07	1111107	10.78	604119	13.14
UL04032-006	742808	6.12	1080573	7.07	1072164	10.78	581973	13.14
UL04032-006	734532	6.13	1092124	7.07	1049050	10.78	595764	13.15
UL04032-006	741139	6.13	1102317	7.07	1069989	10.78	609781	13.15

AREA UPPER LIMIT = +100% of internal standard area.

AREA LOWER LIMIT = - 50% of internal standard area.

RT UPPER LIMIT = + 0.5 minutes of internal standard RT.

RT LOWER LIMIT = - 0.5 minutes of internal standard RT.

RAW SAMPLE DATA

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1207	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-001
Description: MPGI-09-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1138
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1207	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		102	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 06-Dec-2019 10:05:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A10.D
Lab Sample ID: UL04032-001 Client Sample ID: MPG1-09-Water-RW-12
Injection Date: 05-Dec-2019 12:07:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120519, UL04032-001
Misc. Info: XSND02
Method: \\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m
Method Date: 06-Dec-2019 10:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Client ALS Bottle: 10
Cpnd Sublist: sample.sb
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2962204	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4177128	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.856	10.851	0.005	3454279	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1142339	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0		3.133		ND			
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1297842	48.522	48.522	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	4135595	50.951	50.951	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1221393	52.590	52.590	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

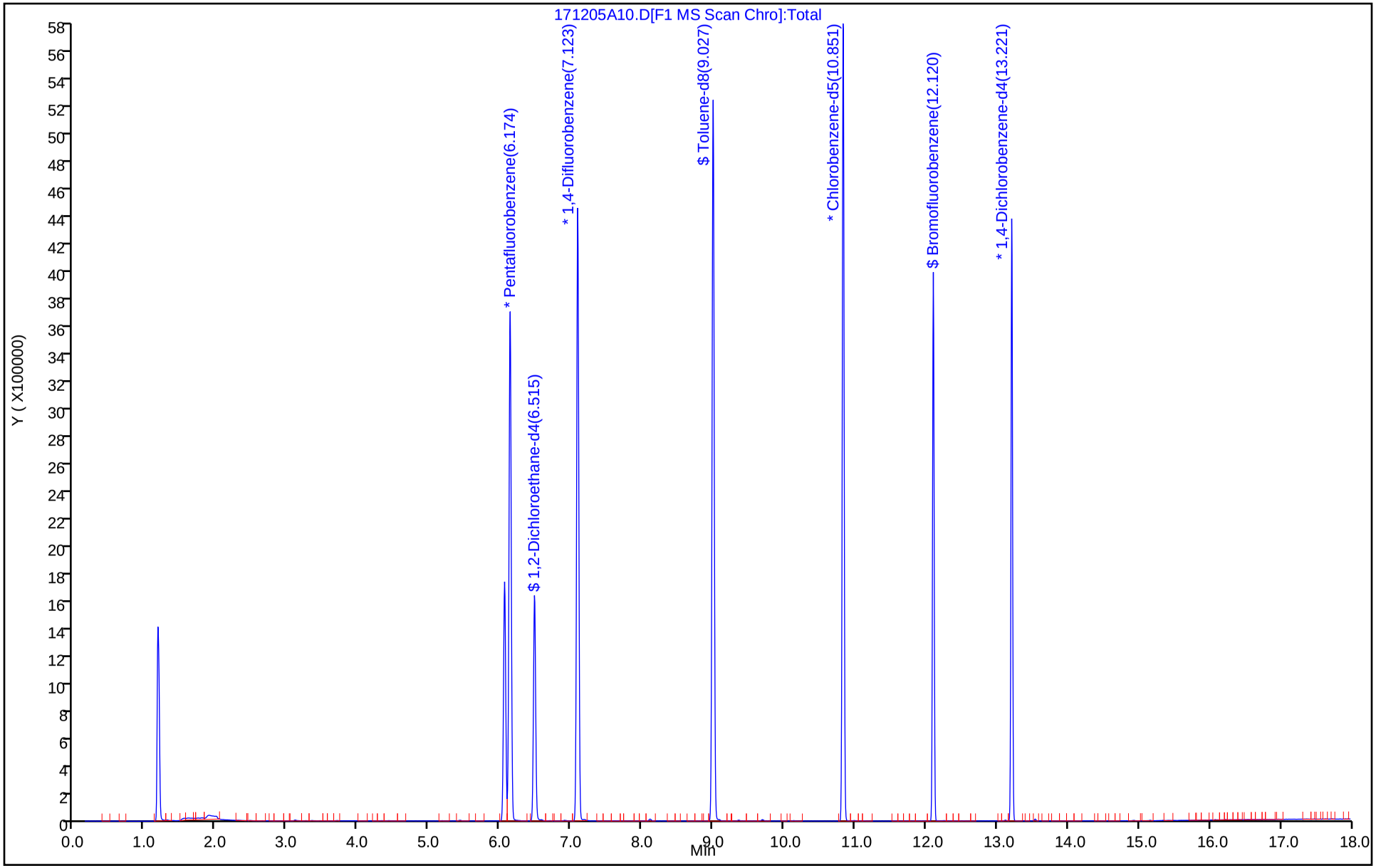
QC Flag Legend

Processing Flags
Review Flags

Report Date: 06-Dec-2019 10:05:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A10.D				
Injection Date:	05-Dec-2019 12:07:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-09-Water-RW-12	Lab ID:	UL04032-001		
Sample Info:	17120519, UL04032-001				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1231	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-002
Description: MPGI-11-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1100
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1231	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A11.D		
Lab Sample ID:	UL04032-002	Client Sample ID:	MPG1-11-Water-RW-12
Injection Date:	05-Dec-2019 12:31:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, UL04032-002		
Misc. Info:	XSNE02		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	11
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2993152	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4180751	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.857	10.851	0.005	3271220	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1103209	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0	3.149	3.133	0.016	21736	2.2450	2.2450	e
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1317217	49.204	49.204	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	4079843	53.077	53.077	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.001	1133763	51.549	51.549	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

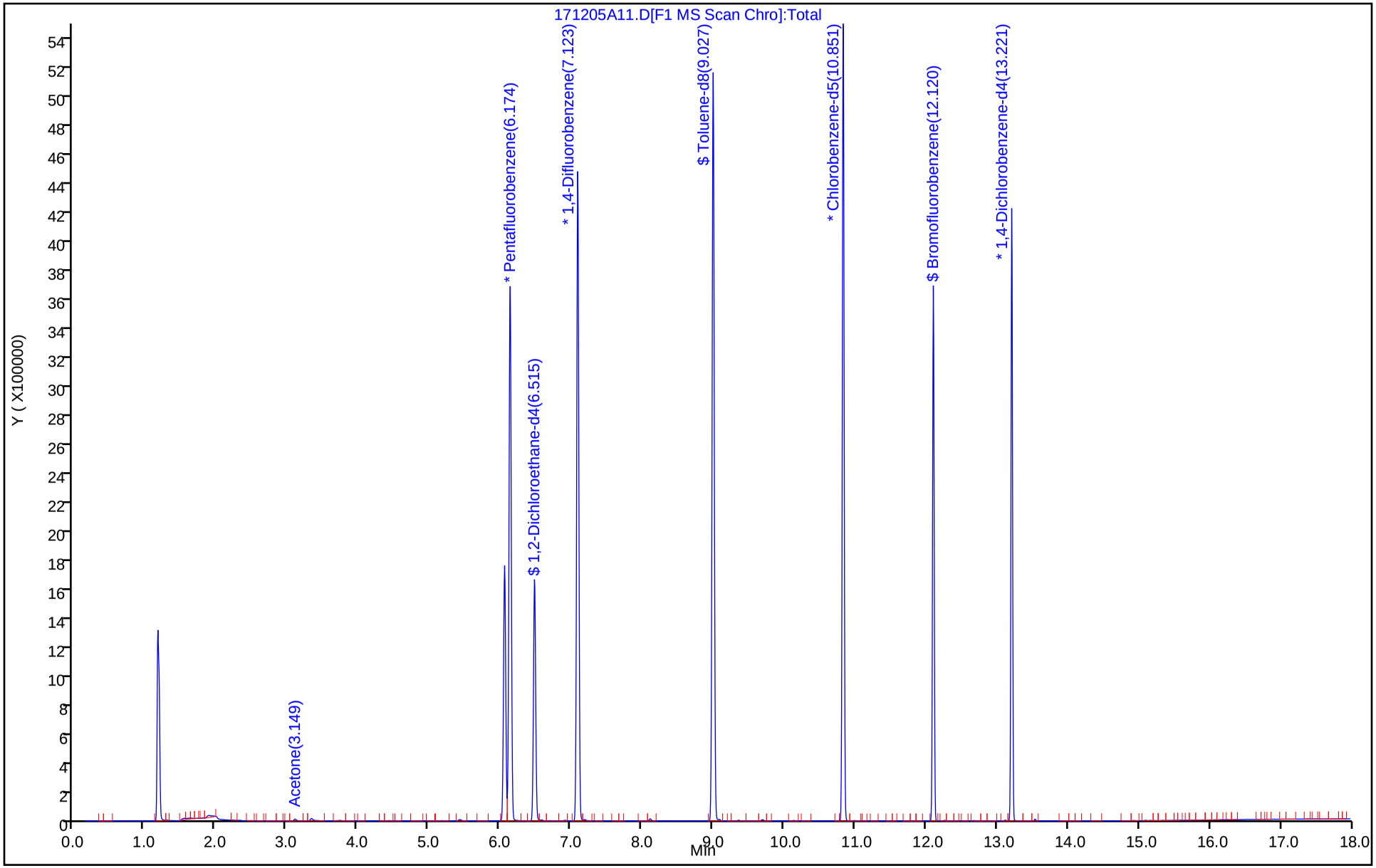
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Review Flags

Report Date: 06-Dec-2019 10:06:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A11.D				
Injection Date:	05-Dec-2019 12:31:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-11-Water-RW-12	Lab ID:	UL04032-002		
Sample Info:	17120519, UL04032-002				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

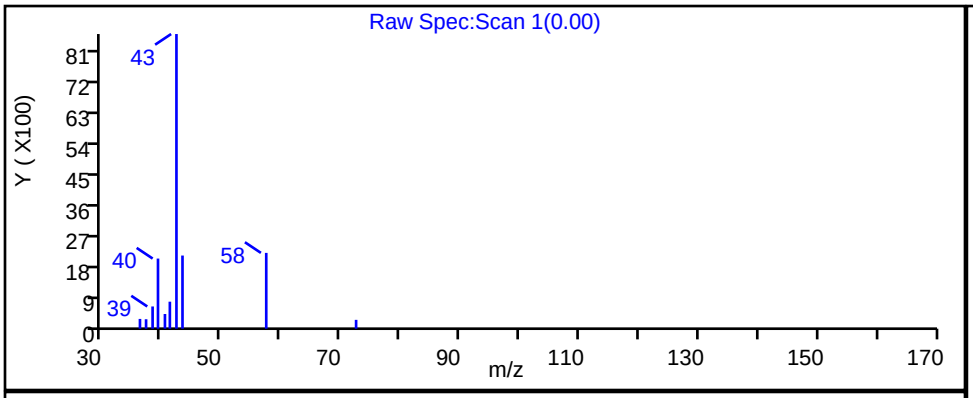


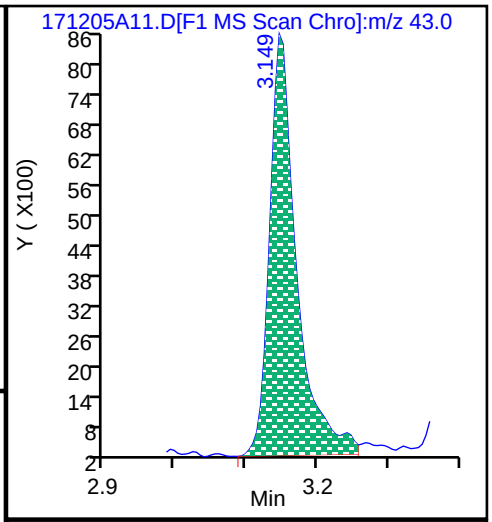
Report Date: 06-Dec-2019 10:06:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

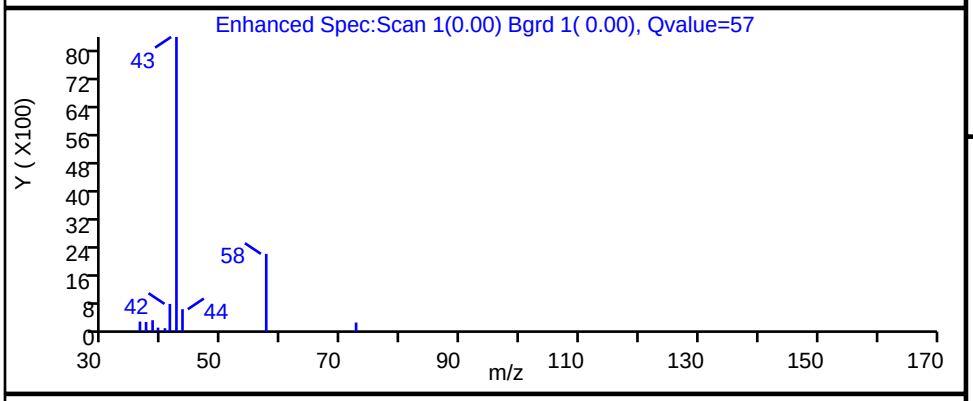
Shealy Environmental Services

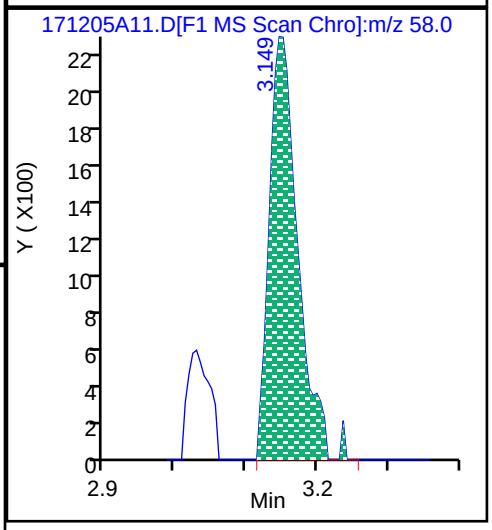
Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A11.D		
Injection Date:	05-Dec-2019 12:31:30	Inst. ID:	msd17.i
Client ID:	MPG1-11-Water-RW-12	Lab ID:	UL04032-002
Sample Info:	17120519, UL04032-002		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

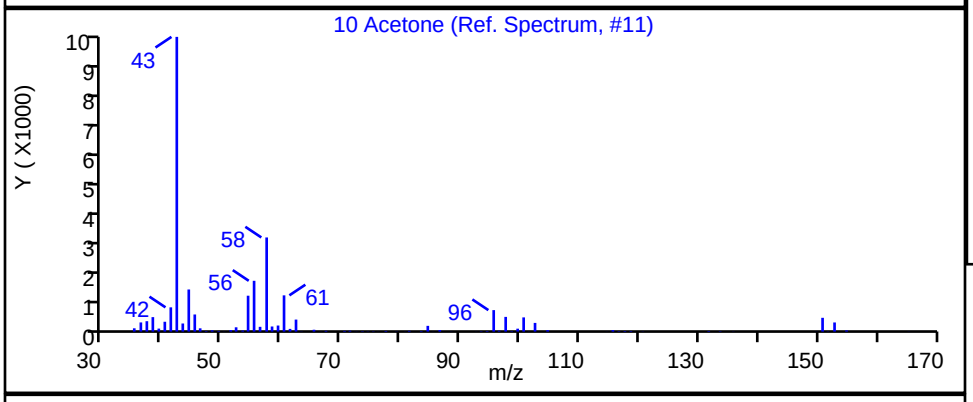
10 Acetone

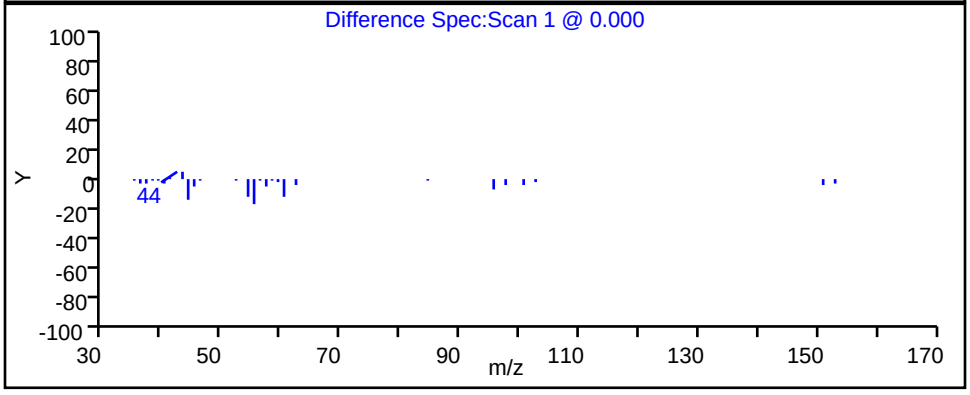












Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1255	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-003
Description: MPGI-12-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0817
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1255	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		107	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 06-Dec-2019 10:06:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A12.D		
Lab Sample ID:	UL04032-003	Client Sample ID:	MPG1-12-Water-RW-12
Injection Date:	05-Dec-2019 12:55:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, UL04032-003		
Misc. Info:	XSNF02		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2975197	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4166313	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.851	10.851	0.000	3204796	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1061635	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0		3.133		ND			
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1332173	49.935	49.935	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	4033196	53.558	53.558	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.001	1125038	52.212	52.212	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

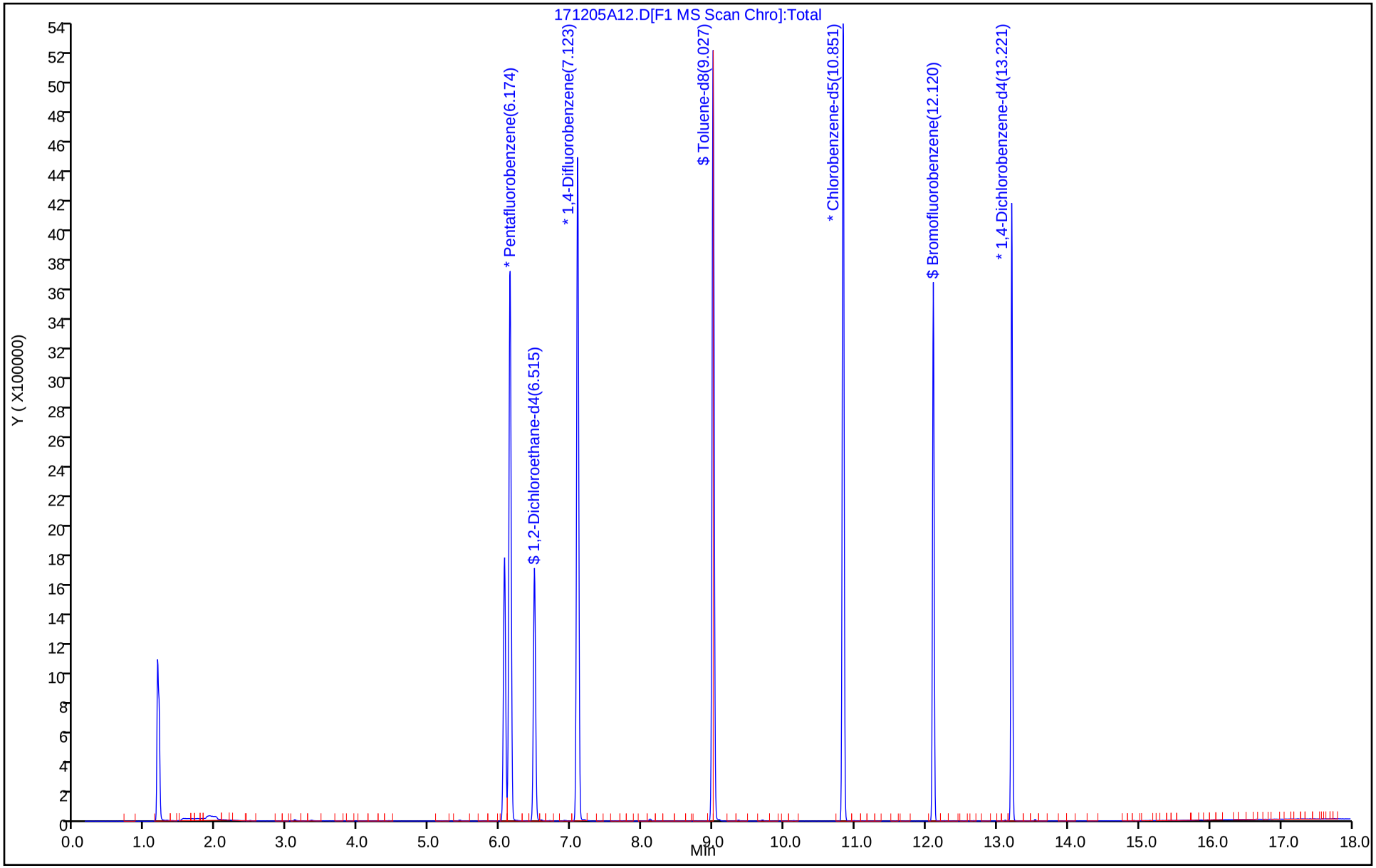
QC Flag Legend

Processing Flags
Review Flags

Report Date: 06-Dec-2019 10:06:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A12.D				
Injection Date:	05-Dec-2019 12:55:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-12-Water-RW-12	Lab ID:	UL04032-003		
Sample Info:	17120519, UL04032-003				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1320	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-004
Description: MPGI-13-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 1006
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1320	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A13.D		
Lab Sample ID:	UL04032-004	Client Sample ID:	MPG1-13-Water-RW-12
Injection Date:	05-Dec-2019 13:20:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, UL04032-004		
Misc. Info:	XSNG02		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	13
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2894332	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4130369	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.856	10.851	0.005	3257660	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1111602	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0		3.133		ND			
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1308458	49.473	49.473	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	3950868	51.613	51.613	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1155399	52.751	52.751	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

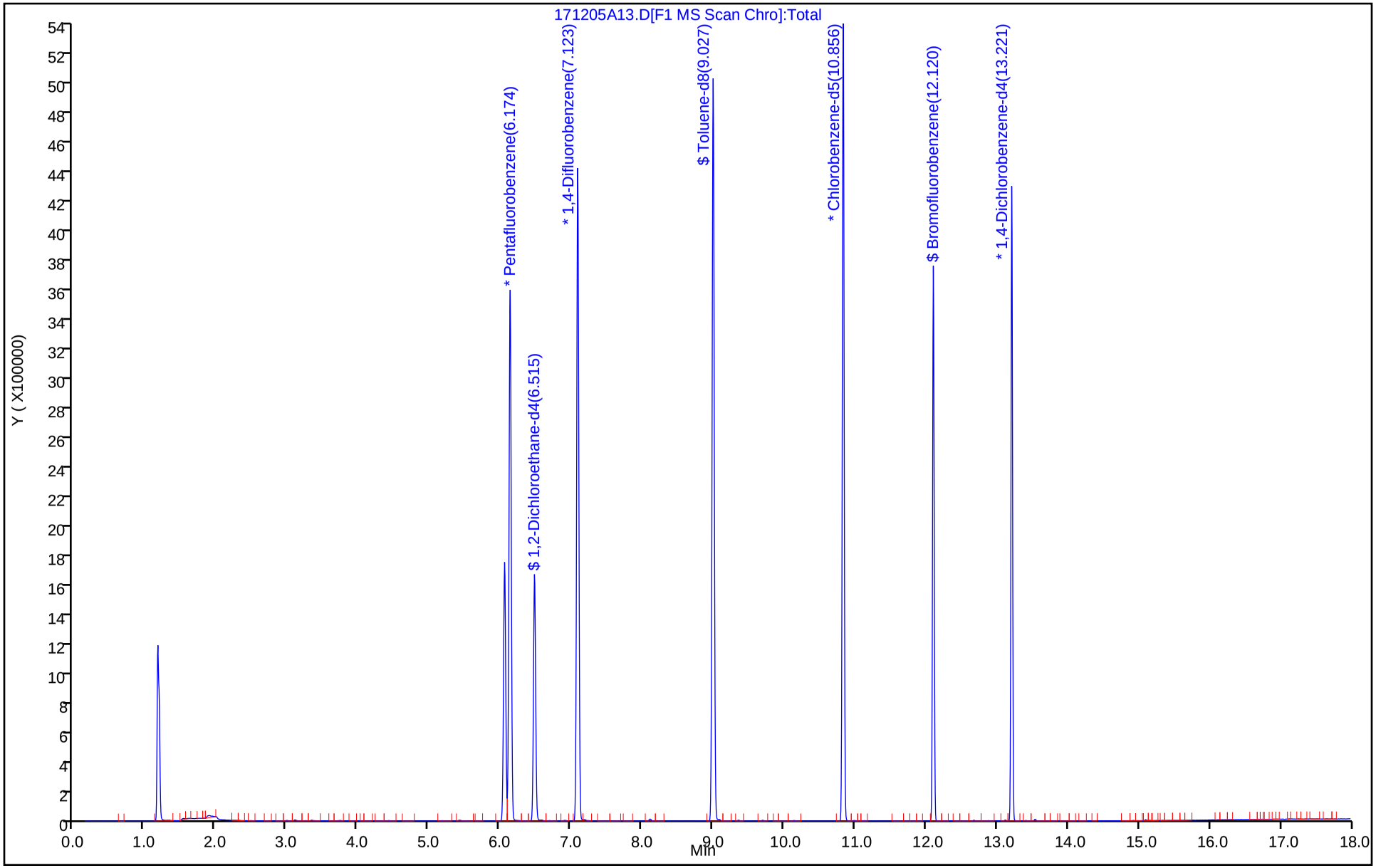
QC Flag Legend

Processing Flags
Review Flags

Report Date: 06-Dec-2019 10:06:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A13.D				
Injection Date:	05-Dec-2019 13:20:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-13-Water-RW-12	Lab ID:	UL04032-004		
Sample Info:	17120519, UL04032-004				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1344	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-005
Description: MPGI-13-Water-RW-120319-D
Matrix: Aqueous
Date Sampled: 12/03/2019 1008
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1344	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 06-Dec-2019 10:06:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A14.D		
Lab Sample ID:	UL04032-005	Client Sample ID:	MPG1-13-Water-RW-12
Injection Date:	05-Dec-2019 13:44:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, UL04032-005		
Misc. Info:	XSNH02		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	14
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2847223	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4073997	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.856	10.851	0.005	3345970	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.000	1122211	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0		3.133		ND			
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1298438	49.773	49.773	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.026	9.026	0.000	3921289	49.875	49.875	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1185420	52.693	52.693	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

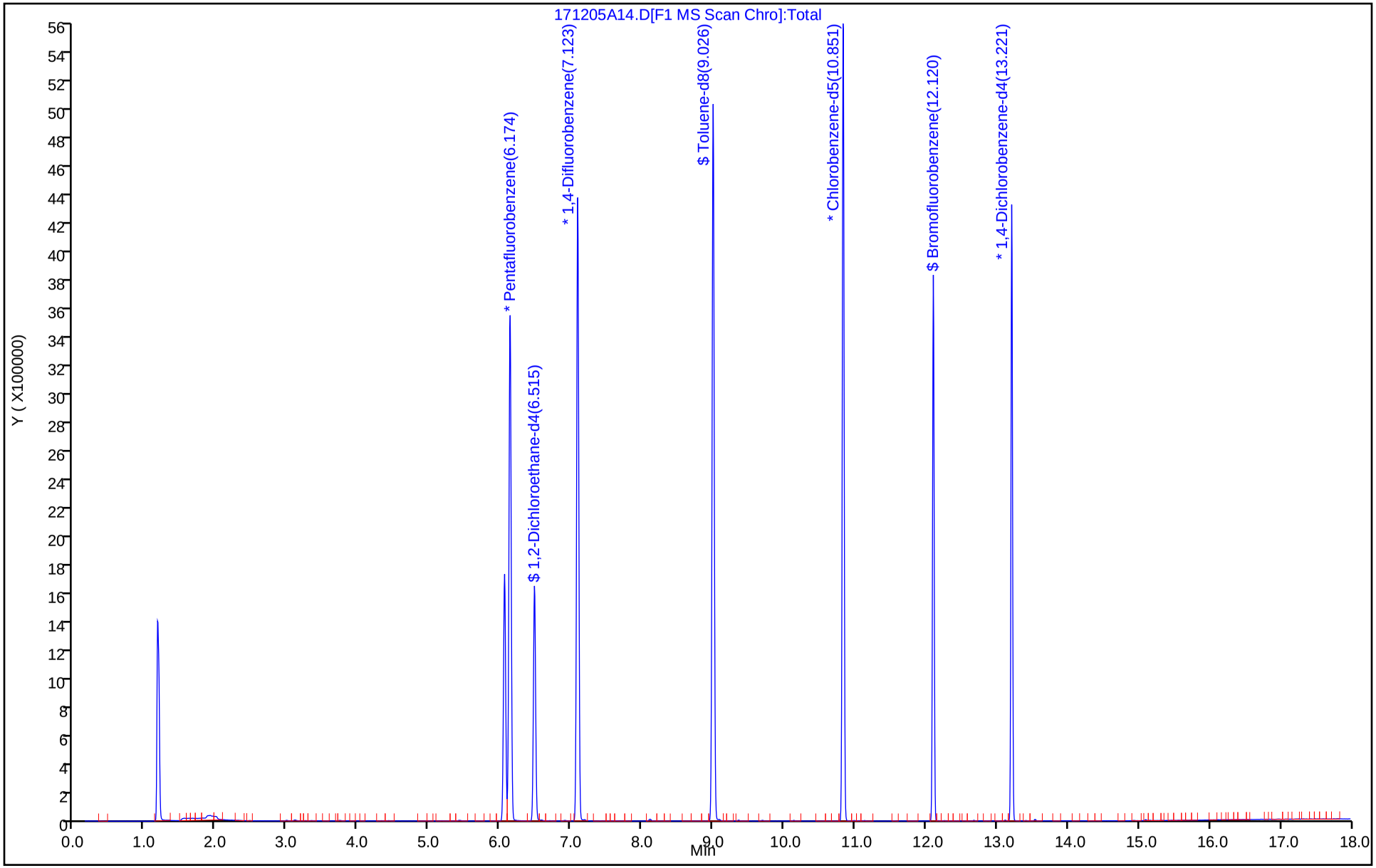
QC Flag Legend

Processing Flags
Review Flags

Report Date: 06-Dec-2019 10:06:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A14.D				
Injection Date:	05-Dec-2019 13:44:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-13-Water-RW-12	Lab ID:	UL04032-005		
Sample Info:	17120519, UL04032-005				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1407	TML		38003
2	5030B	8260B	10	12/06/2019 1138	TML		38152

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	1300		200	50	ug/L	2
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	12		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	1.6		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-006
Description: MPGI-26-Water-RW-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0906
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1407	TML		38003
2	5030B	8260B	10	12/06/2019 1138	TML		38152

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		99	70-130		111	70-130
Bromofluorobenzene		104	70-130		96	70-130
Toluene-d8		103	70-130		106	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Report Date: 06-Dec-2019 10:06:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A15.D		
Lab Sample ID:	UL04032-006	Client Sample ID:	MPG1-26-Water-RW-12
Injection Date:	05-Dec-2019 14:07:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, UL04032-006		
Misc. Info:	XSNI02		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	15
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 09:57:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2908708	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4144840	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.856	10.851	0.005	3321572	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1139105	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0	3.133	3.133	0.000	13341030	1417.94	1417.94	E
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0	3.568	3.563	0.005	38728	1.6169	1.6169	QM
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0	5.446	5.440	0.005	63402	11.929	11.929	
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1313498	49.490	49.490	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	4024575	51.564	51.564	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1166381	52.228	52.228	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

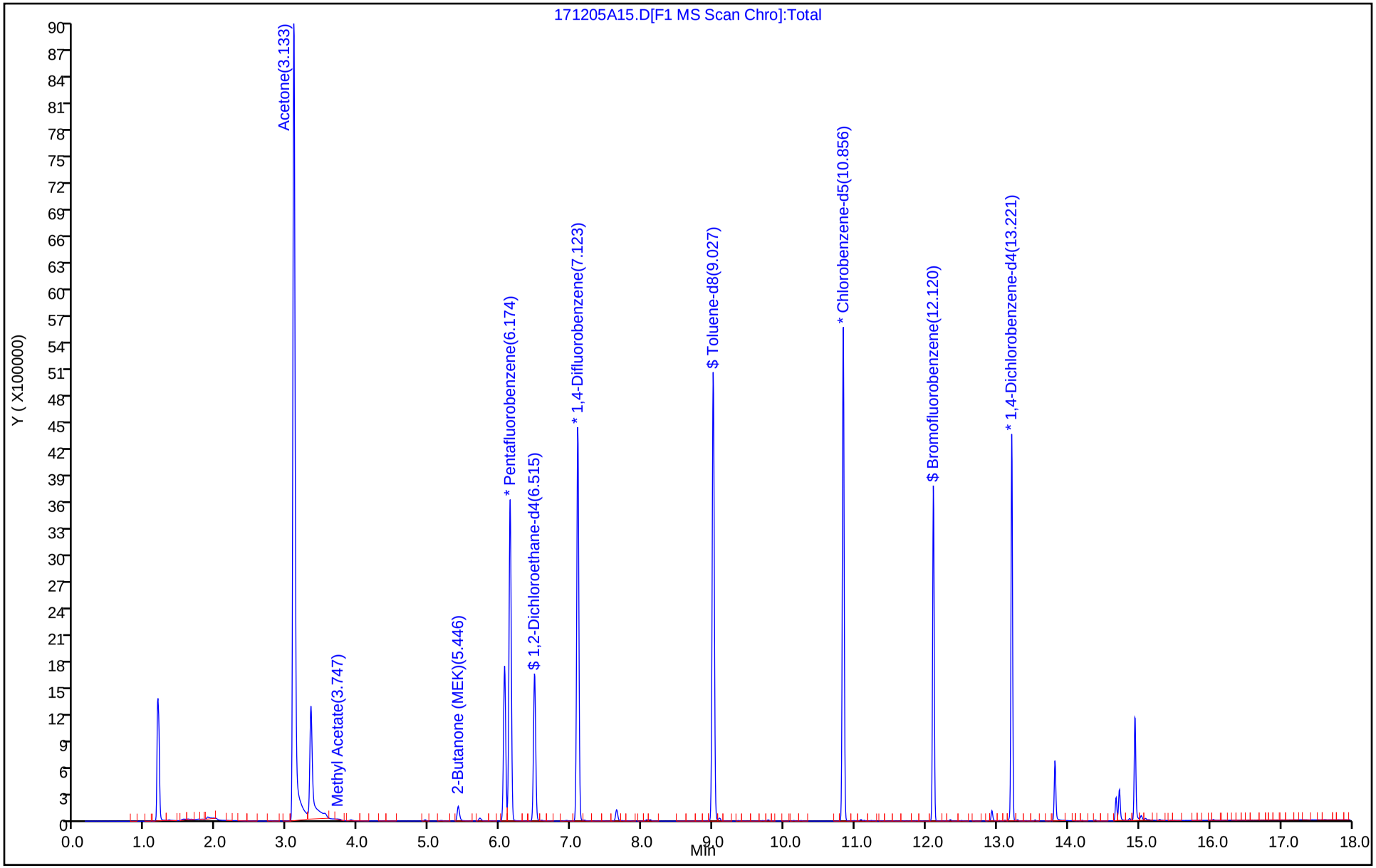
QC Flag Legend

Processing Flags
E - Compound Concentration Exceeds Max. Calibration Range
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 10:06:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A15.D				
Injection Date:	05-Dec-2019 14:07:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-26-Water-RW-12	Lab ID:	UL04032-006		
Sample Info:	17120519, UL04032-006				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

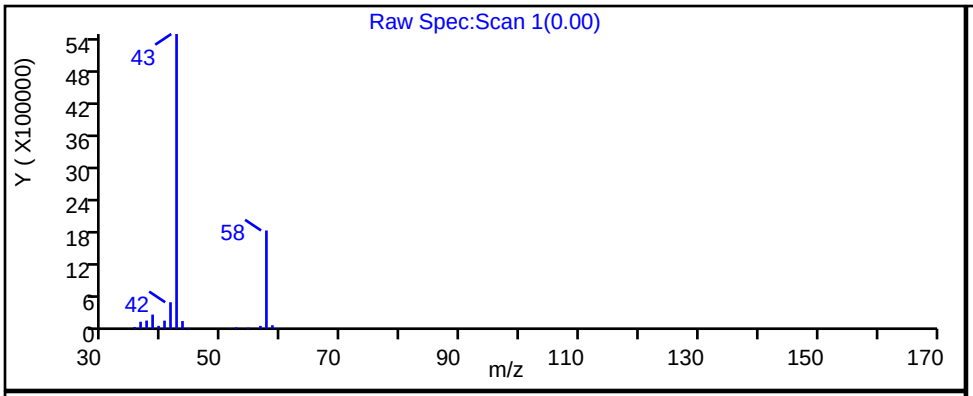


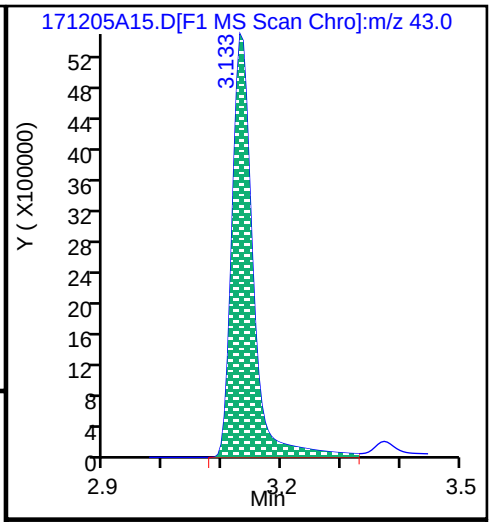
Report Date: 06-Dec-2019 10:06:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

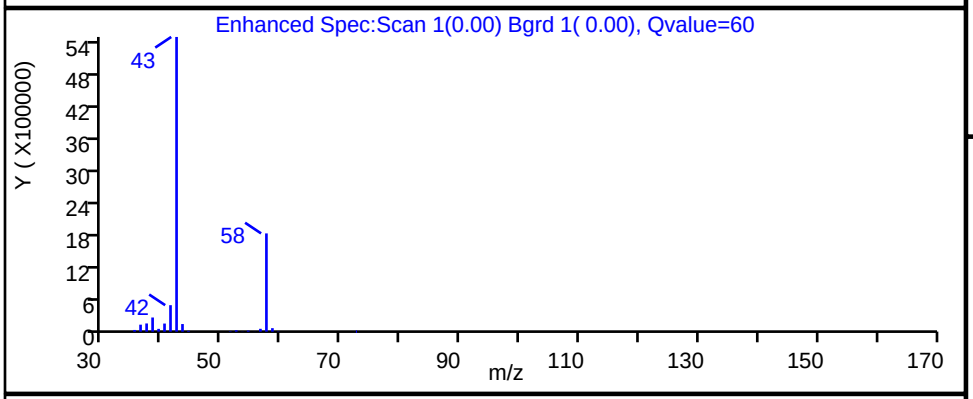
Shealy Environmental Services

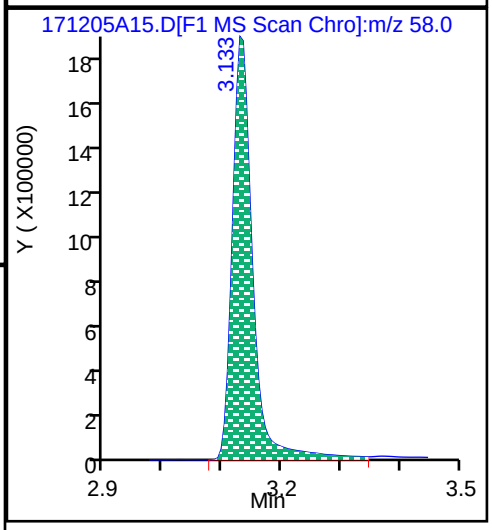
Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A15.D		
Injection Date:	05-Dec-2019 14:07:30	Inst. ID:	msd17.i
Client ID:	MPG1-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	17120519, UL04032-006		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

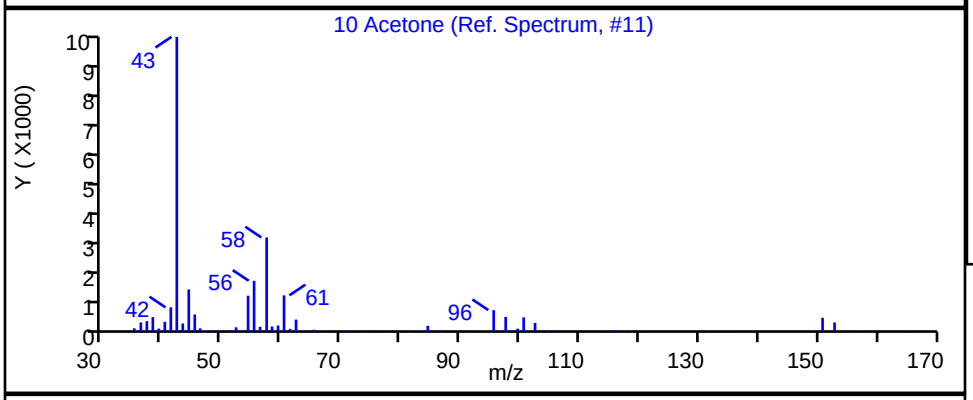
10 Acetone

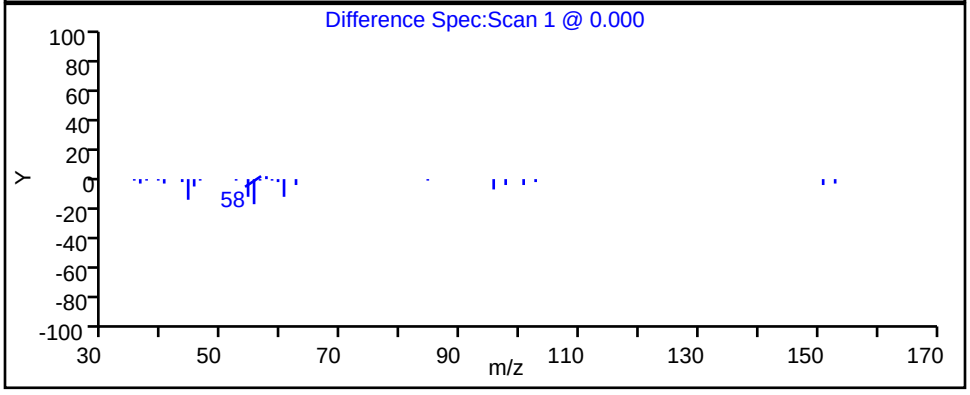










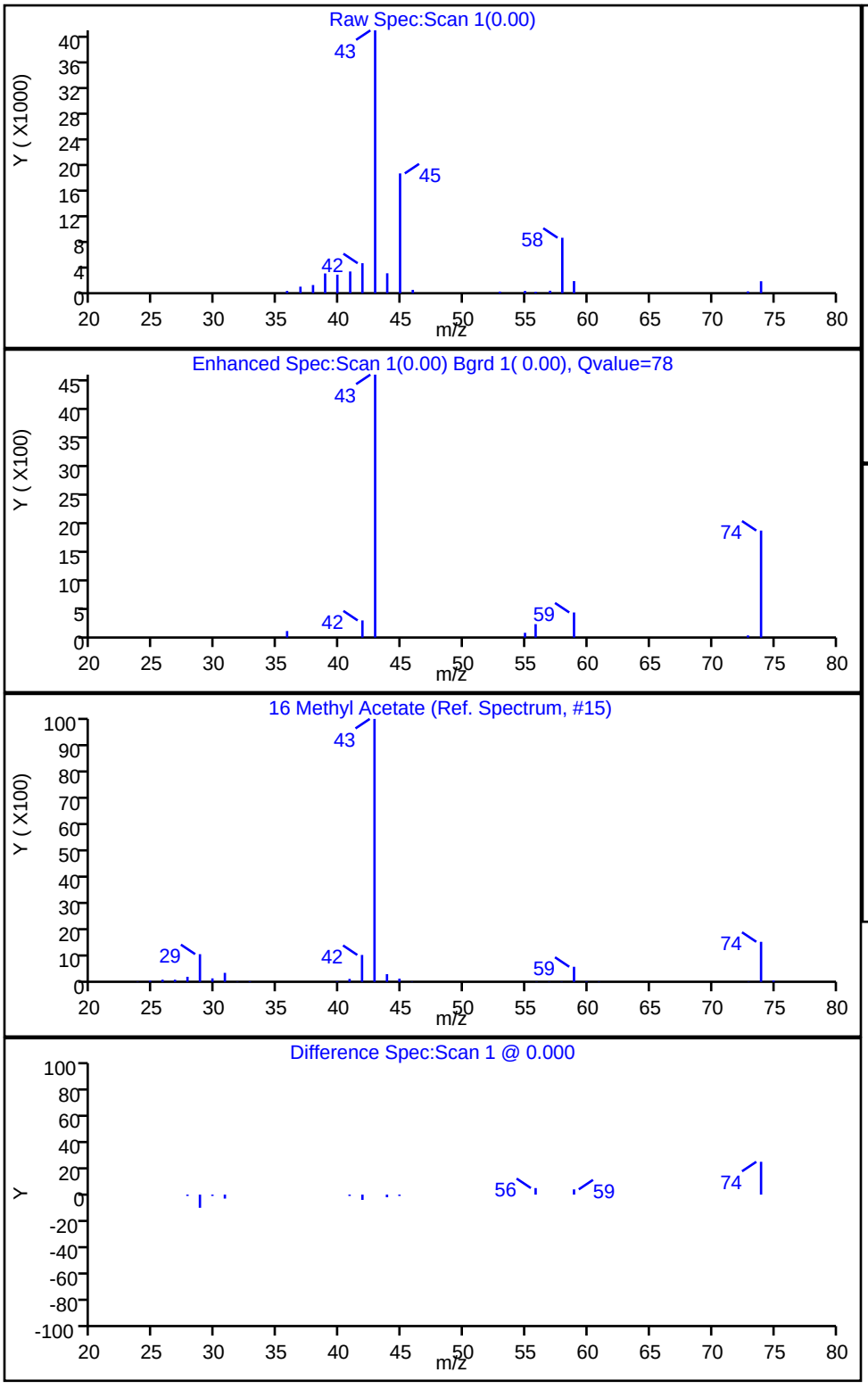


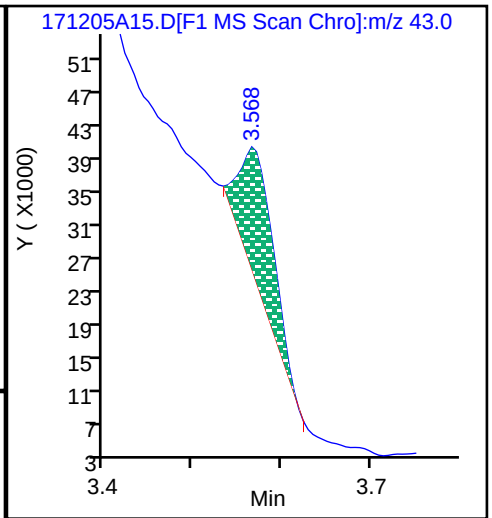
Report Date: 06-Dec-2019 10:06:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

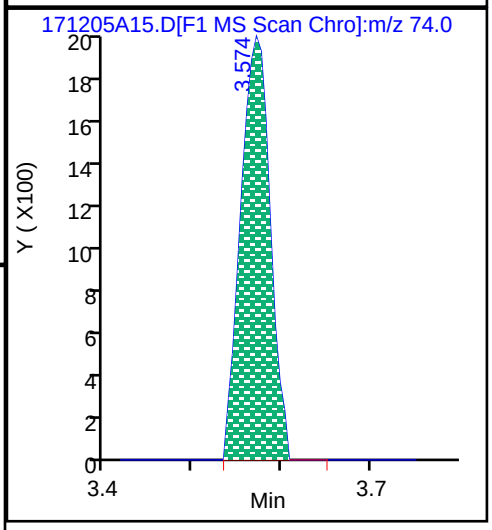
Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A15.D		
Injection Date:	05-Dec-2019 14:07:30	Inst. ID:	msd17.i
Client ID:	MPG1-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	17120519, UL04032-006		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate





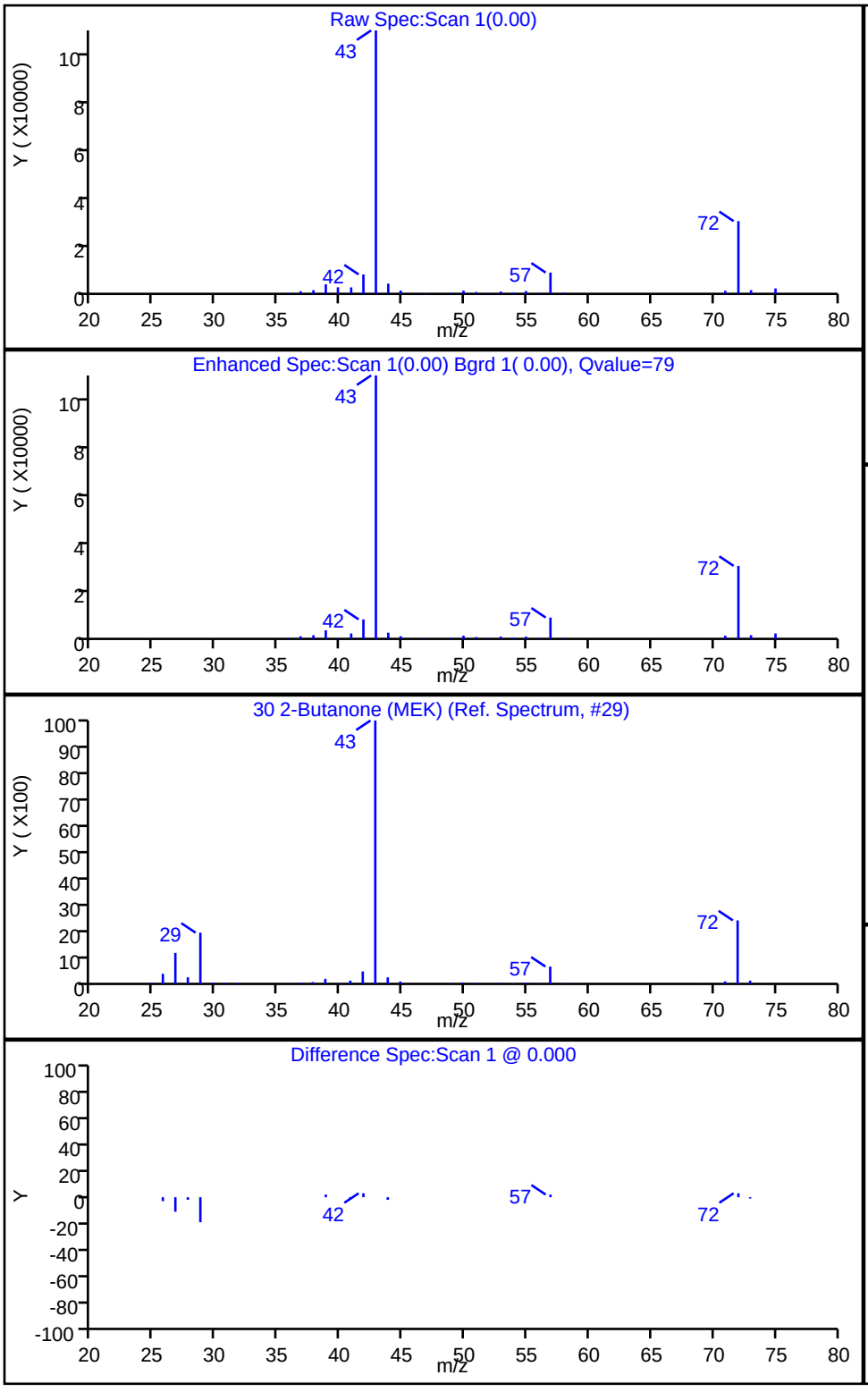


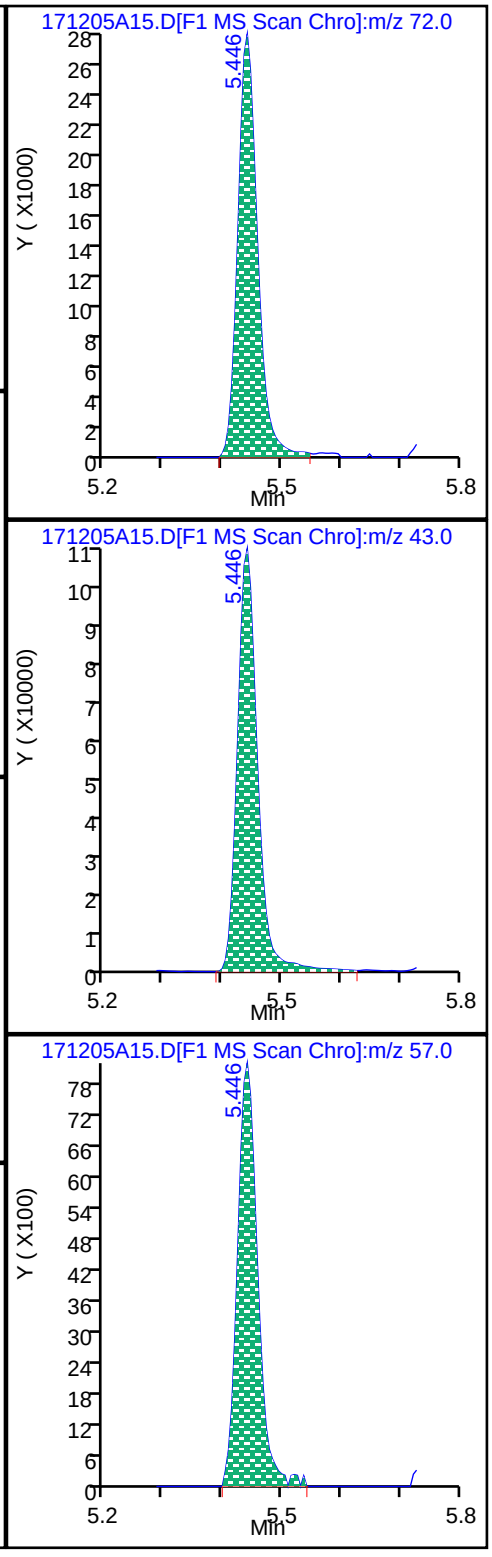
Report Date: 06-Dec-2019 10:06:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A15.D		
Injection Date:	05-Dec-2019 14:07:30	Inst. ID:	msd17.i
Client ID:	MPG1-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	17120519, UL04032-006		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

30 2-Butanone (MEK)





Report Date: 06-Dec-2019 10:06:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

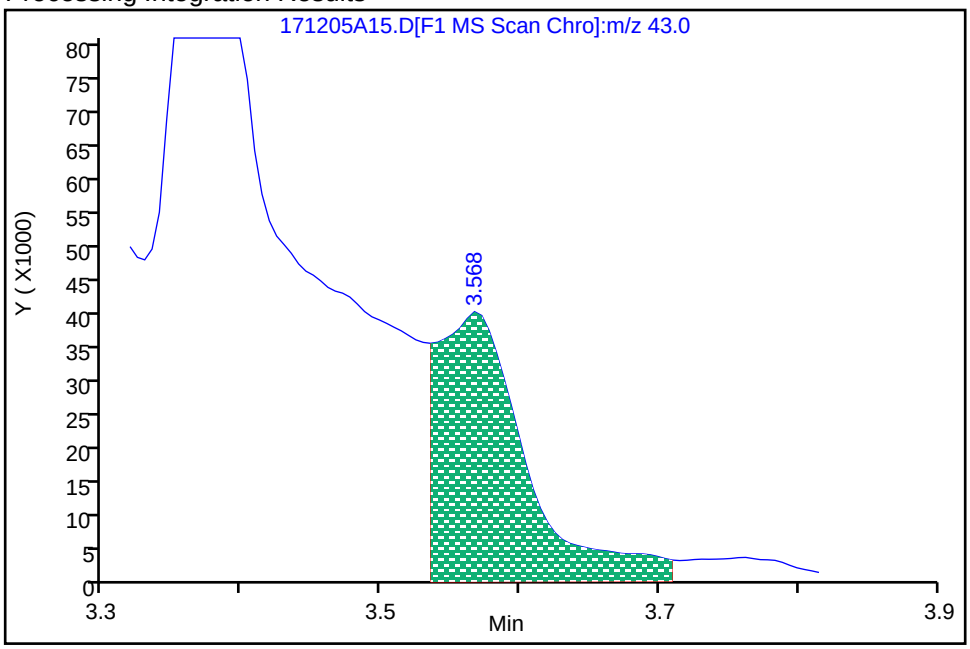
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A15.D		
Injection Date:	05-Dec-2019 14:07:30	Inst. ID:	msd17.i
Client ID:	MPG1-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	17120519, UL04032-006		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

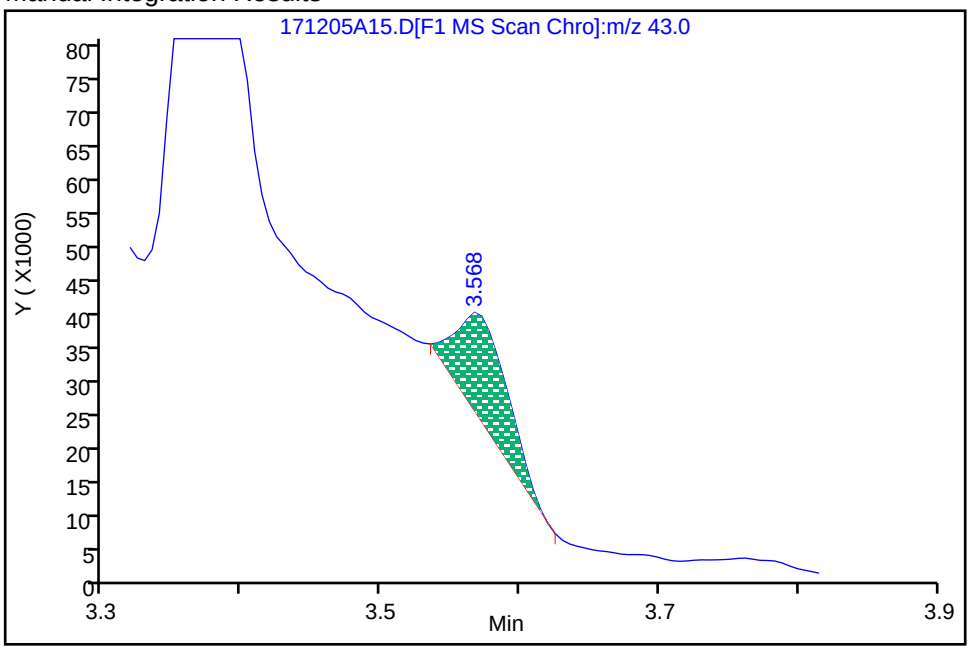
Processing Integration Results

RT: 3.568
Area: 174679
Conc: 7.2929
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.568
Area: 38728
Conc: 1.6169
Conc Units: ug/L



Data Editor: pap, 06-Dec-2019 09:57:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:13:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A06.D		
Lab Sample ID:	UL04032-006	Client Sample ID:	MPGI-26-Water-RW-12
Injection Date:	06-Dec-2019 11:38:30	Dil. Factor:	10.0
Operator:	TML	Inst. ID:	msd18.i
Sample Info:	18120619, UL04032-006,10		
Misc. Info:	XSNI01		
Method:	\\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m		
Method Date:	06-Dec-2019 09:40:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	Client	ALS Bottle:	6
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	tml	Review Date:	06-Dec-2019 14:05:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.127	6.127	0.000	742808	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.071	7.071	0.000	1080573	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.788	10.783	0.006	1072164	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	581973	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.403		ND			
2 Chloromethane	50.0		1.566		ND			
3 Vinyl chloride	62.0		1.681		ND			
4 Bromomethane	94.0		2.001		ND			
5 Chloroethane	64.0		2.132		ND			
6 Trichlorofluoromethane	101.0		2.415		ND			
11 1,1-Dichloroethene	96.0		3.044		ND			
12 Freon 113	101.0		3.081		ND			
10 Acetone	43.0	3.123	3.123	0.000	791946	133.16	1331.55	
14 Carbon disulfide	76.0		3.285		ND			
16 Methyl Acetate	43.0		3.547		ND			
18 Methylene chloride	84.0		3.715		ND			
21 trans-1,2-Dichloroethene	96.0		4.066		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.072		ND			
24 1,1-Dichloroethane	63.0		4.643		ND			
29 cis-1,2-Dichloroethene	96.0		5.393		ND			
30 2-Butanone (MEK)	72.0	5.409	5.398	0.010	1978	0.81706	8.1706	QeM
37 Chloroform	83.0		5.849		ND			
40 1,1,1-Trichloroethane	97.0		6.022		ND			
42 Cyclohexane	41.0		6.096		ND			
44 Carbon tetrachloride	119.0		6.211		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.463	6.463	0.000	414729	55.262	55.262	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.473		ND			
50 1,2-Dichloroethane	62.0		6.562		ND			
53 Trichloroethene	130.0		7.349		ND			
54 Methylcyclohexane	83.0		7.632		ND			
55 1,2-Dichloropropane	63.0		7.679		ND			
59 Bromodichloromethane	83.0		8.041		ND			
62 cis-1,3-Dichloropropene	75.0		8.617		ND			
63 4-Methyl-2-pentanone	43.0		8.838		ND			
$ 64 Toluene-d8	98.0	8.958	8.958	0.000	1276178	52.777	52.777	
65 Toluene	92.0		9.047		ND			
66 trans-1,3-Dichloropropene	75.0		9.399		ND			
68 1,1,2-Trichloroethane	97.0		9.650		ND			
69 Tetrachloroethene	164.0		9.729		ND			
71 2-Hexanone	43.0		9.949		ND			
72 Dibromochloromethane	129.0		10.112		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.232		ND			
77 Chlorobenzene	112.0		10.820		ND			
79 Ethylbenzene	106.0		10.940		ND			
80 m+p-Xylenes	106.0		11.092		ND			
81 o-Xylene	106.0		11.496		ND			
82 Styrene	104.0		11.522		ND			
83 Bromoform	173.0		11.695		ND			
84 Isopropylbenzene	105.0		11.884		ND			
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	449194	47.762	47.762	
88 1,1,2,2-Tetrachloroethane	83.0		12.204		ND			
98 1,3-Dichlorobenzene	146.0		13.074		ND			
101 1,4-Dichlorobenzene	146.0		13.169		ND			
104 1,2-Dichlorobenzene	146.0		13.488		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.175		ND			
106 1,2,4-Trichlorobenzene	180.0		14.862		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

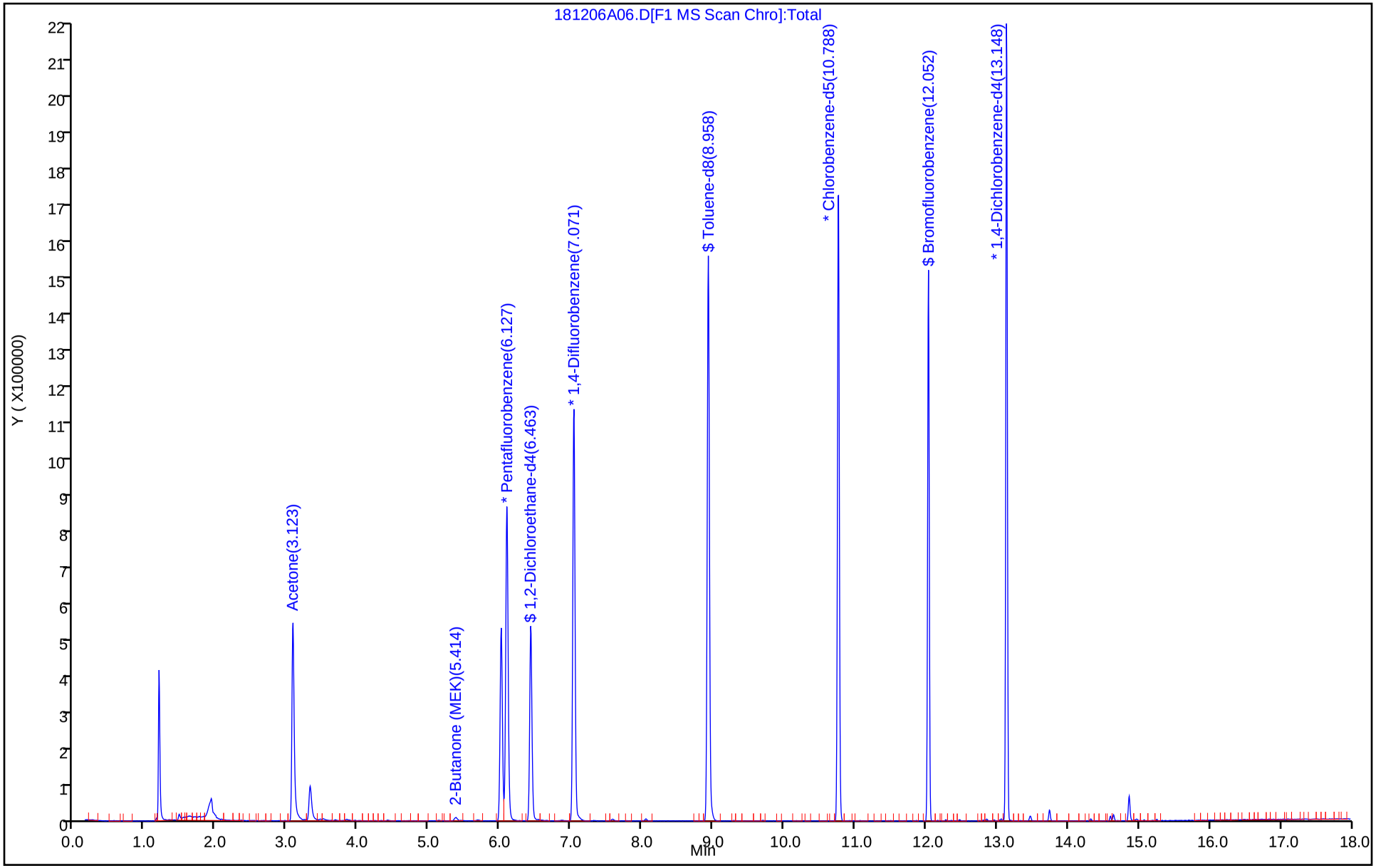
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 14:13:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A06.D				
Injection Date:	06-Dec-2019 11:38:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006		
Sample Info:	18120619, UL04032-006,10				
Purge Vol.	5.00 ml	Dil. Factor:	10.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

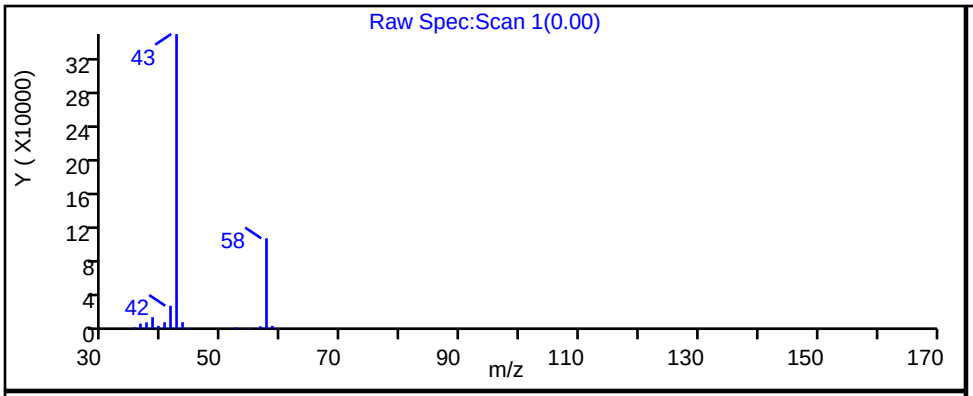


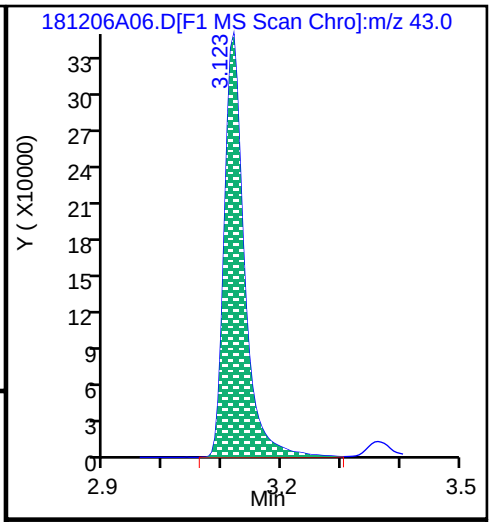
Report Date: 06-Dec-2019 14:13:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

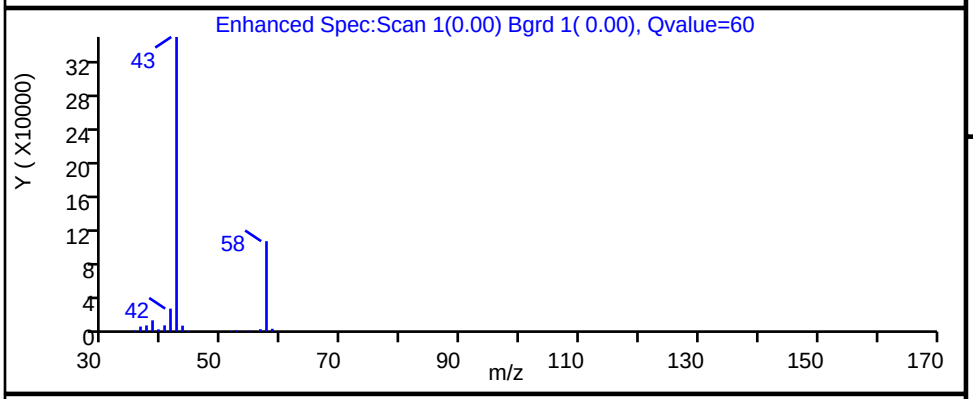
Shealy Environmental Services

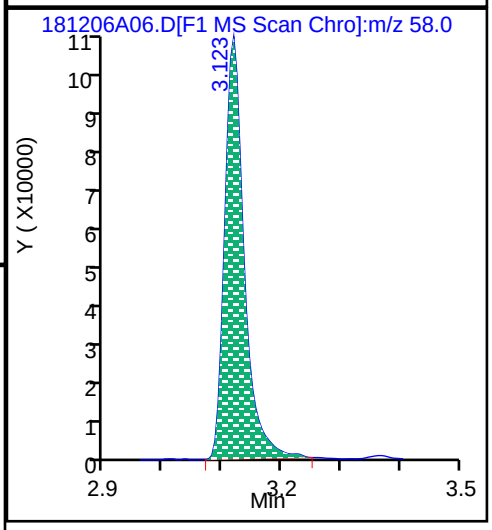
Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A06.D		
Injection Date:	06-Dec-2019 11:38:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

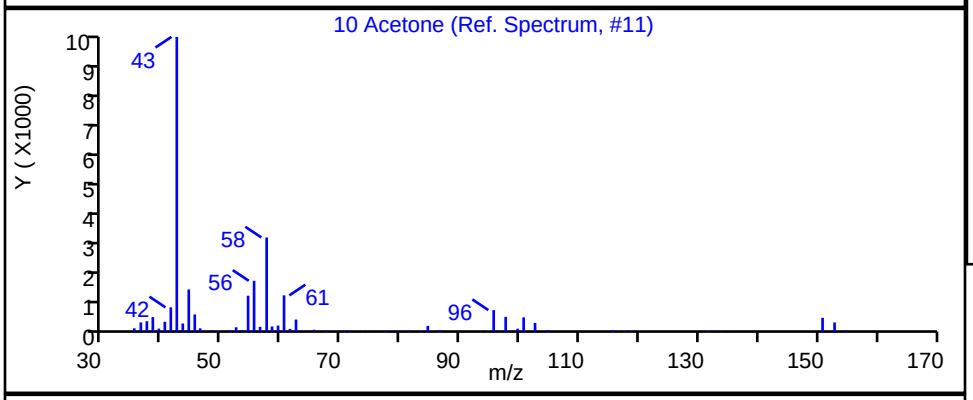
10 Acetone

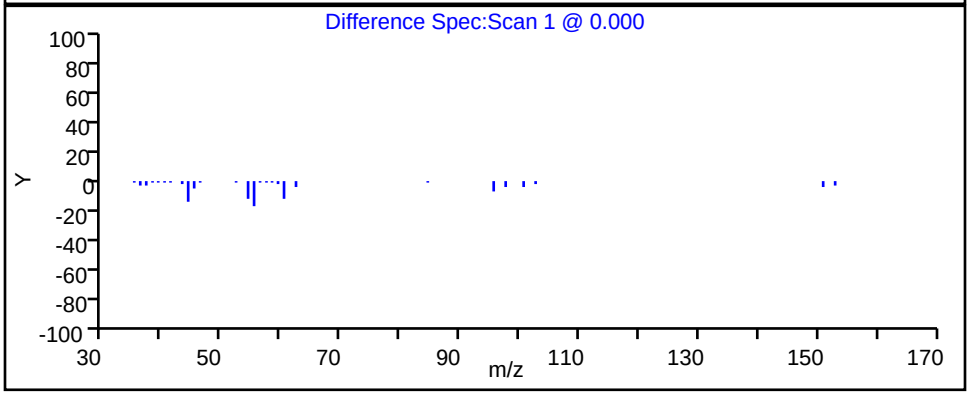










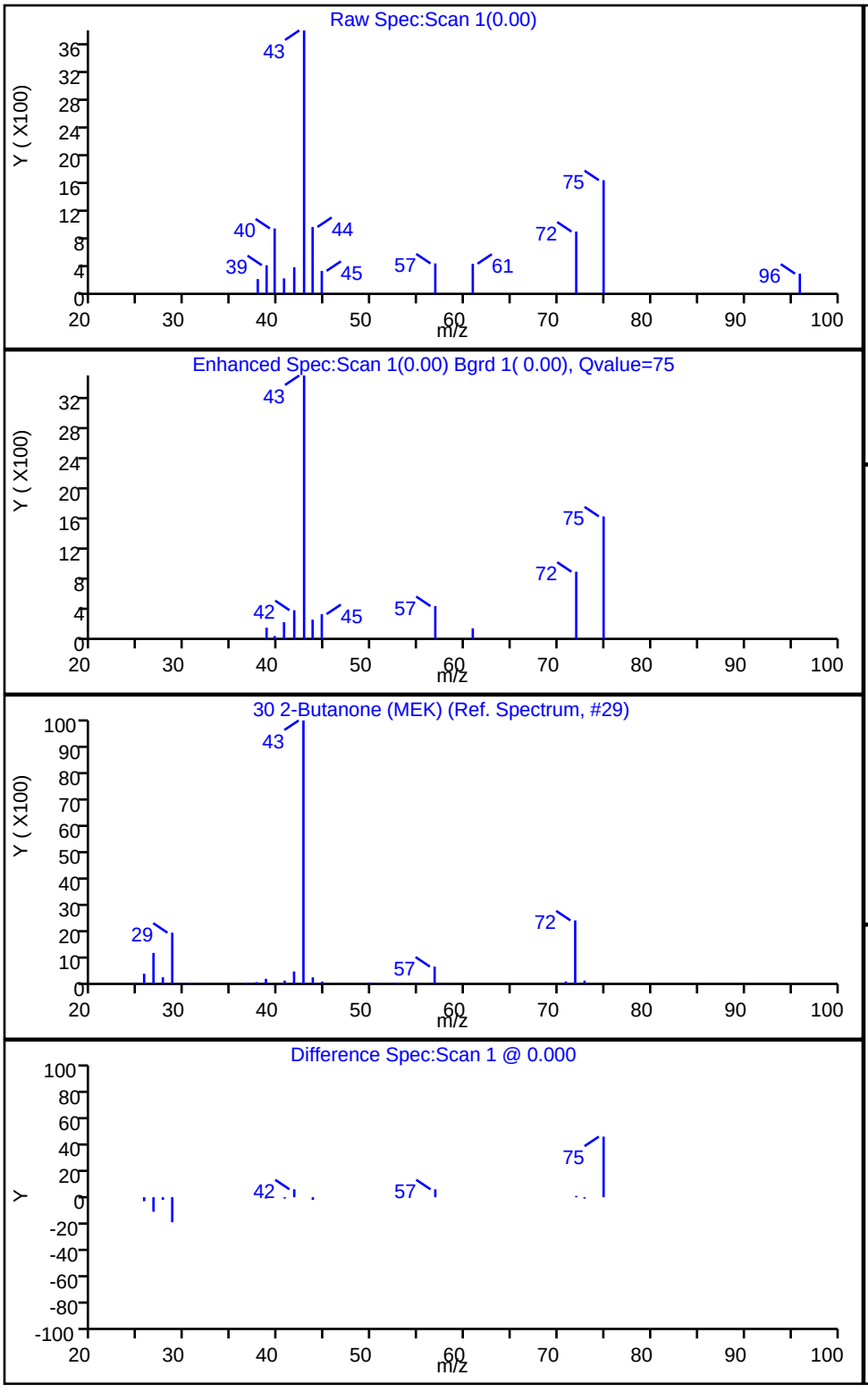


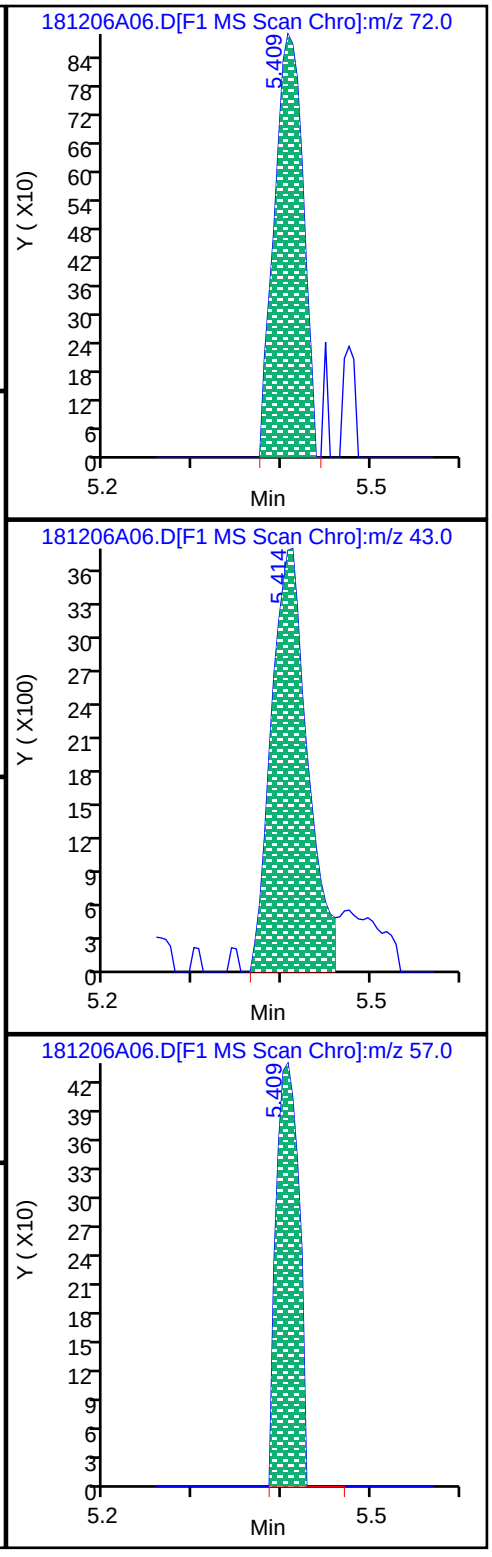
Report Date: 06-Dec-2019 14:13:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A06.D		
Injection Date:	06-Dec-2019 11:38:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

30 2-Butanone (MEK)





Report Date: 06-Dec-2019 14:13:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

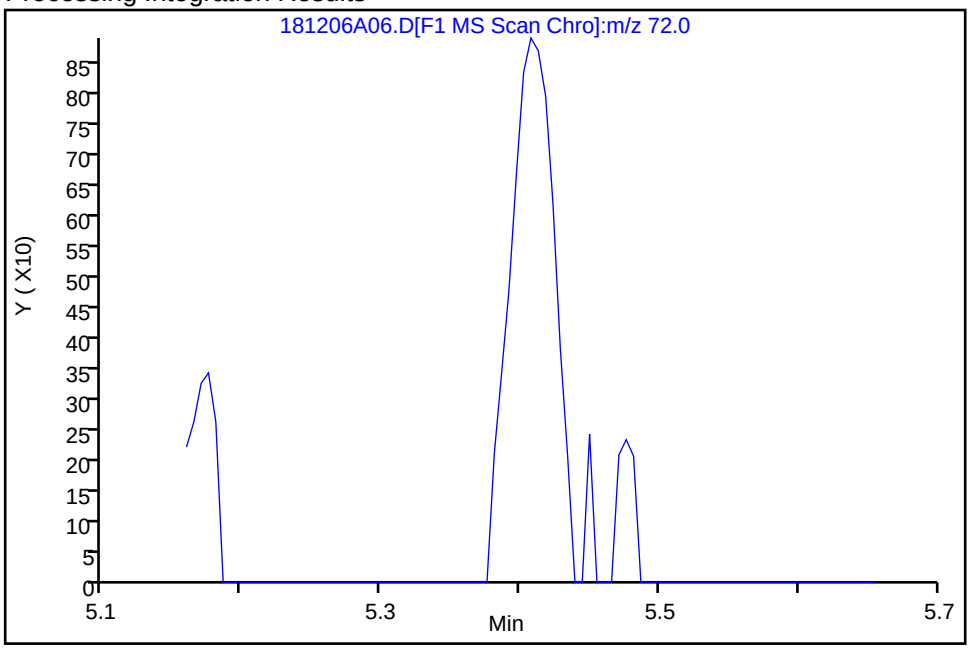
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A06.D		
Injection Date:	06-Dec-2019 11:38:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

30 2-Butanone (MEK), CAS: 78-93-3

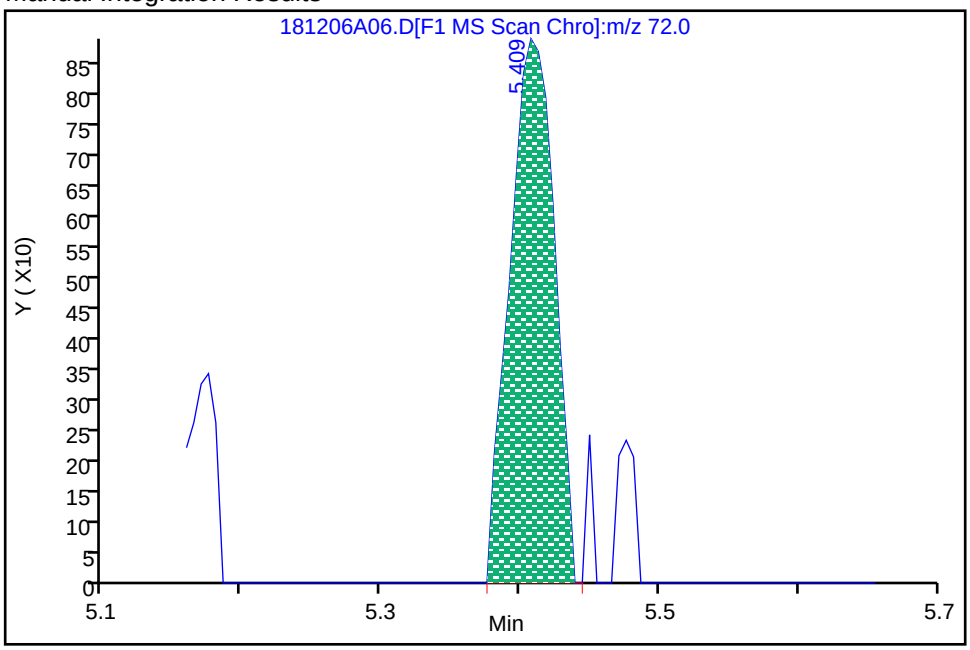
Not Detected
Expected RT: 5.398
RT Window: 5.030-5.766

Processing Integration Results



Manual Integration Results

RT: 5.409
Area: 1978
Conc: 8.1706
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 14:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:13:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

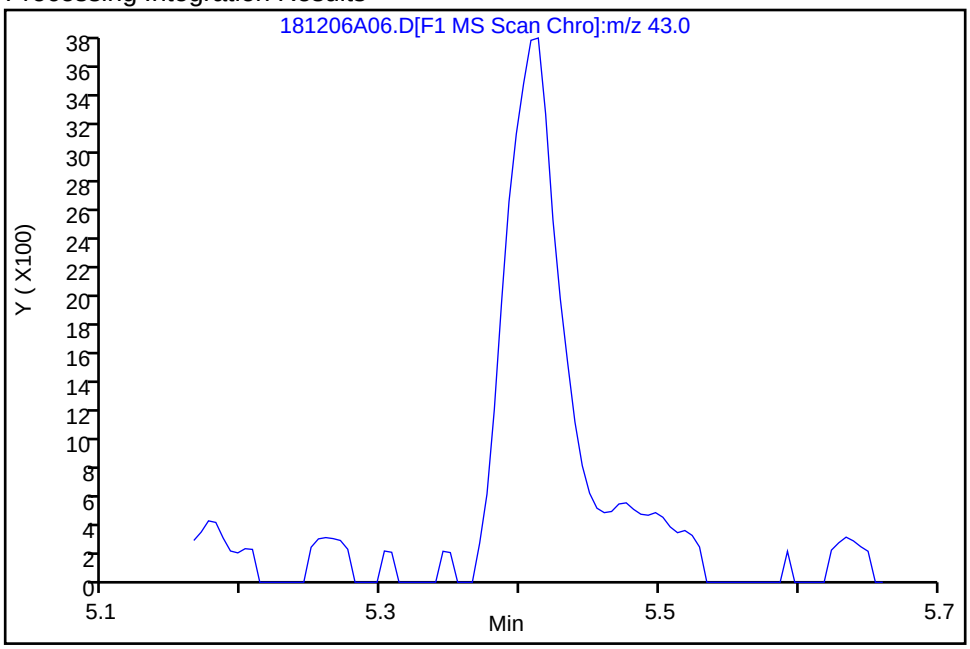
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A06.D		
Injection Date:	06-Dec-2019 11:38:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

30 2-Butanone (MEK), CAS: 78-93-3

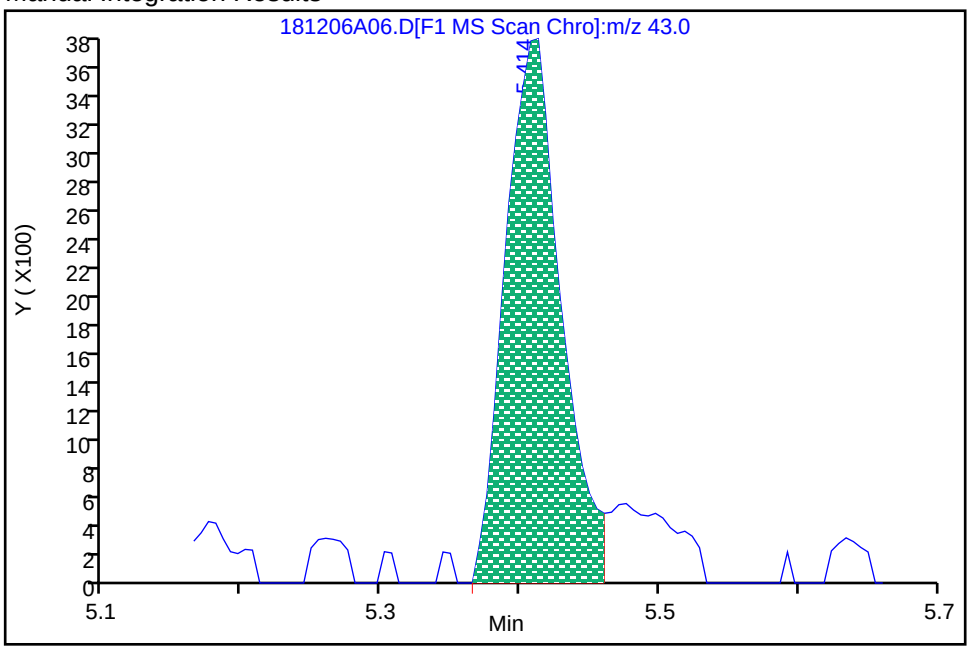
Not Detected
Expected RT: 5.398
RT Window: 5.030-5.766

Processing Integration Results



Manual Integration Results

RT: 5.414
Area: 10560
Conc: 8.1706
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 14:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1120	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-007
Description: MPGI-FB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019 0840
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1120	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A08.D
Lab Sample ID: UL04032-007 Client Sample ID: MPG1-FB-120319
Injection Date: 05-Dec-2019 11:20:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120519, UL04032-007
Misc. Info: XSNJ02
Method: \\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m
Method Date: 06-Dec-2019 10:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Client ALS Bottle: 8
Cpnd Sublist: sample.sb
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2970135	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4175930	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.851	10.851	0.000	3329673	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1133217	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0	3.149	3.133	0.016	32054	3.3364	3.3364	e
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1309779	48.982	48.982	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	4060576	51.899	51.899	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.001	1174128	52.447	52.447	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

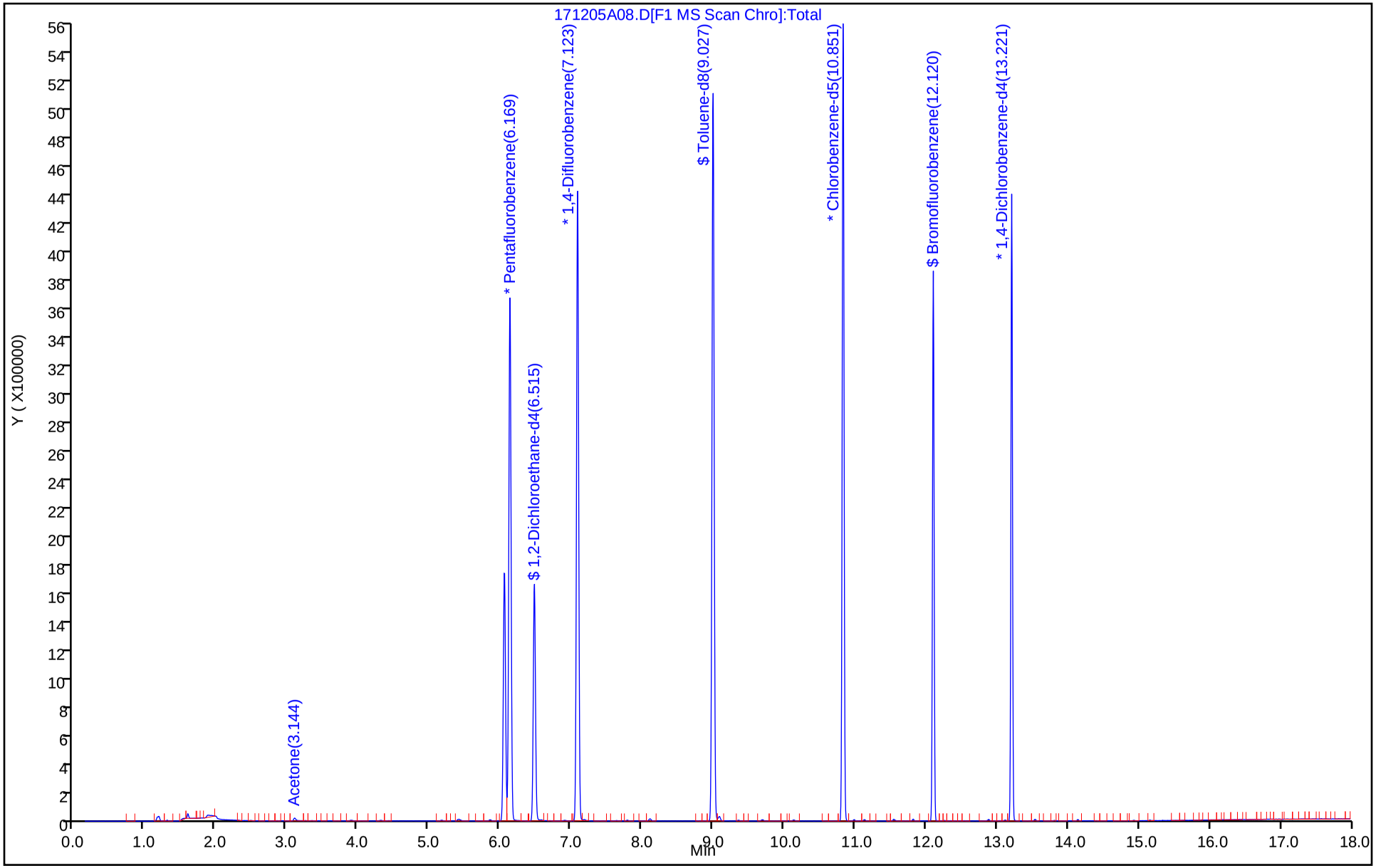
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Review Flags

Report Date: 06-Dec-2019 10:05:57 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A08.D				
Injection Date:	05-Dec-2019 11:20:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-FB-120319	Lab ID:	UL04032-007		
Sample Info:	17120519, UL04032-007				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

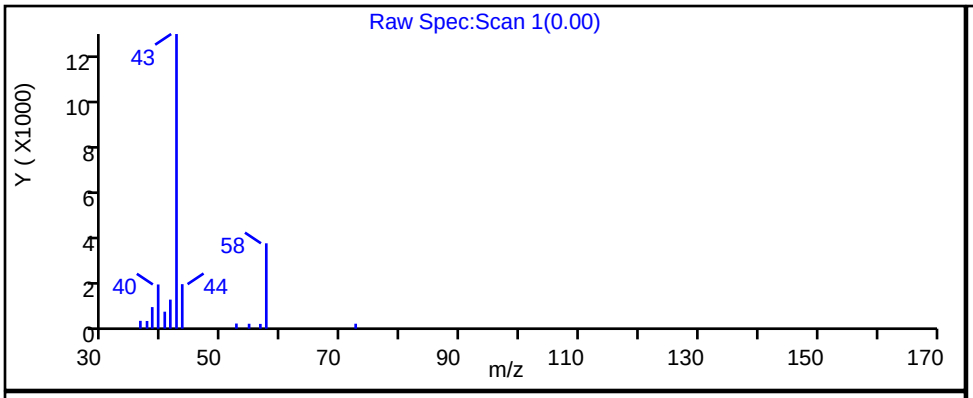


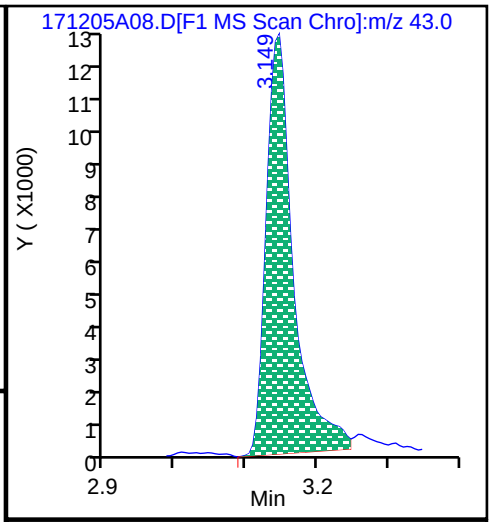
Report Date: 06-Dec-2019 10:05:57 AIM Revision: 1.0 11-Sep-2019 14:31:36

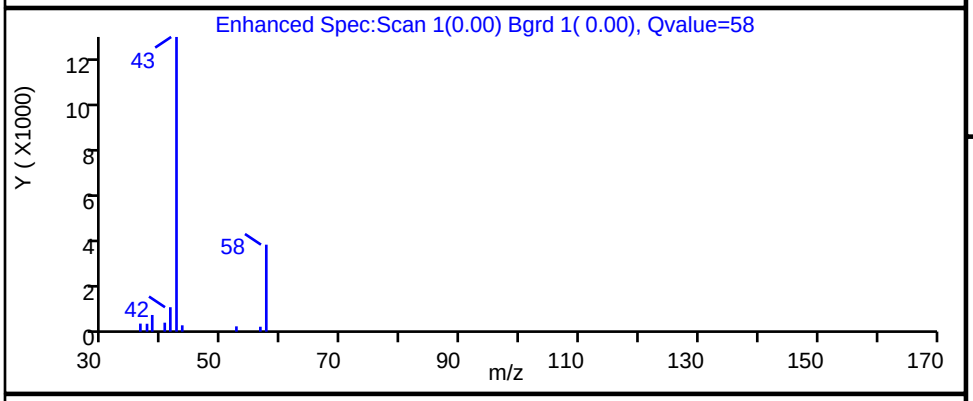
Shealy Environmental Services

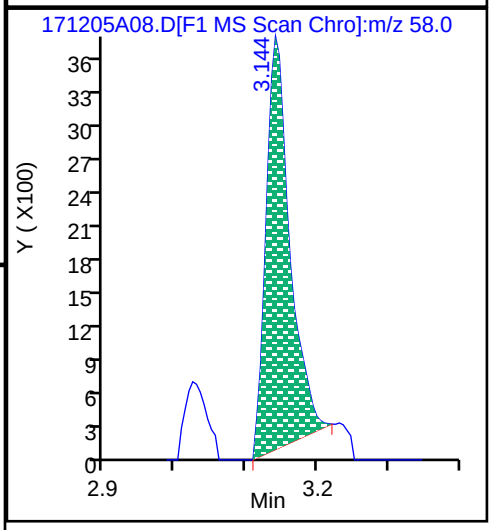
Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A08.D		
Injection Date:	05-Dec-2019 11:20:30	Inst. ID:	msd17.i
Client ID:	MPG1-FB-120319	Lab ID:	UL04032-007
Sample Info:	17120519, UL04032-007		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

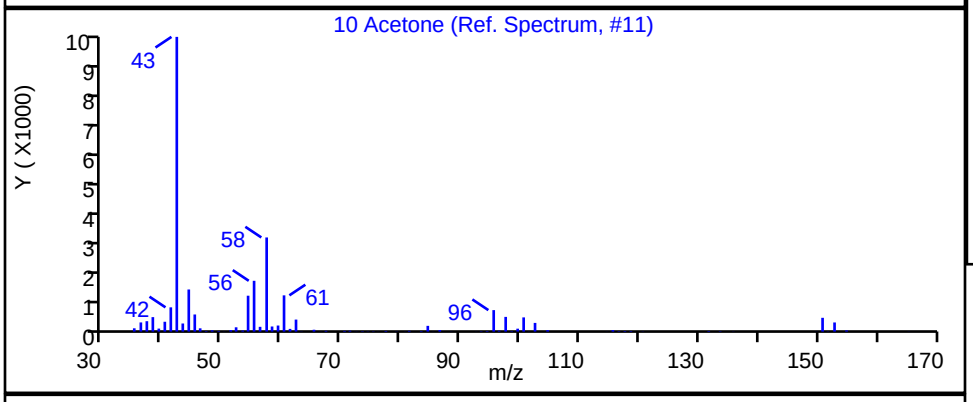
10 Acetone

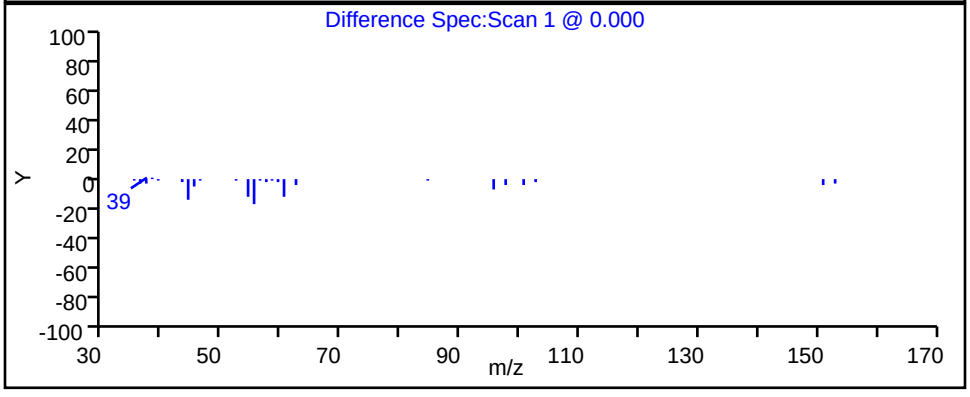












Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-008
Description: MPGI-TB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1144	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Acetone	67-64-1	8260B	ND		20	5.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.50	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.60	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Volatile Organic Compounds by GC/MS

Client: Tetra Tech, Inc.
Laboratory ID: UL04032-008
Description: MPGI-TB-120319
Matrix: Aqueous
Date Sampled: 12/03/2019
Date Received: 12/04/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/05/2019 1144	TML		38003

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A09.D		
Lab Sample ID:	UL04032-008	Client Sample ID:	MPG1-TB-120319
Injection Date:	05-Dec-2019 11:44:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, UL04032-008		
Misc. Info:	XSNK02		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	Client	ALS Bottle:	9
Cpnd Sublist:	sample.sb		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 10:04:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	2965933	50.000	50.000	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4164405	50.000	50.000	
* 76 Chlorobenzene-d5	117.0	10.851	10.851	0.000	3301695	50.000	50.000	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.001	1109346	50.000	50.000	
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
10 Acetone	43.0		3.133		ND			
14 Carbon disulfide	76.0		3.301		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			
37 Chloroform	83.0		5.891		ND			
40 1,1,1-Trichloroethane	97.0		6.064		ND			
42 Cyclohexane	41.0		6.132		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1331889	49.947	49.947	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
48 Benzene	78.0		6.526		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
59 Bromodichloromethane	83.0		8.104		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.027	9.026	0.000	4066186	52.411	52.411	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
77 Chlorobenzene	112.0		10.888		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.001	1161416	52.318	52.318	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
101 1,4-Dichlorobenzene	146.0		13.247		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
S 110 Xylenes (total)	106.0				ND			

Compound Type Legend

* - ISTD
$ - Surrogate
S - Summary

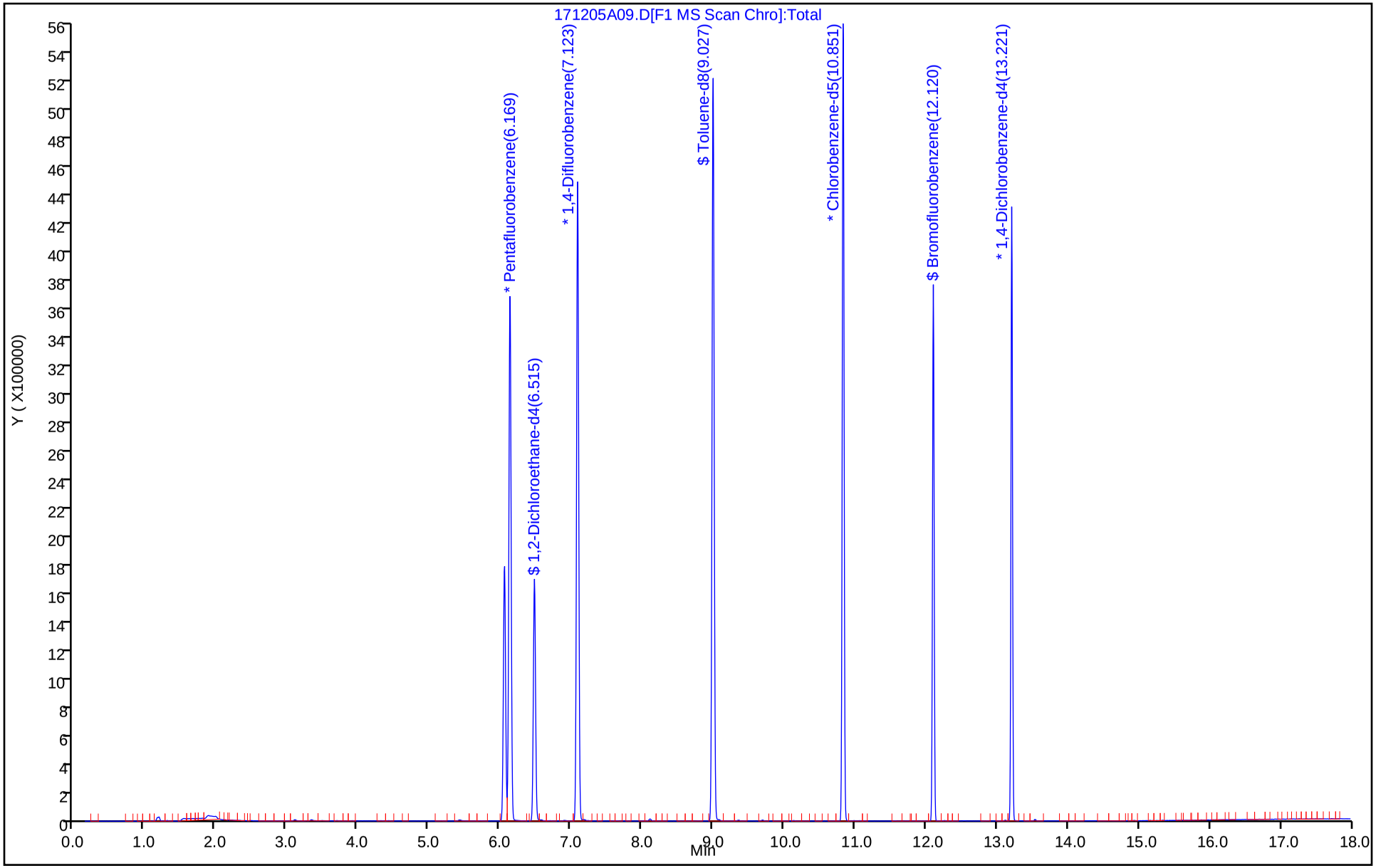
QC Flag Legend

Processing Flags
Review Flags

Report Date: 06-Dec-2019 10:05:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A09.D				
Injection Date:	05-Dec-2019 11:44:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	MPG1-TB-120319	Lab ID:	UL04032-008		
Sample Info:	17120519, UL04032-008				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



CALIBRATION DATA

Shealy Environmental Services
Form 6

Batch: \\Organics\DD\chem\msd17.i\17120219B.b
Method: 8260B-17.M Instrument: msd17
Cal Start Date: 03-Dec-2019 01:21:30 Cal End Date: 03-Dec-2019 03:43:30
Last Modified: 04-Dec-2019 13:02:30
No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
S 111 1,2-Dichloroethene (to	0.348905	0.344426	0.376708	0.354733	0.360772	0.347498	0.351603		0.354949	Avg	3.1		
	-1.7	-3	6.1	-0.1	1.6	-2.1	-0.9						
1 Dichlorodifluoromethan	0.182080	0.163507	0.198433	0.171361	0.200969	0.179256	0.183017		0.182660	Avg	7.4		
	-0.3	-10.5	8.6	-6.2	10	-1.9	0.2						
2 Chloromethane	0.157387	0.151149	0.165687	0.152288	0.156657	0.145377	0.147774		0.153760	Avg	4.4		
	2.4	-1.7	7.8	-1	1.9	-5.5	-3.9						
3 Vinyl chloride	0.185375	0.162658	0.193190	0.184366	0.186640	0.173630	0.178035		0.180556	Avg	5.6		
	2.7	-9.9	7	2.1	3.4	-3.8	-1.4						
4 Bromomethane	0.169140	0.175567	0.183802	0.175948	0.178398	0.164080	0.162817		0.172822	Avg	4.5		
	-2.1	1.6	6.4	1.8	3.2	-5.1	-5.8						
5 Chloroethane	0.123969	0.125586	0.135176	0.128882	0.130420	0.123386	0.129622		0.128149	Avg	3.2		
	-3.3	-2	5.5	0.6	1.8	-3.7	1.1						
6 Trichlorofluoromethane	0.375409	0.365114	0.429969	0.392189	0.407030	0.373231	0.376502		0.388492	Avg	5.9		
	-3.4	-6	10.7	1	4.8	-3.9	-3.1						
8 Ethyl ether	0.263282	0.245916	0.277805	0.258557	0.269290	0.253005	0.255721		0.260511	Avg	4.1		
	1.1	-5.6	6.6	-0.8	3.4	-2.9	-1.8						
9 Acrolein	0.068457	0.065745	0.077645	0.077481	0.082978	0.072642	0.069212		0.073452	Avg	8.4		
	-6.8	-10.5	5.7	5.5	13	-1.1	-5.8						
11 1,1-Dichloroethene	0.231110	0.207682	0.250151	0.232469	0.232722	0.211576	0.215113		0.225832	Avg	6.7		
	2.3	-8	10.8	2.9	3.1	-6.3	-4.7						
12 Freon 113	0.214460	0.201071	0.241300	0.222626	0.228202	0.218463	0.231745		0.222552	Avg	5.8		
	-3.6	-9.7	8.4	0	2.5	-1.8	4.1						
10 Acetone	0.197647	0.169574	0.165885	0.151656	0.160749	0.145411	0.141216		0.161734	Avg	11.7		
	22.2	4.8	2.6	-6.2	-0.6	-10.1	-12.7						
13 Methyl iodide	0.448508	0.456977	0.527095	0.498816	0.501769	0.443561	0.449476		0.475172	Avg	7.0		
	-5.6	-3.8	10.9	5	5.6	-6.7	-5.4						
14 Carbon disulfide	0.661810	0.652405	0.781520	0.743652	0.754035	0.673612	0.676101		0.706162	Avg	7.4		
	-6.3	-7.6	10.7	5.3	6.8	-4.6	-4.3						
15 Acetonitrile		0.022461	0.025844	0.023834	0.023577	0.020905	0.021057		0.022946	Avg	8.2		
		-2.1	12.6	3.9	2.7	-8.9	-8.2						
17 Allyl chloride	0.129489	0.122772	0.150856	0.147888	0.150264	0.145416	0.150648		0.142476	Avg	8.1		
	-9.1	-13.8	5.9	3.8	5.5	2.1	5.7						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
16 Methyl Acetate	0.414080	0.393194	0.437419	0.410054	0.431970	0.403292	0.392081		0.411727	Avg	4.3		
	0.6	-4.5	6.2	-0.4	4.9	-2	-4.8						
18 Methylene chloride	0.310827	0.296195	0.314325	0.294815	0.301306	0.262794	0.266155		0.292345	Avg	7.0		
	6.3	1.3	7.5	0.8	3.1	-10.1	-9						
20 Acrylonitrile	0.202232	0.181150	0.203196	0.189258	0.204665	0.185285	0.182953		0.192677	Avg	5.4		
	5	-6	5.5	-1.8	6.2	-3.8	-5						
21 trans-1,2-Dichloroethe	0.314804	0.315624	0.345530	0.326074	0.330720	0.320620	0.325334		0.325529	Avg	3.2		
	-3.3	-3	6.1	0.2	1.6	-1.5	-0.1						
22 tert-Butyl methyl ethe	0.854249	0.790408	0.889280	0.821399	0.859886	0.760656	0.740875		0.816679	Avg	6.7		
	4.6	-3.2	8.9	0.6	5.3	-6.9	-9.3						
23 Hexane	0.446727	0.404762	0.471677	0.430184	0.423037	0.426419	0.430523		0.433333	Avg	4.8		
	3.1	-6.6	8.8	-0.7	-2.4	-1.6	-0.6						
24 1,1-Dichloroethane	0.530719	0.520909	0.596922	0.553513	0.559061	0.536573	0.531062		0.546966	Avg	4.7		
	-3	-4.8	9.1	1.2	2.2	-1.9	-2.9						
25 Vinyl acetate	0.080756	0.075604	0.099662	0.098942	0.101822	0.098884	0.099759		0.093633	Avg	11.4		
	-13.8	-19.3	6.4	5.7	8.7	5.6	6.5						
26 Diisopropyl ether (IPE	0.281890	0.270556	0.281631	0.281709	0.284166	0.274581	0.272126		0.278094	Avg	2.0		
	1.4	-2.7	1.3	1.3	2.2	-1.3	-2.1						
27 Chloroprene	0.392059	0.377844	0.476404	0.433738	0.437997	0.422306	0.421369		0.423102	Avg	7.6		
	-7.3	-10.7	12.6	2.5	3.5	-0.2	-0.4						
31 2,2-Dichloropropane	0.374637	0.365099	0.389438	0.363313	0.355678	0.328164	0.321745		0.356868	Avg	6.8		
	5	2.3	9.1	1.8	-0.3	-8	-9.8						
29 cis-1,2-Dichloroethene	0.383007	0.373228	0.407886	0.383392	0.390825	0.374375	0.377873		0.384369	Avg	3.1		
	-0.4	-2.9	6.1	-0.3	1.7	-2.6	-1.7						
30 2-Butanone (MEK)	0.102036	0.090002	0.091660	0.092452	0.091086	0.088691	0.083595		0.091360	Avg	6.1		
	11.7	-1.5	0.3	1.2	-0.3	-2.9	-8.5						
33 Ethyl Acetate	0.636524	0.630564	0.642459	0.621994	0.598745	0.590411	0.548191		0.609841	Avg	5.5		
	4.4	3.4	5.3	2	-1.8	-3.2	-10.1						
32 Propionitrile	0.087214	0.073566	0.086670	0.078264	0.080762	0.075752	0.068775		0.078715	Avg	8.6		
	10.8	-6.5	10.1	-0.6	2.6	-3.8	-12.6						
34 Methacrylonitrile	0.228273	0.231218	0.236064	0.227677	0.229407	0.216811	0.199574		0.224146	Avg	5.5		
	1.8	3.2	5.3	1.6	2.3	-3.3	-11						
35 Bromochloromethane	0.206832	0.207890	0.228139	0.214738	0.222511	0.211665	0.215103		0.215268	Avg	3.6		
	-3.9	-3.4	6	-0.2	3.4	-1.7	-0.1						
36 Tetrahydrofuran	0.295305	0.257425	0.257968	0.248203	0.247225	0.232456	0.218670		0.251036	Avg	9.6		
	17.6	2.5	2.8	-1.1	-1.5	-7.4	-12.9						
37 Chloroform	0.606489	0.585793	0.644884	0.611842	0.612534	0.586699	0.580431		0.604096	Avg	3.7		
	0.4	-3	6.8	1.3	1.4	-2.9	-3.9						
40 1,1,1-Trichloroethane	0.502880	0.482407	0.551508	0.530542	0.527653	0.516104	0.507779		0.516982	Avg	4.3		
	-2.7	-6.7	6.7	2.6	2.1	-0.2	-1.8						
$ 39 dibromofluoromethane	0.437467	0.382430	0.398440	0.387295	0.394141	0.374159	0.374324		0.392608	Avg	5.6		
	11.4	-2.6	1.5	-1.4	0.4	-4.7	-4.7						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
42 Cyclohexane	0.237817	0.223940	0.258659	0.232059	0.230997	0.219196	0.216450		0.231303	Avg	6.1		
	2.8	-3.2	11.8	0.3	-0.1	-5.2	-6.4						
44 Carbon tetrachloride	0.452455	0.427051	0.510733	0.489294	0.500220	0.493353	0.493155		0.480894	Avg	6.2		
	-5.9	-11.2	6.2	1.7	4	2.6	2.5						
43 1,1-Dichloropropene	0.431413	0.406638	0.478342	0.446119	0.446205	0.436182	0.433998		0.439843	Avg	4.9		
	-1.9	-7.5	8.8	1.4	1.4	-0.8	-1.3						
$ 46 1,2-Dichloroethane-d4	0.380321	0.331253	0.316853	0.310394	0.310845	0.298858	0.292637		0.320166	Avg	9.1		
	18.8	3.5	-1	-3.1	-2.9	-6.7	-8.6						
45 Isobutyl alcohol	0.013703	0.017086	0.019529	0.018401	0.017895	0.016845	0.014935		0.016913	Avg	11.9		
	-19	1	15.5	8.8	5.8	-0.4	-11.7						
48 Benzene	0.907069	0.875401	0.978875	0.940810	0.917794	0.905055	0.852740		0.911106	Avg	4.5		
	-0.4	-3.9	7.4	3.3	0.7	-0.7	-6.4						
50 1,2-Dichloroethane	0.361015	0.341031	0.380906	0.355305	0.355539	0.346938	0.337893		0.354089	Avg	4.1		
	2	-3.7	7.6	0.3	0.4	-2	-4.6						
49 Isopropyl Acetate	0.582705	0.601652	0.606663	0.619308	0.597399	0.616469	0.584759		0.601279	Avg	2.4		
	-3.1	0.1	0.9	3	-0.6	2.5	-2.7						
53 Trichloroethene	0.287038	0.277056	0.314728	0.307296	0.302764	0.305549	0.303757		0.299741	Avg	4.3		
	-4.2	-7.6	5	2.5	1	1.9	1.3						
54 Methylcyclohexane	0.363085	0.352736	0.408730	0.375832	0.379373	0.378899	0.377898		0.376650	Avg	4.6		
	-3.6	-6.3	8.5	-0.2	0.7	0.6	0.3						
55 1,2-Dichloropropane	0.232106	0.223153	0.232964	0.231793	0.220466	0.223925	0.216551		0.225851	Avg	2.9		
	2.8	-1.2	3.1	2.6	-2.4	-0.9	-4.1						
58 1,4-Dioxane	0.003003	0.003423	0.003520	0.003181	0.002911	0.002834	0.002549		0.003060	Avg	11.1		
	-1.9	11.9	15	3.9	-4.9	-7.4	-16.7						
56 Dibromomethane	0.180529	0.173521	0.187731	0.180753	0.182089	0.179295	0.175606		0.179932	Avg	2.6		
	0.3	-3.6	4.3	0.5	1.2	-0.4	-2.4						
57 Methyl methacrylate	0.273790	0.294596	0.298801	0.311363	0.295348	0.302281	0.282206		0.294055	Avg	4.3		
	-6.9	0.2	1.6	5.9	0.4	2.8	-4						
59 Bromodichloromethane	0.303664	0.291443	0.329366	0.328385	0.331030	0.329938	0.324256		0.319726	Avg	4.9		
	-5	-8.8	3	2.7	3.5	3.2	1.4						
60 2-nitropropane	0.146624	0.147495	0.147905	0.153389	0.151123	0.157018	0.148109		0.150238	Avg	2.5		
	-2.4	-1.8	-1.6	2.1	0.6	4.5	-1.4						
61 2-Chloroethylvinyl eth	0.175234	0.192518	0.204955	0.214668	0.205873	0.209417	0.200523		0.200456	Avg	6.5		
	-12.6	-4	2.2	7.1	2.7	4.5	0						
62 cis-1,3-Dichloropropen	0.325672	0.343319	0.387695	0.390247	0.390579	0.385483	0.372574		0.370796	Avg	7.0		
	-12.2	-7.4	4.6	5.2	5.3	4	0.5						
63 4-Methyl-2-pentanone	0.382565	0.402943	0.418045	0.429906	0.401944	0.396534	0.343758		0.396528	Avg	7.0		
	-3.5	1.6	5.4	8.4	1.4	0	-13.3						
$ 64 Toluene-d8	1.418450	1.173283	1.189035	1.155627	1.091233	1.135156	1.061449		1.174890	Avg	9.9		
	20.7	-0.1	1.2	-1.6	-7.1	-3.4	-9.7						
65 Toluene	0.776751	0.727450	0.793470	0.765171	0.729050	0.778974	0.748645		0.759930	Avg	3.4		
	2.2	-4.3	4.4	0.7	-4.1	2.5	-1.5						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
66 trans-1,3-Dichloroprop	0.393677	0.390131	0.434432	0.450698	0.453611	0.477961	0.474066		0.439225	Avg	8.1		
	-10.4	-11.2	-1.1	2.6	3.3	8.8	7.9						
67 Ethyl methacrylate	0.457518	0.450427	0.477998	0.498319	0.476732	0.523376	0.495047		0.482774	Avg	5.2		
	-5.2	-6.7	-1	3.2	-1.3	8.4	2.5						
68 1,1,2-Trichloroethane	0.313252	0.302964	0.322639	0.308396	0.299043	0.312435	0.304020		0.308964	Avg	2.6		
	1.4	-1.9	4.4	-0.2	-3.2	1.1	-1.6						
69 Tetrachloroethene	0.322012	0.286776	0.325817	0.306379	0.294776	0.315210	0.315036		0.309429	Avg	4.6		
	4.1	-7.3	5.3	-1	-4.7	1.9	1.8						
70 1,3-Dichloropropane	0.505937	0.492751	0.496990	0.484294	0.468766	0.482297	0.462137		0.484739	Avg	3.2		
	4.4	1.7	2.5	-0.1	-3.3	-0.5	-4.7						
71 2-Hexanone	0.444081	0.424291	0.437223	0.465247	0.421640	0.450504	0.402919		0.435129	Avg	4.8		
	2.1	-2.5	0.5	6.9	-3.1	3.5	-7.4						
72 Dibromochloromethane	0.301459	0.294137	0.337686	0.346324	0.356076	0.371630	0.368612		0.339418	Avg	9.1		
	-11.2	-13.3	-0.5	2	4.9	9.5	8.6						
73 n-Butyl acetate	0.618169	0.614701	0.652578	0.687419	0.635253	0.680469	0.624252		0.644691	Avg	4.6		
	-4.1	-4.7	1.2	6.6	-1.5	5.5	-3.2						
75 1,2-Dibromoethane (EDB	0.312316	0.316219	0.345332	0.340245	0.341264	0.347822	0.337441		0.334377	Avg	4.2		
	-6.6	-5.4	3.3	1.8	2.1	4	0.9						
77 Chlorobenzene	0.789707	0.782627	0.853351	0.834325	0.809128	0.806610	0.755953		0.804529	Avg	4.0		
	-1.8	-2.7	6.1	3.7	0.6	0.3	-6						
78 1,1,1,2-Tetrachloroeth	0.282721	0.263186	0.299143	0.295046	0.294159	0.307076	0.288692		0.290003	Avg	4.9		
	-2.5	-9.2	3.2	1.7	1.4	5.9	-0.5						
79 Ethylbenzene	0.424889	0.380279	0.453660	0.439059	0.428500	0.436501	0.418648		0.425934	Avg	5.4		
	-0.2	-10.7	6.5	3.1	0.6	2.5	-1.7						
80 m+p-Xylenes	0.480112	0.466034	0.547320	0.529247	0.515352	0.521430	0.498231		0.508247	Avg	5.6		
	-5.5	-8.3	7.7	4.1	1.4	2.6	-2						
81 o-Xylene	0.435576	0.408878	0.489563	0.470720	0.461651	0.459132	0.430166		0.450812	Avg	6.1		
	-3.4	-9.3	8.6	4.4	2.4	1.8	-4.6						
82 Styrene	0.726631	0.646745	0.807601	0.816022	0.815018	0.787760	0.735309		0.762155	Avg	8.2		
	-4.7	-15.1	6	7.1	6.9	3.4	-3.5						
83 Bromoform	0.168901	0.166335	0.203930	0.222687	0.243618	0.249342	0.252511	0.005492	0.249436	WLn	12.7	0.999	
	22.6	-5.9	-12.8	-9.4	-1.8	0.2	1.4						
84 Isopropylbenzene	1.090230	1.043918	1.244328	1.178186	1.140387	1.081223	0.930492		1.101252	Avg	9.1		
	-1	-5.2	13	7	3.6	-1.8	-15.5						
85 Cyclohexanone	0.015359	0.012349	0.013086	0.012057	0.012535	0.011740	0.010538		0.012523	Avg	11.8		
	22.6	-1.4	4.5	-3.7	0.1	-6.3	-15.9						
$ 86 Bromofluorobenzene		0.340238	0.358897	0.335252	0.342641	0.326282	0.313743		0.336176	Avg	4.6		
		1.2	6.8	-0.3	1.9	-2.9	-6.7						
87 Bromobenzene	0.827625	0.865691	0.934687	0.923985	0.899828	0.905685	0.857383		0.887841	Avg	4.4		
	-6.8	-2.5	5.3	4.1	1.4	2	-3.4						
88 1,1,2,2-Tetrachloroeth	0.874755	0.898987	0.945908	0.928545	0.910112	0.911385	0.862171		0.904552	Avg	3.2		
	-3.3	-0.6	4.6	2.7	0.6	0.8	-4.7						

Report Date: 04-Dec-2019 13:04:30 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
90 trans-1,4-Dichloro-2-b	0.216205	0.163433	0.213289	0.241376	0.260254	0.263059	0.266720	0.005254	0.263948	WLn	17.7	0.999	
	*34.5	-11.8	-13.9	-7.2	-0.9	-0.1	1.2						
89 1,2,3-Trichloropropane	0.353435	0.376027	0.380715	0.374192	0.369028	0.363043	0.345573		0.366002	Avg	3.5		
	-3.4	2.7	4	2.2	0.8	-0.8	-5.6						
91 n-Propylbenzene	3.430659	3.350524	3.910638	3.742862	3.476054	3.324676	2.807457		3.434696	Avg	10.2		
	-0.1	-2.5	13.9	9	1.2	-3.2	-18.3						
92 2-Chlorotoluene	1.966224	1.981376	2.131141	2.054172	1.942389	1.933796	1.744391		1.964784	Avg	6.1		
	0.1	0.8	8.5	4.5	-1.1	-1.6	-11.2						
93 1,3,5-Trimethylbenzene	2.014883	2.023134	2.393756	2.255680	2.129561	2.098897	1.845996		2.108844	Avg	8.4		
	-4.5	-4.1	13.5	7	1	-0.5	-12.5						
94 4-Chlorotoluene	0.703472	0.672432	0.787585	0.774441	0.751139	0.749439	0.715607		0.736302	Avg	5.6		
	-4.5	-8.7	7	5.2	2	1.8	-2.8						
95 tert-Butylbenzene	1.978792	2.024784	2.250081	2.096244	1.958702	1.907943	1.667304		1.983407	Avg	9.0		
	-0.2	2.1	13.4	5.7	-1.2	-3.8	-15.9						
96 1,2,4-Trimethylbenzene	1.962658	1.887200	2.210207	2.160878	2.036149	2.023435	1.801187		2.011674	Avg	7.2		
	-2.4	-6.2	9.9	7.4	1.2	0.6	-10.5						
97 sec-Butylbenzene	2.696022	2.697511	3.029038	2.858702	2.673445	2.602390	2.235851		2.684709	Avg	9.1		
	0.4	0.5	12.8	6.5	-0.4	-3.1	-16.7						
98 1,3-Dichlorobenzene	1.213414	1.279964	1.326988	1.300233	1.253791	1.297830	1.230272		1.271785	Avg	3.2		
	-4.6	0.6	4.3	2.2	-1.4	2	-3.3						
99 p-Isopropyltoluene	2.100906	2.016872	2.338640	2.265011	2.132998	2.128301	1.872750		2.122211	Avg	7.2		
	-1	-5	10.2	6.7	0.5	0.3	-11.8						
101 1,4-Dichlorobenzene	1.228614	1.234357	1.286456	1.299119	1.242172	1.280203	1.218256		1.255597	Avg	2.6		
	-2.1	-1.7	2.5	3.5	-1.1	2	-3						
102 Benzyl chloride	1.121616	1.098508	1.225598	1.365233	1.403763	1.447984	1.388747		1.293064	Avg	11.0		
	-13.3	-15	-5.2	5.6	8.6	12	7.4						
103 n-Butylbenzene	1.626462	1.550096	1.829436	1.811316	1.740555	1.768913	1.613203		1.705712	Avg	6.4		
	-4.6	-9.1	7.3	6.2	2	3.7	-5.4						
104 1,2-Dichlorobenzene	1.105141	1.123639	1.165779	1.151625	1.104142	1.160090	1.118093		1.132644	Avg	2.3		
	-2.4	-0.8	2.9	1.7	-2.5	2.4	-1.3						
105 1,2-Dibromo-3-chloropr	0.188521	0.173417	0.178704	0.186170	0.187590	0.204838	0.208063		0.189615	Avg	6.7		
	-0.6	-8.5	-5.8	-1.8	-1.1	8	9.7						
106 1,2,4-Trichlorobenzene	0.709756	0.656736	0.685283	0.687728	0.674958	0.753731	0.742287		0.701497	Avg	5.1		
	1.2	-6.4	-2.3	-2	-3.8	7.4	5.8						
107 Hexachlorobutadiene	0.329402	0.325174	0.350128	0.339560	0.329385	0.360049	0.351833		0.340790	Avg	3.9		
	-3.3	-4.6	2.7	-0.4	-3.3	5.7	3.2						
108 Naphthalene	1.891750	1.785367	1.993262	2.042152	2.006928	2.166658	2.058026		1.992020	Avg	6.2		
	-5	-10.4	0.1	2.5	0.7	8.8	3.3						
109 1,2,3-Trichlorobenzene	0.636301	0.632578	0.641761	0.638948	0.632729	0.706914	0.686783		0.653716	Avg	4.6		
	-2.7	-3.2	-1.8	-2.3	-3.2	8.1	5.1						
S 110 Xylenes (total)	0.457844	0.437456	0.518442	0.499984	0.488501	0.490281	0.464198		0.479530	Avg	5.8		
	-4.5	-8.8	8.1	4.3	1.9	2.2	-3.2						

Shealy Environmental Services
Initial Calibration RT Report

Batch:	\\Organics\DD\chem\msd17.i\17120219B.b		
Method:	8260B-17.M	Instrument:	msd17
Cal Start Date:	03-Dec-2019 01:21:30	Cal End Date:	03-Dec-2019 03:43:30
Last Modified:	04-Dec-2019 13:02:30		
No.Compounds:	112	Integrator:	falcon
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
S 111 1,2-Dichloroethene (to	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	
1 Dichlorodifluoromethan	1.398	1.398	1.398	1.398	1.398	1.398	1.398	1.398	0.008	
2 Chloromethane	1.576	1.576	1.576	1.576	1.576	1.576	1.576	1.576	0.007	
3 Vinyl chloride	1.697	1.692	1.697	1.692	1.697	1.691	1.697	1.694	0.159	
4 Bromomethane	2.032	2.027	2.027	2.027	2.027	2.027	2.027	2.028	0.095	
5 Chloroethane	2.147	2.148	2.147	2.148	2.148	2.148	2.142	2.147	0.093	
6 Trichlorofluoromethane	2.436	2.426	2.431	2.431	2.431	2.431	2.431	2.431	0.121	
8 Ethyl ether	2.787	2.782	2.782	2.782	2.782	2.782	2.782	2.783	0.069	
9 Acrolein	2.960	2.960	2.955	2.955	2.955	2.955	2.955	2.956	0.087	
11 1,1-Dichloroethene	3.070	3.065	3.065	3.065	3.065	3.065	3.065	3.066	0.063	
12 Freon 113	3.107	3.107	3.102	3.102	3.107	3.102	3.102	3.104	0.090	
10 Acetone	3.159	3.160	3.154	3.149	3.149	3.149	3.149	3.153	0.158	
13 Methyl iodide	3.243	3.238	3.238	3.238	3.243	3.243	3.243	3.241	0.084	
14 Carbon disulfide	3.317	3.312	3.311	3.312	3.311	3.312	3.311	3.312	0.058	
15 Acetonitrile		3.542	3.537	3.532	3.532	3.526	3.532	3.533	0.154	
17 Allyl chloride	3.568	3.569	3.563	3.563	3.568	3.563	3.568	3.566	0.078	
16 Methyl Acetate	3.584	3.584	3.579	3.579	3.579	3.579	3.579	3.580	0.072	
18 Methylene chloride	3.752	3.747	3.747	3.747	3.747	3.747	3.752	3.748	0.066	
20 Acrylonitrile	4.082	4.082	4.077	4.077	4.077	4.077	4.077	4.079	0.063	
21 trans-1,2-Dichloroethe	4.103	4.098	4.098	4.098	4.103	4.098	4.103	4.100	0.066	
22 tert-Butyl methyl ethe	4.108	4.109	4.103	4.109	4.108	4.108	4.108	4.108	0.049	
23 Hexane	4.481	4.486	4.481	4.481	4.481	4.481	4.481	4.481	0.045	
24 1,1-Dichloroethane	4.690	4.691	4.690	4.691	4.690	4.690	4.690	4.690	0.002	
25 Vinyl acetate	4.738	4.738	4.732	4.733	4.732	4.732	4.732	4.734	0.054	
26 Diisopropyl ether (IPE	4.774	4.769	4.774	4.769	4.774	4.774	4.774	4.773	0.051	
27 Chloroprene	4.780	4.780	4.779	4.780	4.780	4.780	4.780	4.780	0.002	
31 2,2-Dichloropropane	5.435	5.435	5.435	5.435	5.435	5.435	5.435	5.435	0.002	
29 cis-1,2-Dichloroethene	5.445	5.446	5.445	5.446	5.445	5.445	5.445	5.445	0.002	
30 2-Butanone (MEK)	5.461	5.456	5.456	5.451	5.456	5.451	5.456	5.455	0.065	
33 Ethyl Acetate	5.535	5.530	5.529	5.530	5.529	5.529	5.529	5.530	0.035	
32 Propionitrile	5.545	5.545	5.540	5.540	5.540	5.540	5.545	5.542	0.050	
34 Methacrylonitrile	5.729	5.729	5.728	5.729	5.729	5.734	5.739	5.731	0.071	
35 Bromochloromethane	5.744	5.744	5.744	5.745	5.744	5.750	5.750	5.746	0.044	
36 Tetrahydrofuran	5.760	5.760	5.749	5.750	5.750	5.750	5.750	5.753	0.089	
37 Chloroform	5.907	5.907	5.907	5.907	5.907	5.907	5.907	5.907	0.002	
40 1,1,1-Trichloroethane	6.080	6.075	6.075	6.075	6.080	6.075	6.080	6.077	0.045	
$ 39 dibromofluoromethane	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.106	0.002	
42 Cyclohexane	6.148	6.148	6.143	6.148	6.148	6.148	6.148	6.147	0.033	
44 Carbon tetrachloride	6.269	6.269	6.263	6.264	6.269	6.263	6.269	6.266	0.044	
43 1,1-Dichloropropene	6.290	6.290	6.289	6.290	6.290	6.290	6.290	6.290	0.001	
$ 46 1,2-Dichloroethane-d4	6.531	6.526	6.525	6.526	6.526	6.526	6.531	6.527	0.038	
48 Benzene	6.536	6.536	6.536	6.536	6.536	6.536	6.536	6.536	0.001	
45 Isobutyl alcohol	6.536	6.536	6.536	6.536	6.536	6.536	6.536	6.536	0.001	
50 1,2-Dichloroethane	6.630	6.631	6.625	6.625	6.630	6.630	6.630	6.629	0.038	
49 Isopropyl Acetate	6.688	6.688	6.688	6.688	6.688	6.688	6.688	6.688	0.001	
53 Trichloroethene	7.417	7.412	7.412	7.412	7.412	7.412	7.412	7.412	0.026	
54 Methylcyclohexane	7.695	7.695	7.695	7.695	7.695	7.695	7.695	7.695	0.001	
55 1,2-Dichloropropane	7.752	7.753	7.752	7.753	7.752	7.752	7.752	7.752	0.001	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
58 1,4-Dioxane	7.862	7.863	7.862	7.857	7.857	7.857	7.857	7.860	0.035	
56 Dibromomethane	7.862	7.863	7.862	7.863	7.862	7.863	7.862	7.863	0.001	
57 Methyl methacrylate	7.883	7.878	7.878	7.878	7.878	7.878	7.878	7.879	0.024	
59 Bromodichloromethane	8.119	8.120	8.119	8.120	8.119	8.119	8.119	8.119	0.001	
60 2-nitropropane	8.423	8.424	8.423	8.424	8.424	8.424	8.424	8.424	0.001	
61 2-Chloroethylvinyl eth	8.523	8.523	8.523	8.523	8.523	8.523	8.523	8.523	0.001	
62 cis-1,3-Dichloropropen	8.701	8.702	8.701	8.702	8.701	8.701	8.701	8.701	0.001	
63 4-Methyl-2-pentanone	8.922	8.922	8.922	8.922	8.922	8.922	8.922	8.922	0.001	
$ 64 Toluene-d8	9.037	9.037	9.037	9.037	9.037	9.037	9.037	9.037	0.001	
65 Toluene	9.126	9.126	9.126	9.126	9.126	9.126	9.131	9.127	0.021	
66 trans-1,3-Dichloroprop	9.483	9.483	9.483	9.483	9.483	9.483	9.483	9.483	0.001	
67 Ethyl methacrylate	9.582	9.582	9.582	9.582	9.582	9.582	9.587	9.583	0.020	
68 1,1,2-Trichloroethane	9.734	9.735	9.734	9.735	9.734	9.734	9.734	9.734	0.001	
69 Tetrachloroethene	9.808	9.808	9.802	9.803	9.802	9.808	9.808	9.805	0.028	
70 1,3-Dichloropropane	9.933	9.934	9.933	9.934	9.934	9.934	9.934	9.934	0.001	
71 2-Hexanone	10.033	10.033	10.033	10.033	10.033	10.033	10.033	10.033	0.001	
72 Dibromochloromethane	10.190	10.191	10.190	10.191	10.190	10.190	10.190	10.190	0.001	
73 n-Butyl acetate	10.196	10.196	10.196	10.196	10.196	10.196	10.196	10.196	0.001	
75 1,2-Dibromoethane (EDB	10.316	10.316	10.316	10.311	10.316	10.316	10.316	10.316	0.018	
77 Chlorobenzene	10.898	10.898	10.898	10.893	10.893	10.898	10.898	10.897	0.023	
78 1,1,1,2-Tetrachloroeth	11.008	11.009	11.008	11.009	11.008	11.008	11.008	11.008	0.001	
79 Ethylbenzene	11.019	11.019	11.019	11.019	11.019	11.019	11.019	11.019	0.001	
80 m+p-Xylenes	11.166	11.166	11.166	11.166	11.166	11.166	11.166	11.166	0.001	
81 o-Xylene	11.575	11.575	11.575	11.575	11.575	11.575	11.575	11.575	0.001	
82 Styrene	11.596	11.596	11.596	11.596	11.596	11.601	11.601	11.597	0.021	
83 Bromoform	11.774	11.774	11.774	11.774	11.774	11.774	11.774	11.774	0.001	
84 Isopropylbenzene	11.957	11.958	11.957	11.958	11.957	11.957	11.957	11.957	0.001	
85 Cyclohexanone	12.041	12.047	12.041	12.041	12.041	12.041	12.041	12.042	0.017	
$ 86 Bromofluorobenzene		12.131	12.130	12.125	12.130	12.130	12.130	12.130	0.017	
87 Bromobenzene	12.256	12.262	12.256	12.256	12.256	12.256	12.256	12.257	0.016	
88 1,1,2,2-Tetrachloroeth	12.288	12.288	12.288	12.288	12.288	12.288	12.288	12.287	0.014	
90 trans-1,4-Dichloro-2-b	12.319	12.319	12.319	12.319	12.319	12.319	12.319	12.319	0.001	
89 1,2,3-Trichloropropane	12.330	12.330	12.330	12.330	12.330	12.330	12.330	12.330	0.001	
91 n-Propylbenzene	12.372	12.372	12.371	12.372	12.372	12.372	12.372	12.372	0.000	
92 2-Chlorotoluene	12.450	12.450	12.450	12.450	12.450	12.450	12.450	12.450	0.000	
93 1,3,5-Trimethylbenzene	12.555	12.555	12.555	12.555	12.555	12.555	12.555	12.555	0.000	
94 4-Chlorotoluene	12.571	12.571	12.571	12.571	12.571	12.571	12.571	12.571	0.000	
95 tert-Butylbenzene	12.849	12.849	12.849	12.844	12.849	12.849	12.849	12.848	0.014	
96 1,2,4-Trimethylbenzene	12.906	12.901	12.901	12.901	12.901	12.901	12.901	12.902	0.015	
97 sec-Butylbenzene	13.053	13.053	13.053	13.053	13.053	13.053	13.053	13.053	0.000	
98 1,3-Dichlorobenzene	13.158	13.158	13.158	13.158	13.158	13.158	13.158	13.158	0.000	
99 p-Isopropyltoluene	13.200	13.200	13.200	13.195	13.195	13.200	13.200	13.199	0.019	
101 1,4-Dichlorobenzene	13.252	13.253	13.252	13.253	13.252	13.252	13.252	13.252	0.000	
102 Benzyl chloride	13.362	13.357	13.362	13.358	13.357	13.357	13.363	13.360	0.020	
103 n-Butylbenzene	13.562	13.562	13.562	13.562	13.562	13.562	13.562	13.562	0.000	
104 1,2-Dichlorobenzene	13.572	13.572	13.572	13.572	13.572	13.572	13.572	13.572	0.000	
105 1,2-Dibromo-3-chloropr	14.259	14.265	14.259	14.259	14.259	14.259	14.259	14.260	0.014	
106 1,2,4-Trichlorobenzene	14.946	14.946	14.946	14.946	14.946	14.946	14.946	14.946	0.000	
107 Hexachlorobutadiene	15.061	15.067	15.066	15.062	15.067	15.067	15.067	15.065	0.016	
108 Naphthalene	15.166	15.166	15.166	15.166	15.166	15.166	15.166	15.166	0.000	
109 1,2,3-Trichlorobenzene	15.350	15.350	15.350	15.350	15.350	15.350	15.350	15.350	0.000	
S 110 Xylenes (total)	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	0.000	

Shealy Environmental Services
Form 6 Response

Batch: \\Organics\DD\chem\msd17.i\17120219B.b
Method: 8260B-17.M Instrument: msd17
Cal Start Date: 03-Dec-2019 01:21:30 Cal End Date: 03-Dec-2019 03:43:30
Last Modified: 04-Dec-2019 13:02:30
No.Compounds: 112 Integrator: falcon

Internal Standards

* 41 Pentafluorobenzene
* 52 1,4-Difluorobenzene
* 76 Chlorobenzene-d5
* 100 1,4-Dichlorobenzene-d4

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
S 111 1,2-Dichloroethene (to	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	23512	46267	244140	922685	2296181	4653264	9118309	
1 Dichlorodifluoromethan	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6135	10982	64301	222861	639547	1200191	2373130	
2 Chloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5303	10152	53690	198056	498533	973353	1916147	
3 Vinyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6246	10925	62602	239774	593947	1162519	2308531	
4 Bromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5699	11792	59560	228827	567719	1098582	2111210	
5 Chloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4177	8435	43803	167615	415038	826117	1680776	
6 Trichlorofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	12649	24523	139329	510056	1295297	2498925	4882006	
8 Ethyl ether	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8871	16517	90021	336262	856966	1693968	3315867	
9 Acrolein	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	23066	44158	251603	1007673	2640631	4863689	8974564	
11 1,1-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7787	13949	81060	302334	740593	1416586	2789313	
12 Freon 113	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7226	13505	78192	289533	726211	1462695	3004976	
10 Acetone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	13319	22779	107508	394467	1023107	1947171	3662213	
13 Methyl iodide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15112	30693	170802	648728	1596786	2969813	5828245	
14 Carbon disulfide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	22299	43819	253247	967145	2399577	4510096	8766832	
15 Acetonitrile		10.000	50.000	200.00	500.00	1000.00	2000.00	#41
		15086	83745	309972	750305	1399697	2730452	
17 Allyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4363	8246	48884	192334	478186	973614	1953420	
16 Methyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	13952	26409	141743	533290	1374664	2700196	5084019	
18 Methylene chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10473	19894	101855	383417	958850	1759509	3451172	
20 Acrylonitrile	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	13628	24334	131689	492272	1302614	2481118	4744617	
21 trans-1,2-Dichloroethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10607	21199	111967	424070	1052454	2146675	4218519	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
22 tert-Butyl methyl ethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	28783	53088	288166	1068258	2736428	5092892	9606746	
23 Hexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15052	27186	152844	559469	1346235	2855044	5582485	
24 1,1-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	17882	34987	193429	719863	1779108	3592569	6886150	
25 Vinyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	2721	5078	32295	128677	324029	662069	1293544	
26 Diisopropyl ether (IPE	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	9498	18172	91261	366372	904307	1838425	3528585	
27 Chloroprene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	13210	25378	154376	564091	1393844	2827502	5463792	
31 2,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	12623	24522	126195	472501	1131880	2197186	4171986	
29 cis-1,2-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	12905	25068	132173	498615	1243727	2506589	4899790	
30 2-Butanone (MEK)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	6876	12090	59404	240473	579728	1187640	2167918	
33 Ethyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	21447	42352	208185	808925	1905394	3953035	7108255	
32 Propionitrile	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	29386	49411	280848	1017854	2570106	5071890	8917854	
34 Methacrylonitrile	2.5000	5.0000	25.000	100.00	250.00	500.00	1000.00	#41
	38457	77649	382475	1480512	3650228	7258189	12939134	
35 Bromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6969	13963	73927	279274	708100	1417181	2789185	
36 Tetrahydrofuran	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	9950	17290	83593	322797	786748	1556386	2835436	
37 Chloroform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	20435	39345	208971	795722	1949276	3928181	7526300	
40 1,1,1-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	16944	32401	178713	689988	1679158	3455520	6584242	
$ 39 dibromofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	14740	25686	129112	503690	1254282	2505142	4853760	
42 Cyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8013	15041	83817	301801	735105	1467605	2806655	
44 Carbon tetrachloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	15245	28683	165500	636344	1591858	3303191	6394619	
43 1,1-Dichloropropene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	14536	27312	155004	580193	1419965	2920412	5627550	
$ 46 1,2-Dichloroethane-d4	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	17454	30254	144034	559925	1382348	2701958	5084959	
48 Benzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	41628	79952	444974	1697144	4081483	8182557	14817501	
45 Isobutyl alcohol	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	4617	11476	63283	239314	569467	1127863	1936545	
50 1,2-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	16568	31147	173151	640940	1581103	3136651	5871343	
49 Isopropyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	26742	54950	275775	1117180	2656669	5573467	10160964	
53 Trichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	13173	25304	143068	554336	1346410	2762453	5278191	
54 Methylcyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	16663	32216	185799	677969	1687093	3425612	6566474	
55 1,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	10652	20381	105900	418136	980427	2024493	3762868	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
58 1,4-Dioxane	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#52
	1378	3126	16001	57375	129450	256242	442922	
56 Dibromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8285	15848	85338	326063	809760	1620995	3051384	
57 Methyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	12565	26906	135828	561673	1313430	2732904	4903710	
59 Bromodichloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	13936	26618	149722	592379	1472112	2982954	5634388	
60 2-nitropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	6729	13471	67234	276701	672053	1419591	2573594	
61 2-Chloroethylvinyl eth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8042	17583	93168	387244	915530	1893326	3484357	
62 cis-1,3-Dichloropropen	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	14946	31356	176237	703974	1736926	3485135	6473979	
63 4-Methyl-2-pentanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#52
	35114	73603	380067	1551031	3574934	7170097	11946522	
$ 64 Toluene-d8	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	50036	84800	438810	1730006	4018533	7918709	14001260	
65 Toluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	27400	52577	292828	1145483	2684771	5434023	9875154	
66 trans-1,3-Dichloroprop	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	13887	28197	160326	674707	1670450	3334196	6253270	
67 Ethyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	16139	32555	176404	745997	1755594	3651004	6530022	
68 1,1,2-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11050	21897	119069	461677	1101244	2179511	4010238	
69 Tetrachloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11359	20727	120242	458658	1085533	2198863	4155542	
70 1,3-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	17847	35614	183413	725002	1726261	3364444	6095912	
71 2-Hexanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	31330	61332	322712	1392977	3105429	6285319	10629568	
72 Dibromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	10634	21259	124622	518456	1311274	2592445	4862252	
73 n-Butyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	21806	44428	240832	1029085	2339358	4746864	8234321	
75 1,2-Dibromoethane (EDB	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11017	22855	127444	509357	1256726	2426360	4451082	
77 Chlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	27857	56565	314927	1249008	2979665	5626810	9971560	
78 1,1,1,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9973	19022	110398	441692	1083259	2142123	3808056	
79 Ethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	14988	27485	167422	657284	1577977	3044974	5522259	
80 m+p-Xylenes	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	16936	33683	201987	792298	1897816	3637433	6572017	
81 o-Xylene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	15365	29552	180672	704681	1700059	3202850	5674194	
82 Styrene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	25632	46744	298043	1221608	3001354	5495314	9699240	
83 Bromoform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5958	12022	75260	333368	897137	1739382	3330795	
84 Isopropylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	38458	75450	459216	1763777	4199548	7542480	12273854	
85 Cyclohexanone	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#76
	5418	8925	48292	180499	461621	818976	1390034	

Report Date: 04-Dec-2019 13:04:31 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
$ 86 Bromofluorobenzene		1.0000	5.0000	20.000	50.000	100.00	200.00	#76
		24591	132450	501881	1261797	2276106	4138495	
87 Bromobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	9746	20462	117861	474529	1185488	2195832	3999693	
88 1,1,2,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	10301	21249	119276	476871	1199036	2209652	4022030	
90 trans-1,4-Dichloro-2-b	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2546	3863	26895	123963	342874	637787	1244251	
89 1,2,3-Trichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	4162	8888	48007	192173	486180	880196	1612099	
91 n-Propylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	40399	79195	493119	1922214	4579562	8060671	13096785	
92 2-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23154	46833	268730	1054957	2559020	4688484	8137584	
93 1,3,5-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23727	47820	301845	1158445	2805611	5088772	8611570	
94 4-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	8284	15894	99312	397728	989595	1817013	3338305	
95 tert-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23302	47859	283728	1076564	2580512	4625803	7777974	
96 1,2,4-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23112	44607	278700	1109758	2682545	4905815	8402539	
97 sec-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	31748	63760	381952	1468138	3522157	6309490	10430245	
98 1,3-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	14289	30254	167329	667758	1651820	3146586	5739220	
99 p-Isopropyltoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	24740	47672	294895	1163237	2810139	5160062	8736378	
101 1,4-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	14468	29176	162218	667186	1636512	3103850	5683162	
102 Benzyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	13208	25965	154544	701140	1849401	3510634	6478505	
103 n-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	19153	36639	230686	930234	2293112	4288725	7525593	
104 1,2-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	13014	26559	147001	591438	1454663	2812636	5215905	
105 1,2-Dibromo-3-chloropr	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2220	4099	22534	95611	247142	496629	970612	
106 1,2,4-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	8358	15523	86412	353195	889230	1827420	3462767	
107 Hexachlorobutadiene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	3879	7686	44150	174387	433952	872938	1641302	
108 Naphthalene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	22277	42200	251344	1048784	2644047	5253059	9600692	
109 1,2,3-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	7493	14952	80924	328143	833595	1713911	3203845	
S 110 Xylenes (total)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	32301	63235	382659	1496979	3597875	6840283	12246211	

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\DD\chem\msd17.i\17120219B.b		
Method:	8260B-17.M	Instrument:	msd17
Cal Start Date:	03-Dec-2019 01:21:30	Cal End Date:	03-Dec-2019 03:43:30
Last Modified:	04-Dec-2019 13:02:30		
No.Compounds:	112	Integrator:	falcon
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

No. Cal Levels: 7 No. Cal Levels: 7

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	VSTD0.5BQ	03-Dec-2019 01:21:30	17120219B.b	171202B05.D	std.sub	49375428	32127224
2	2	VSTD001BQ	03-Dec-2019 01:44:30	17120219B.b	171202B06.D	std.sub	49375428	32127226
3	3	VSTD005BQ	03-Dec-2019 02:08:30	17120219B.b	171202B07.D	std.sub	49375428	32127225
4	4	VSTD020BQ	03-Dec-2019 02:32:30	17120219B.b	171202B08.D	std.sub	49375428	32127227
5	5	VSTD050BQ	03-Dec-2019 02:56:30	17120219B.b	171202B09.D	std.sub	49375428	32127221
6	6	VSTD100BQ	03-Dec-2019 03:19:30	17120219B.b	171202B10.D	std.sub	49375428	32127228
7	7	VSTD200BQ	03-Dec-2019 03:43:30	17120219B.b	171202B11.D	std.sub	49375428	32127229

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D
Lab Sample ID: VSTD0.5BQ Client Sample ID: 1mL/100mL VSTD050
Injection Date: 03-Dec-2019 01:21:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD0.5BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 1 ALS Bottle: 5
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:43:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	6135	0.50000	0.49841	
2 Chloromethane	50.0	1.576	1.577	0.000	5303	0.50000	0.51180	
3 Vinyl chloride	62.0	1.697	1.697	0.000	6246	0.50000	0.51334	Q
4 Bromomethane	94.0	2.032	2.027	0.006	5699	0.50000	0.48935	M
5 Chloroethane	64.0	2.147	2.148	0.000	4177	0.50000	0.48369	
6 Trichlorofluoromethane	101.0	2.436	2.431	0.005	12649	0.50000	0.48316	
8 Ethyl ether	59.0	2.787	2.782	0.006	8871	0.50000	0.50532	M
9 Acrolein	56.0	2.960	2.955	0.006	23066	5.0000	4.6600	M
10 Acetone	43.0	3.159	3.149	0.011	13319	1.0000	1.2220	M
11 1,1-Dichloroethene	96.0	3.070	3.066	0.005	7787	0.50000	0.51169	
12 Freon 113	101.0	3.107	3.107	0.000	7226	0.50000	0.48182	
13 Methyl iodide	142.0	3.243	3.244	0.000	15112	0.50000	0.47194	
14 Carbon disulfide	76.0	3.317	3.312	0.005	22299	0.50000	0.46860	
15 Acetonitrile	40.0	3.537	3.532	0.005	11127	5.0000	7.1958	QM
17 Allyl chloride	76.0	3.568	3.569	0.000	4363	0.50000	0.45442	M
16 Methyl Acetate	43.0	3.584	3.579	0.006	13952	0.50000	0.50286	M
18 Methylene chloride	84.0	3.752	3.747	0.005	10473	0.50000	0.53161	
20 Acrylonitrile	53.0	4.082	4.077	0.006	13628	1.0000	1.0496	M
21 trans-1,2-Dichloroethene	96.0	4.103	4.104	0.000	10607	0.50000	0.48353	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.109	0.000	28783	0.50000	0.52300	M
23 Hexane	57.0	4.481	4.481	0.000	15052	0.50000	0.51546	
24 1,1-Dichloroethane	63.0	4.690	4.691	0.000	17882	0.50000	0.48515	
25 Vinyl acetate	86.0	4.738	4.733	0.005	2721	0.50000	0.43124	M
26 Diisopropyl ether (IPE)	87.0	4.774	4.775	0.000	9498	0.50000	0.50683	Q
27 Chloroprene	53.0	4.780	4.780	0.000	13210	0.50000	0.46331	
29 cis-1,2-Dichloroethene	96.0	5.445	5.446	0.000	12905	0.50000	0.49823	
30 2-Butanone (MEK)	72.0	5.461	5.456	0.006	6876	1.0000	1.1169	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	12623	0.50000	0.52490	M
32 Propionitrile	54.0	5.545	5.540	0.005	29386	5.0000	5.5399	
33 Ethyl Acetate	43.0	5.535	5.530	0.005	21447	0.50000	0.52188	Q
34 Methacrylonitrile	67.0	5.729	5.729	0.000	38457	2.5000	2.5460	
35 Bromochloromethane	128.0	5.744	5.745	0.000	6969	0.50000	0.48041	
36 Tetrahydrofuran	42.0	5.760	5.750	0.010	9950	0.50000	0.58817	M
37 Chloroform	83.0	5.907	5.907	0.000	20435	0.50000	0.50198	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	14740	0.50000	0.55713	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	16944	0.50000	0.48636	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3369394	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.149	0.000	8013	0.50000	0.51408	Q
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	14536	0.50000	0.49042	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	15245	0.50000	0.47043	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	4617	5.0000	4.0508	M
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.526	0.005	17454	0.50000	0.59394	
48 Benzene	78.0	6.536	6.536	0.000	41628	0.50000	0.49778	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	26742	0.50000	0.48455	M
50 1,2-Dichloroethane	62.0	6.630	6.631	0.000	16568	0.50000	0.50978	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4589286	50.000	50.000	
53 Trichloroethene	130.0	7.417	7.412	0.005	13173	0.50000	0.47881	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	16663	0.50000	0.48199	
55 1,2-Dichloropropane	63.0	7.752	7.753	0.000	10652	0.50000	0.51385	
56 Dibromomethane	93.0	7.862	7.863	0.000	8285	0.50000	0.50166	
57 Methyl methacrylate	41.0	7.883	7.879	0.005	12565	0.50000	0.46554	M
58 1,4-Dioxane	88.0	7.862	7.858	0.005	1378	5.0000	4.9063	Q
59 Bromodichloromethane	83.0	8.119	8.119	0.000	13936	0.50000	0.47488	
60 2-nitropropane	43.0	8.423	8.423	0.000	6729	0.50000	0.48797	M
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	8042	0.50000	0.43709	
62 cis-1,3-Dichloropropene	75.0	8.701	8.702	0.000	14946	0.50000	0.43915	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	35114	1.0000	0.96479	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	50036	0.50000	0.60365	
65 Toluene	92.0	9.126	9.127	0.000	27400	0.50000	0.51107	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	13887	0.50000	0.44815	M
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	16139	0.50000	0.47384	
68 1,1,2-Trichloroethane	97.0	9.734	9.735	0.000	11050	0.50000	0.50694	M
69 Tetrachloroethene	164.0	9.808	9.803	0.005	11359	0.50000	0.52033	
70 1,3-Dichloropropane	76.0	9.933	9.934	0.000	17847	0.50000	0.52187	
71 2-Hexanone	43.0	10.033	10.034	0.000	31330	1.0000	1.0206	
72 Dibromochloromethane	129.0	10.190	10.191	0.000	10634	0.50000	0.44408	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	21806	0.50000	0.47943	M
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.317	0.000	11017	0.50000	0.46701	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3527512	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.894	0.005	27857	0.50000	0.49079	M
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.009	0.000	9973	0.50000	0.48744	
79 Ethylbenzene	106.0	11.019	11.019	0.000	14988	0.50000	0.49877	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	16936	0.50000	0.47232	
81 o-Xylene	106.0	11.575	11.575	0.000	15365	0.50000	0.48310	
82 Styrene	104.0	11.596	11.596	0.000	25632	0.50000	0.47670	
83 Bromoform	173.0	11.774	11.774	0.000	5958	0.50000	0.61314	
84 Isopropylbenzene	105.0	11.957	11.958	0.000	38458	0.50000	0.49500	
85 Cyclohexanone	55.0	12.041	12.042	0.000	5418	5.0000	6.1322	M

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.131	0.000	18082	0.50000	0.76240	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	10301	0.50000	0.48353	
87 Bromobenzene	156.0	12.256	12.257	0.000	9746	0.50000	0.46609	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	4162	0.50000	0.48283	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	2546	0.50000	0.67226	Q
91 n-Propylbenzene	91.0	12.372	12.372	0.000	40399	0.50000	0.49941	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	23154	0.50000	0.50037	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	23727	0.50000	0.47772	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	8284	0.50000	0.47771	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	23302	0.50000	0.49884	
96 1,2,4-Trimethylbenzene	105.0	12.906	12.902	0.005	23112	0.50000	0.48782	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	31748	0.50000	0.50211	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	14289	0.50000	0.47705	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.005	24740	0.50000	0.49498	M
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.232	0.000	1177587	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.253	0.000	14468	0.50000	0.48926	Q
102 Benzyl chloride	91.0	13.362	13.358	0.005	13208	0.50000	0.43370	M
103 n-Butylbenzene	91.0	13.562	13.562	0.000	19153	0.50000	0.47677	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	13014	0.50000	0.48786	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.260	0.000	2220	0.50000	0.49712	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	8358	0.50000	0.50589	
107 Hexachlorobutadiene	225.0	15.061	15.067	-0.004	3879	0.50000	0.48329	
108 Naphthalene	128.0	15.166	15.167	0.000	22277	0.50000	0.47483	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	7493	0.50000	0.48668	
S 110 Xylenes (total)	106.0	16.000		0.000		1.0000	0.95542	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		1.0000	0.98175	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

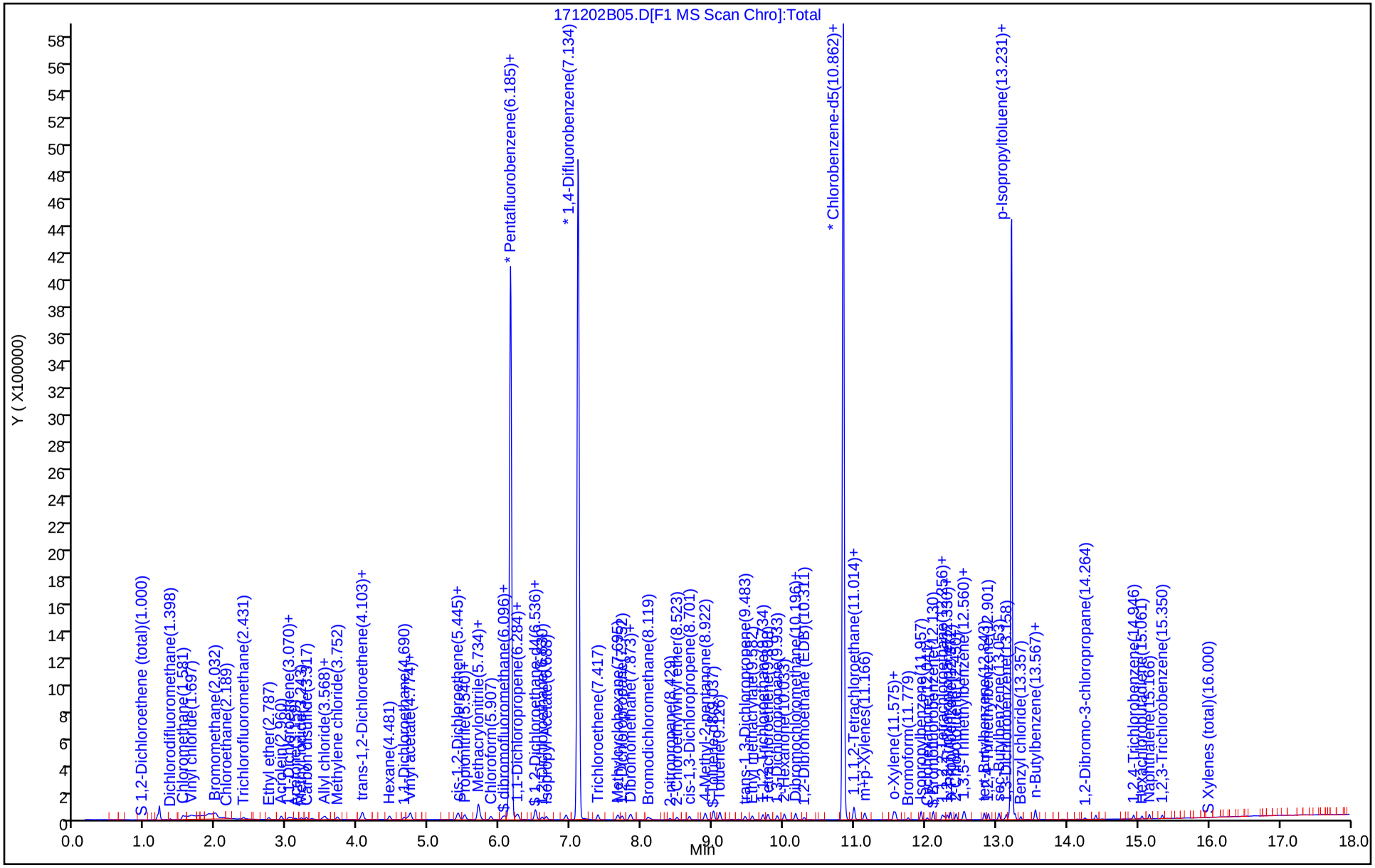
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D				
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ		
Sample Info:	17120219B, VSTD0.5BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

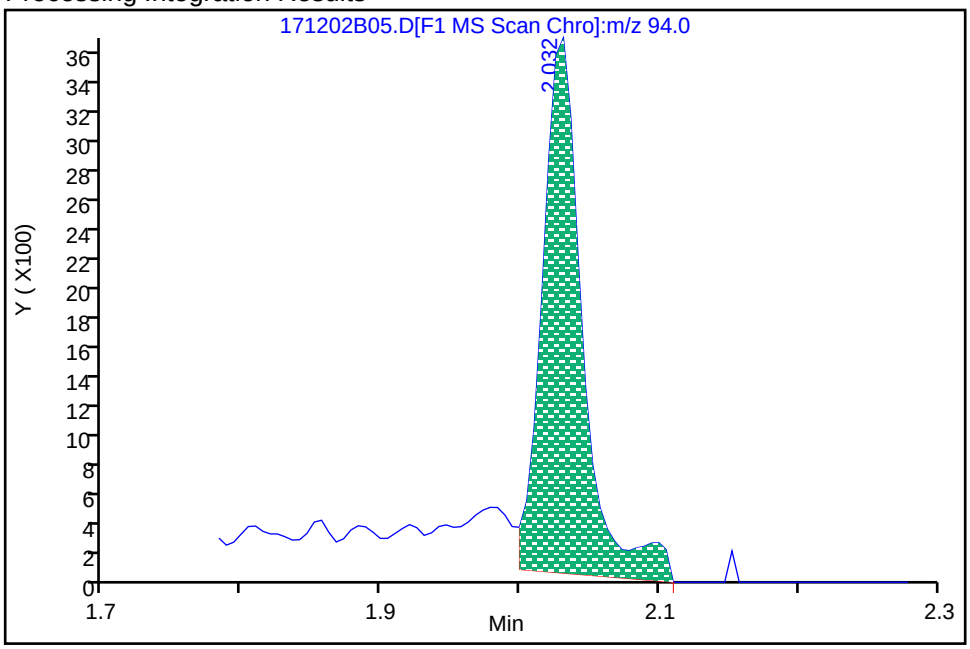
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

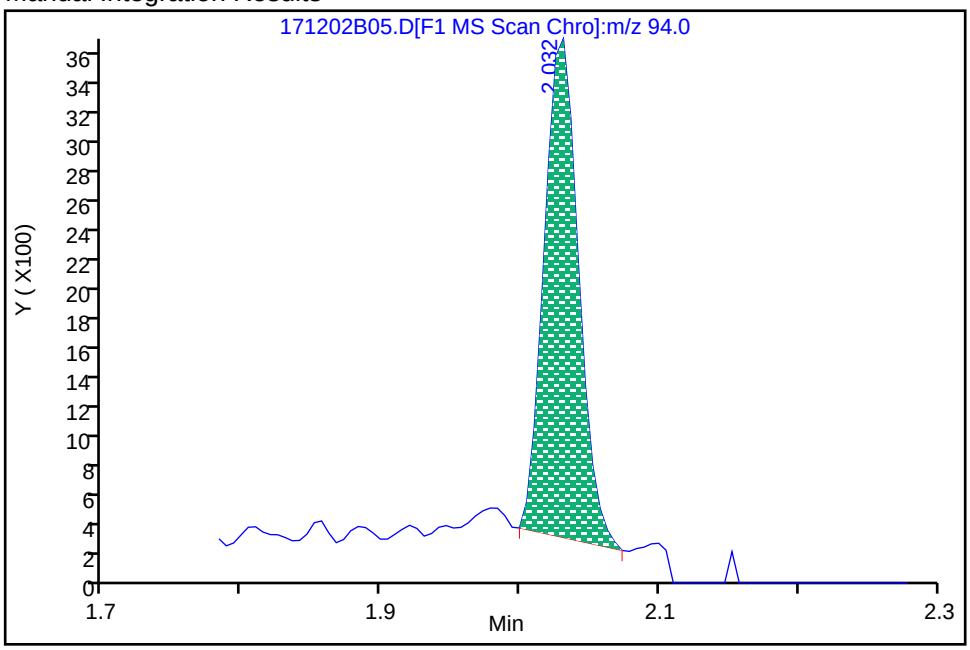
Processing Integration Results

RT: 2.032
Area: 7188
Amount: 0.54459
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.032
Area: 5699
Amount: 0.48935
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:39:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

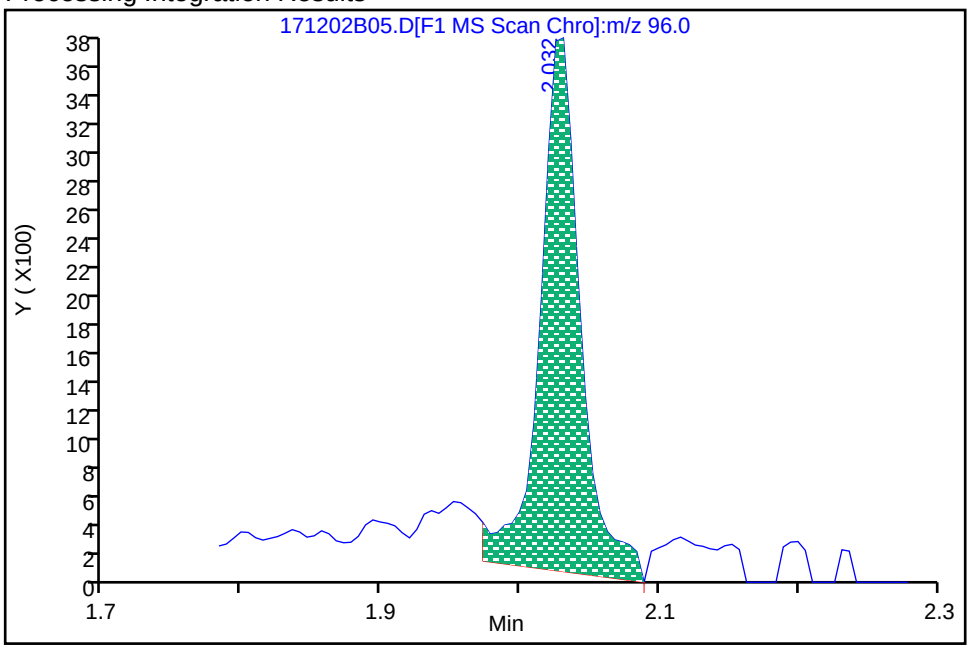
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

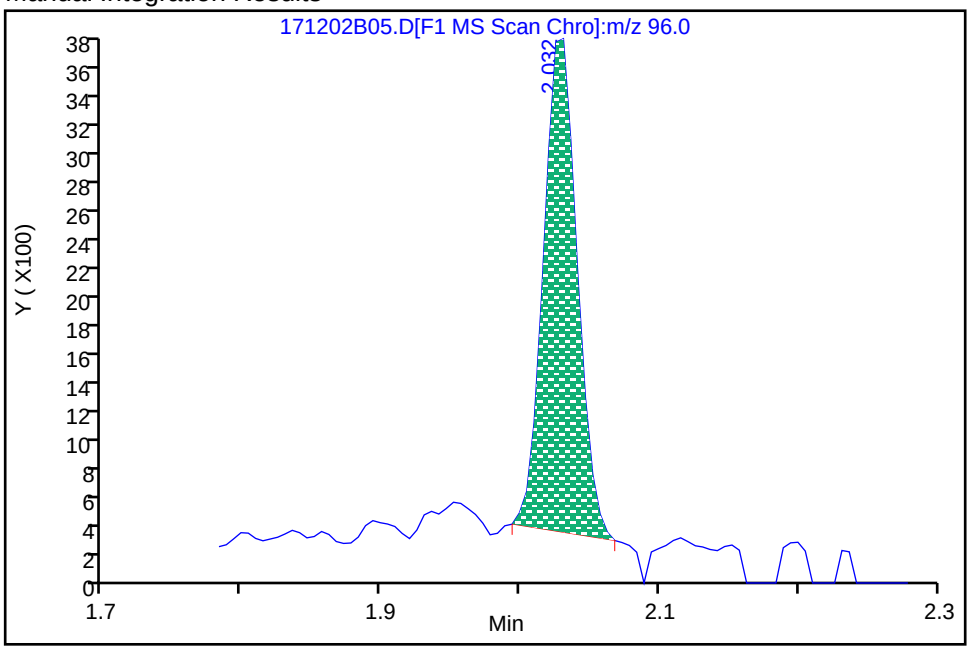
Processing Integration Results

RT: 2.032
Area: 7375
Amount: 0.54459
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.032
Area: 5615
Amount: 0.48935
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:39:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

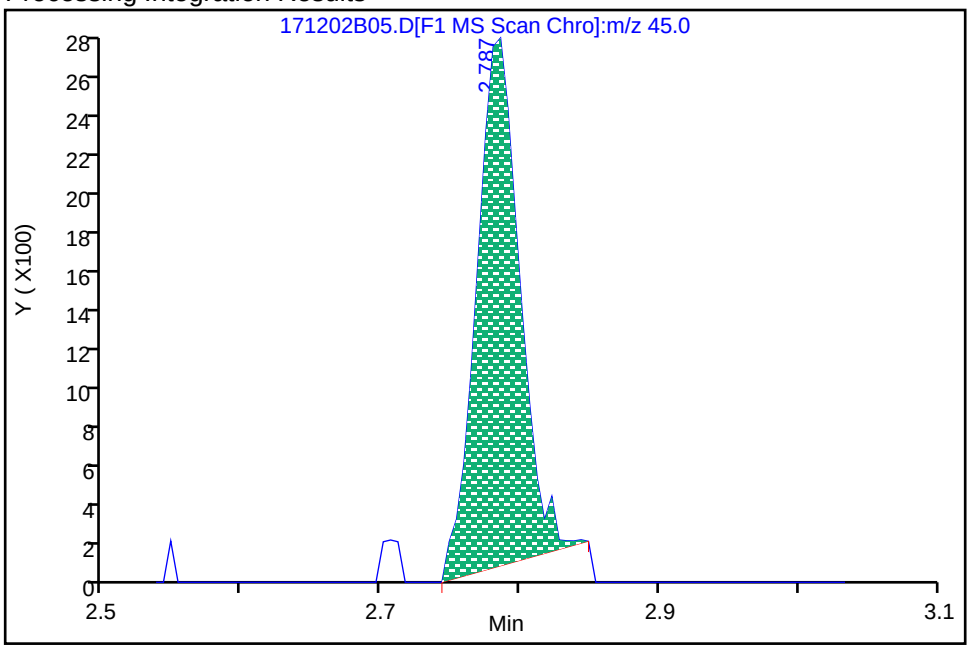
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

8 Ethyl ether, CAS: 60-29-7

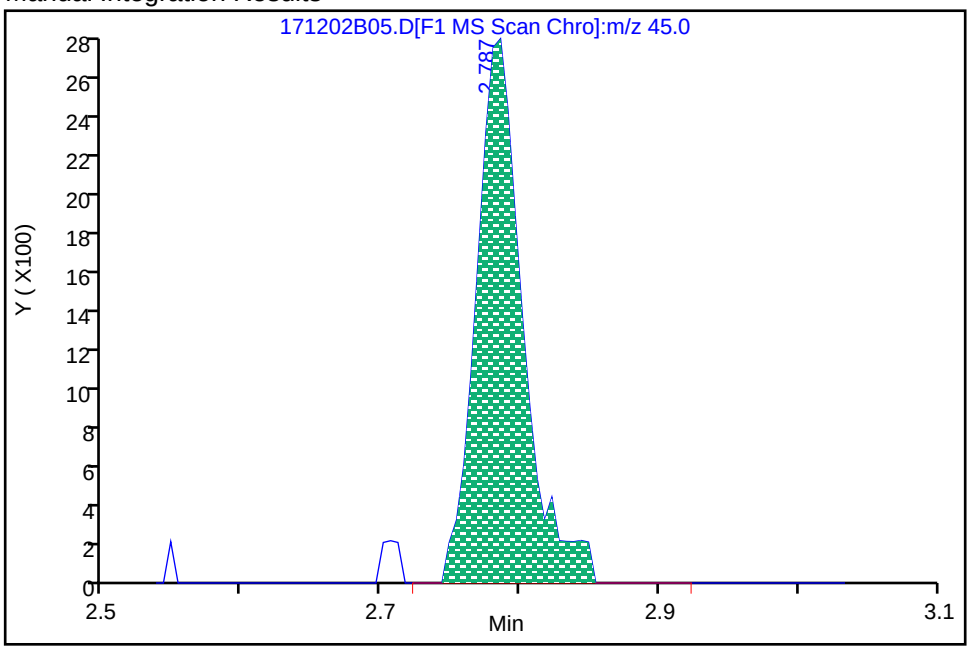
Processing Integration Results

RT: 2.787
Area: 5744
Amount: 0.49436
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.787
Area: 6430
Amount: 0.50532
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

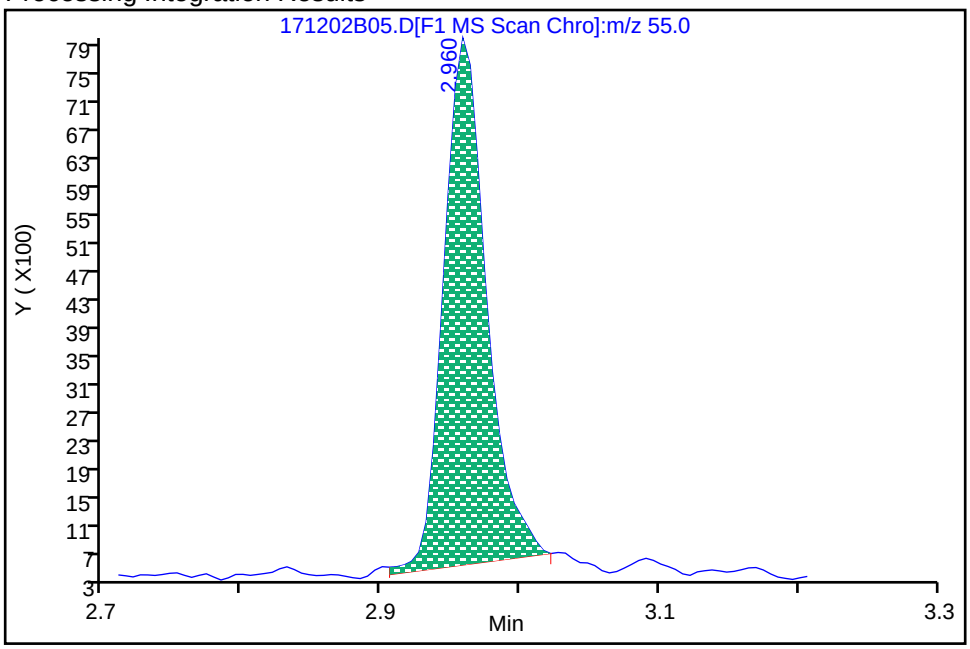
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

9 Acrolein, CAS: 107-02-8

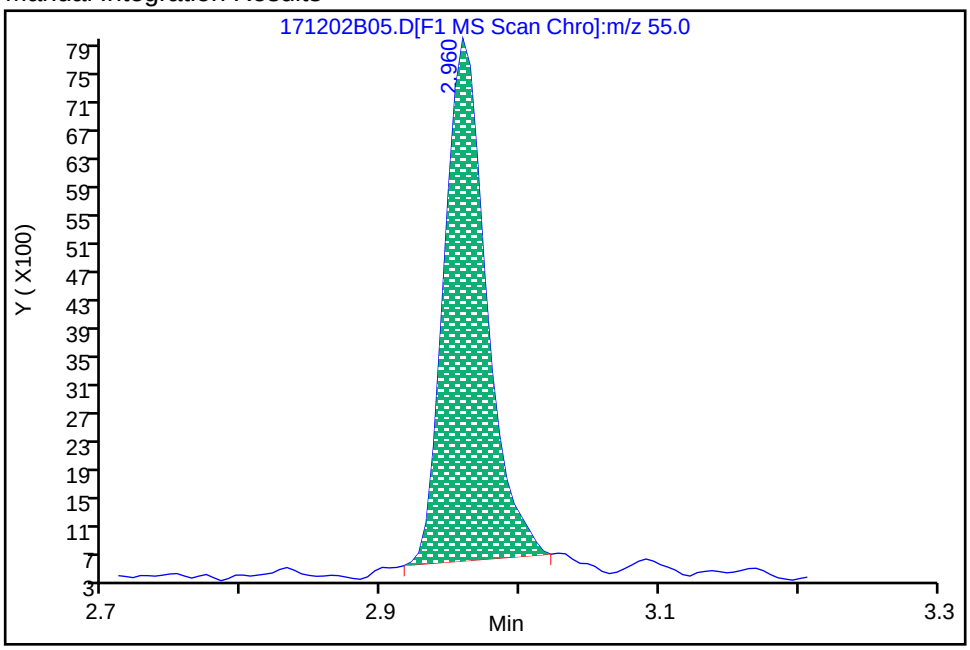
Processing Integration Results

RT: 2.960
Area: 15817
Amount: 4.7429
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.960
Area: 15403
Amount: 4.6600
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

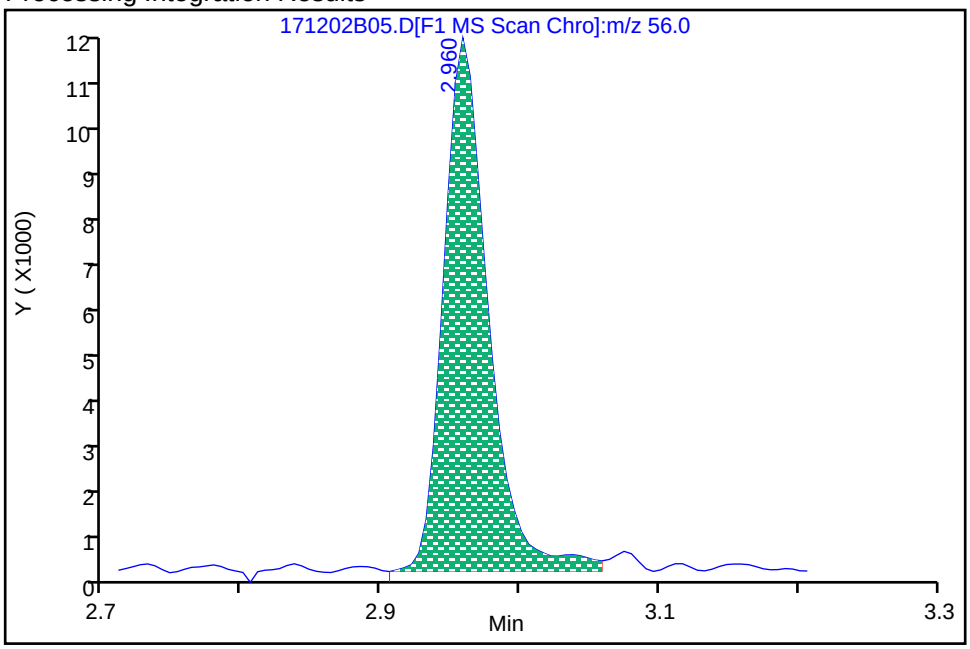
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

9 Acrolein, CAS: 107-02-8

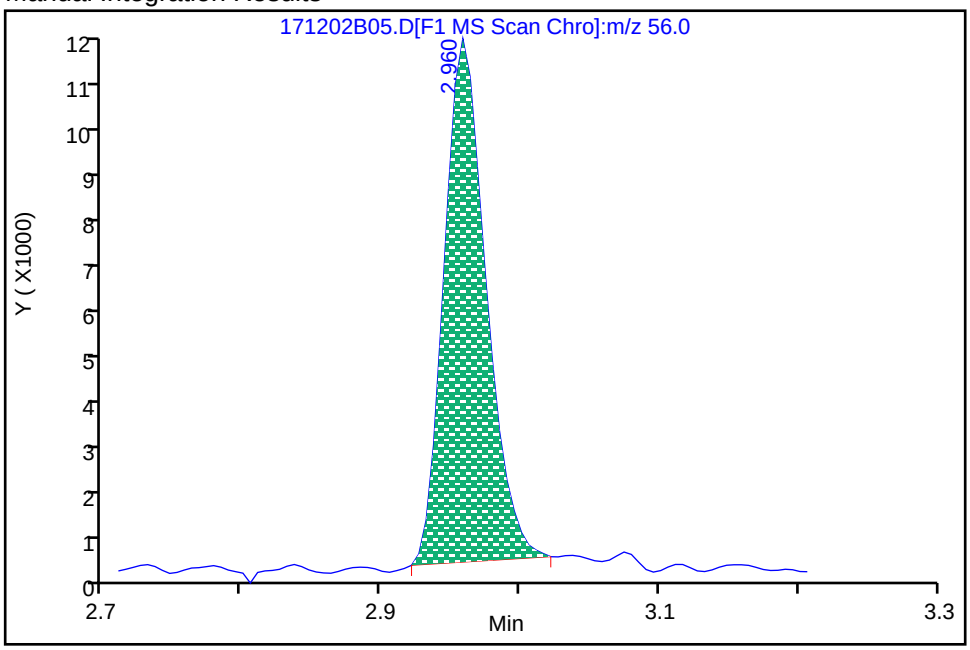
Processing Integration Results

RT: 2.960
Area: 25224
Amount: 4.7429
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.960
Area: 23066
Amount: 4.6600
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

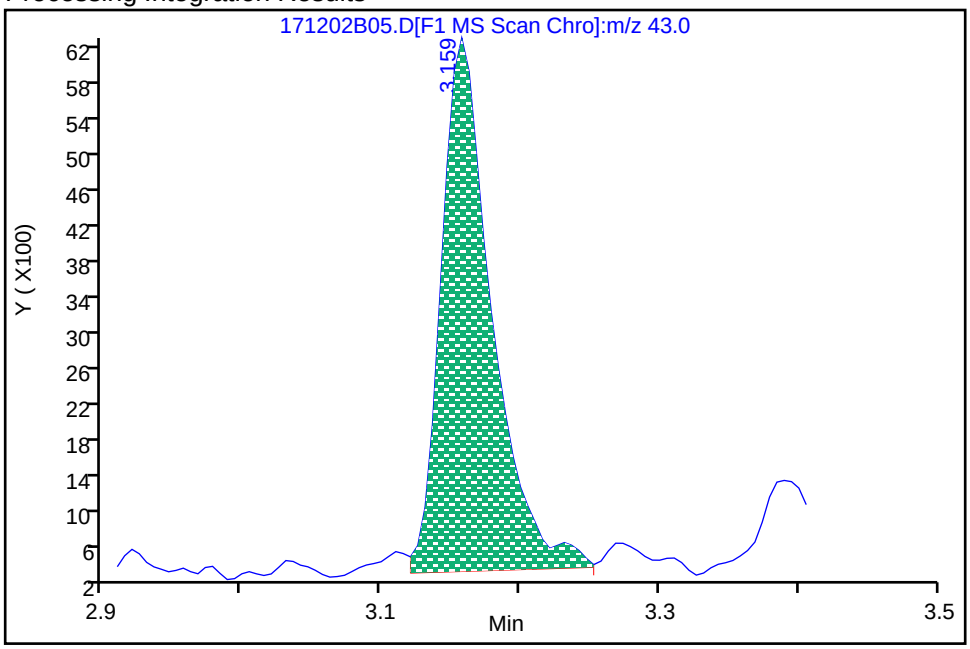
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

10 Acetone, CAS: 67-64-1

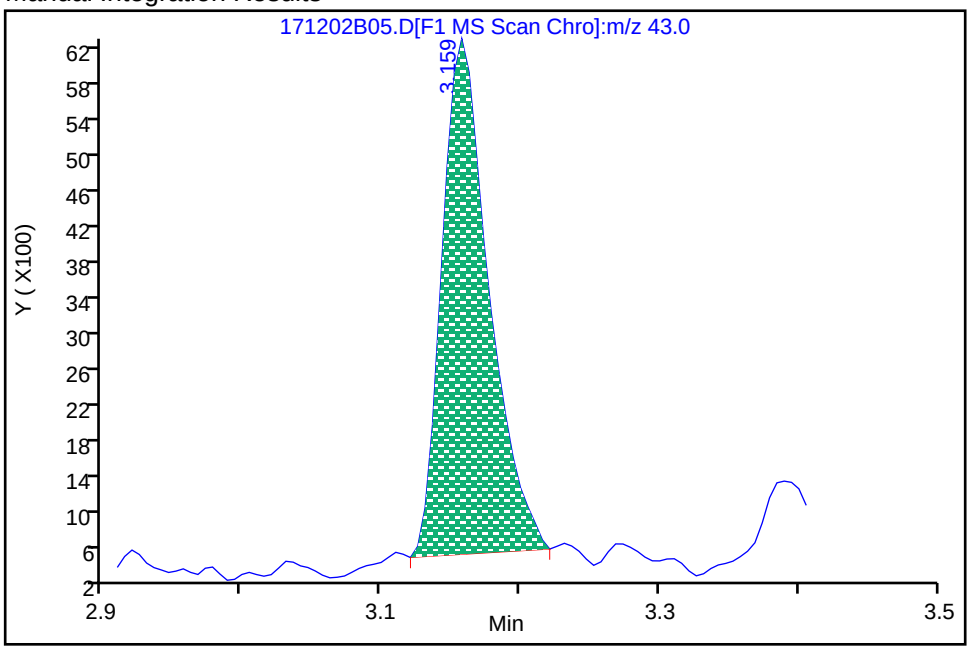
Processing Integration Results

RT: 3.159
Area: 14915
Amount: 1.1586
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.159
Area: 13319
Amount: 1.2220
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

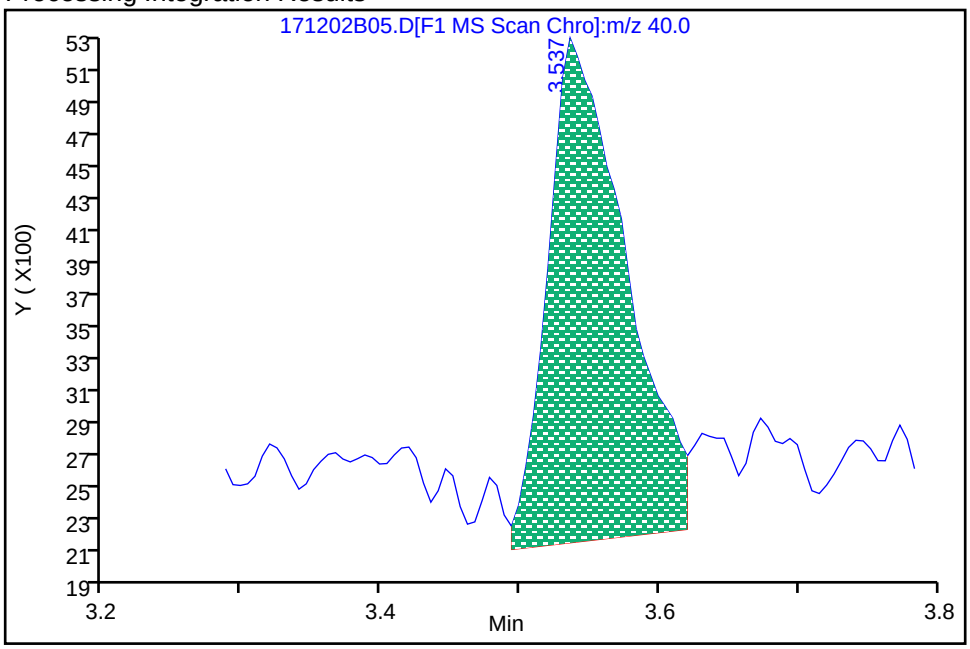
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

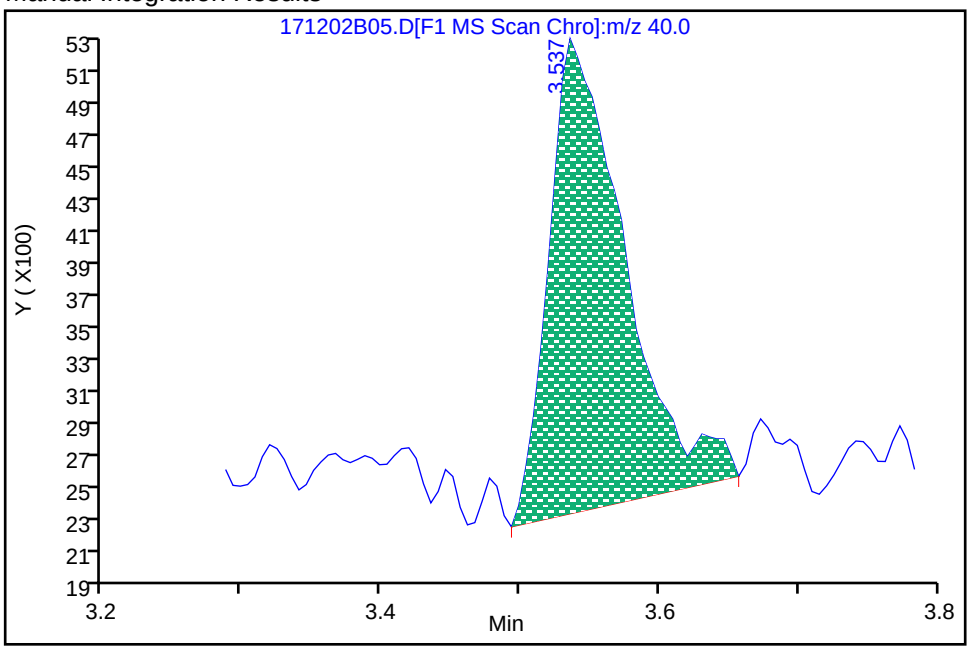
Processing Integration Results

RT: 3.537
Area: 12167
Amount: 6.0499
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 11127
Amount: 7.1958
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

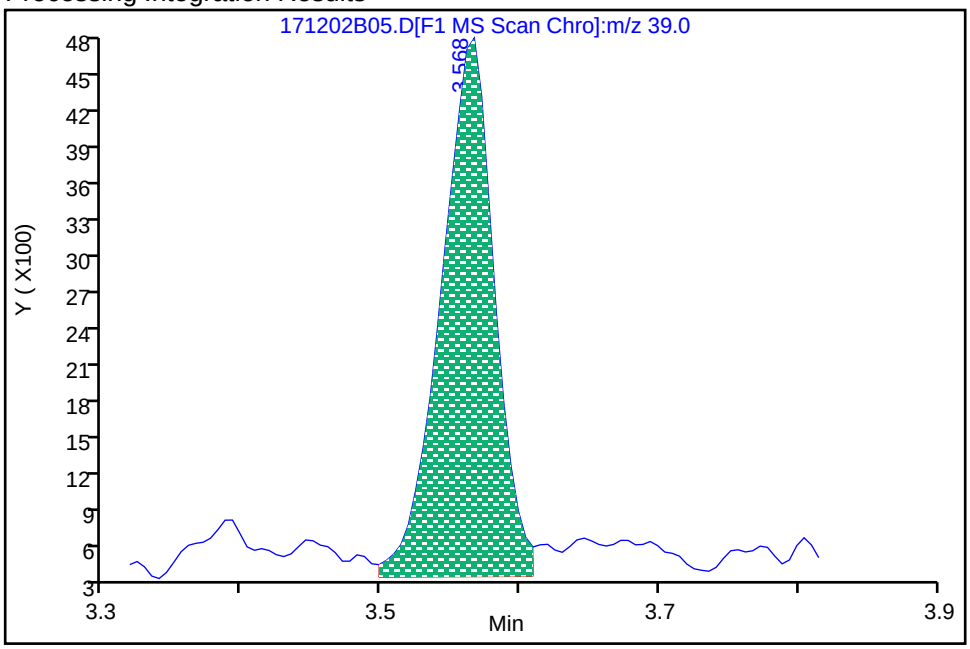
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

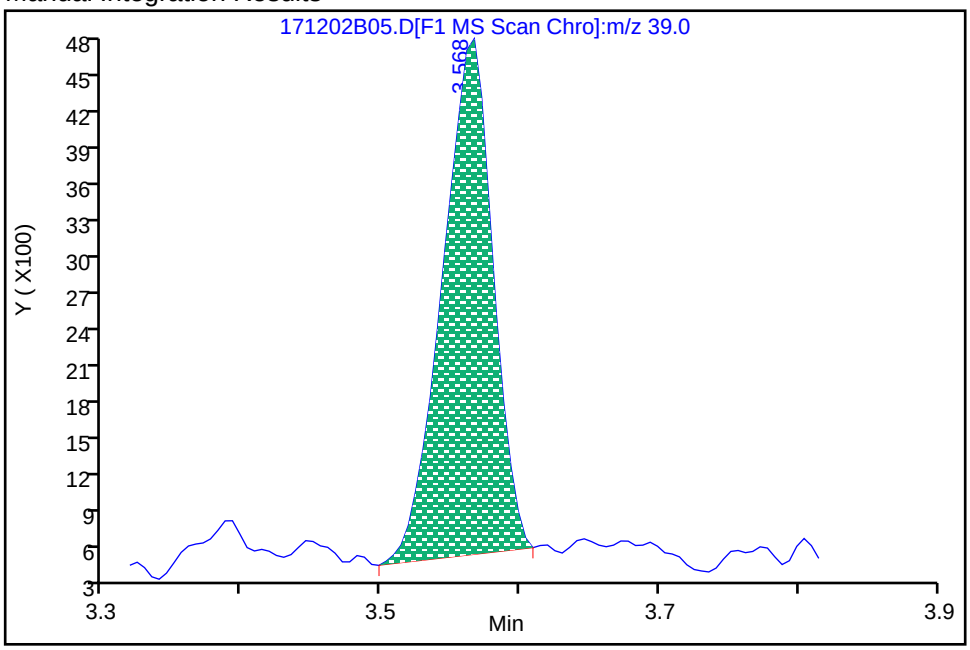
Processing Integration Results

RT: 3.568
Area: 11840
Amount: 6.0499
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.568
Area: 10692
Amount: 7.1958
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

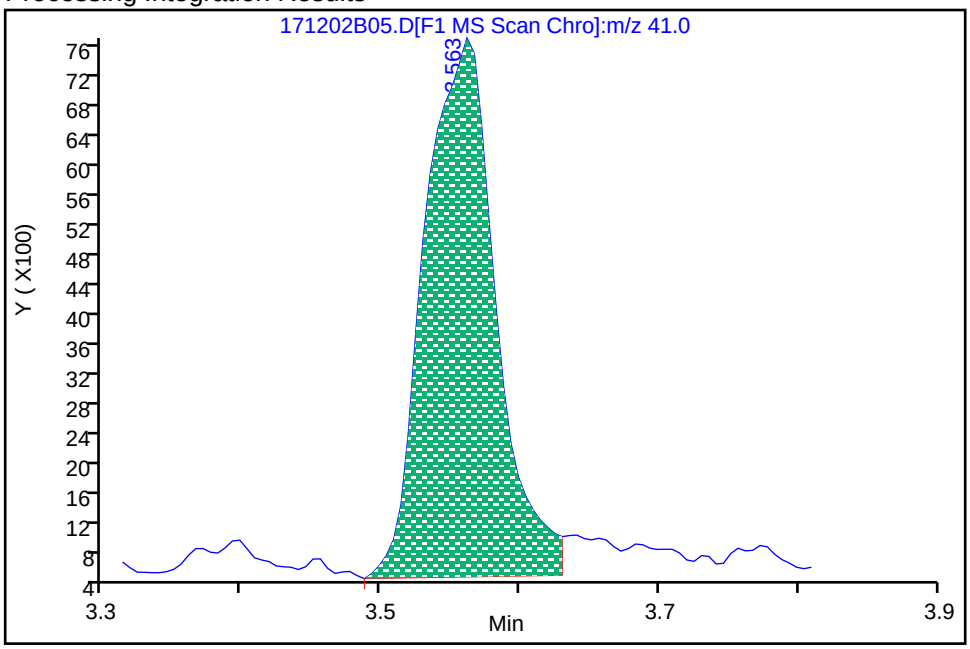
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

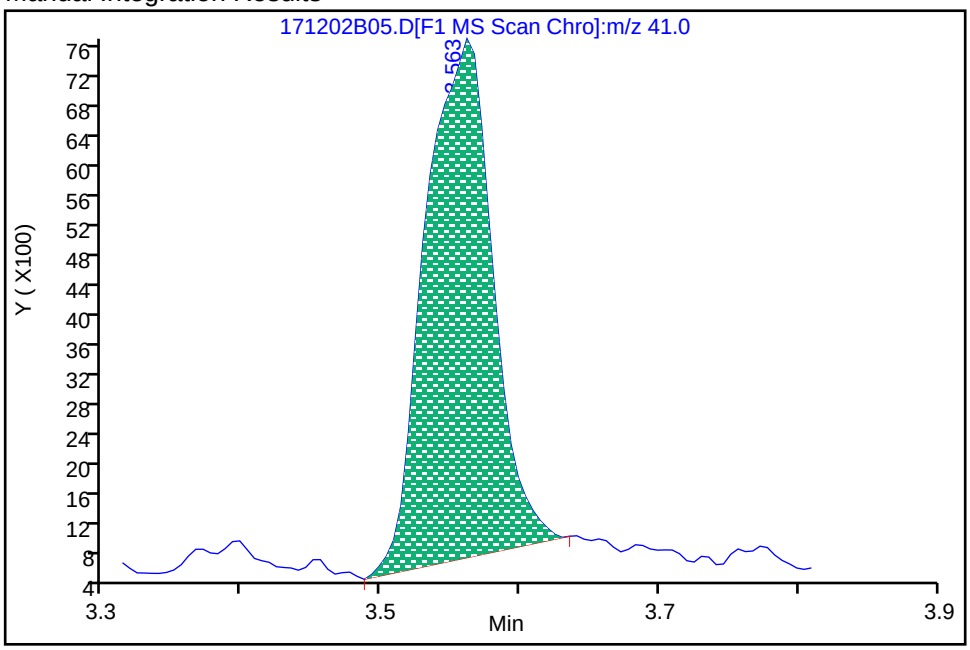
Processing Integration Results

RT: 3.563
Area: 25412
Amount: 6.0499
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 23254
Amount: 7.1958
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

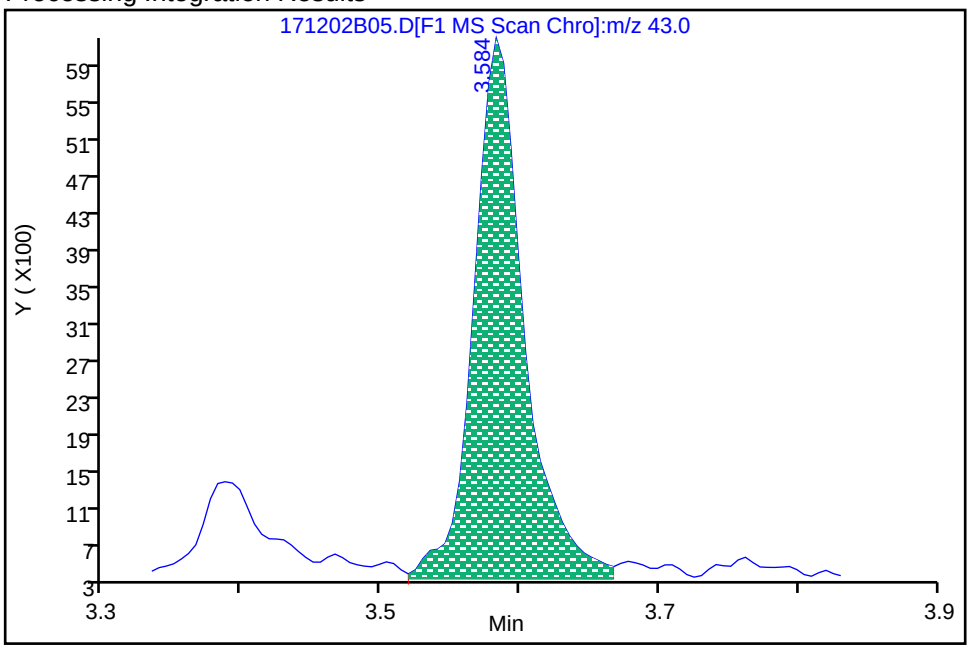
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

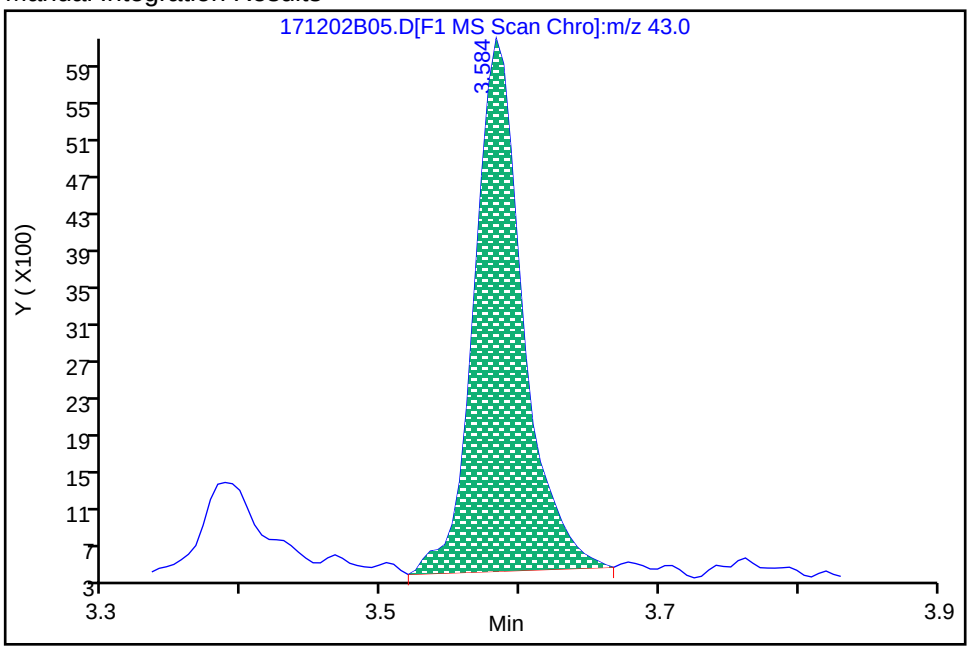
Processing Integration Results

RT: 3.584
Area: 14789
Amount: 0.50399
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.584
Area: 13952
Amount: 0.50286
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:50:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

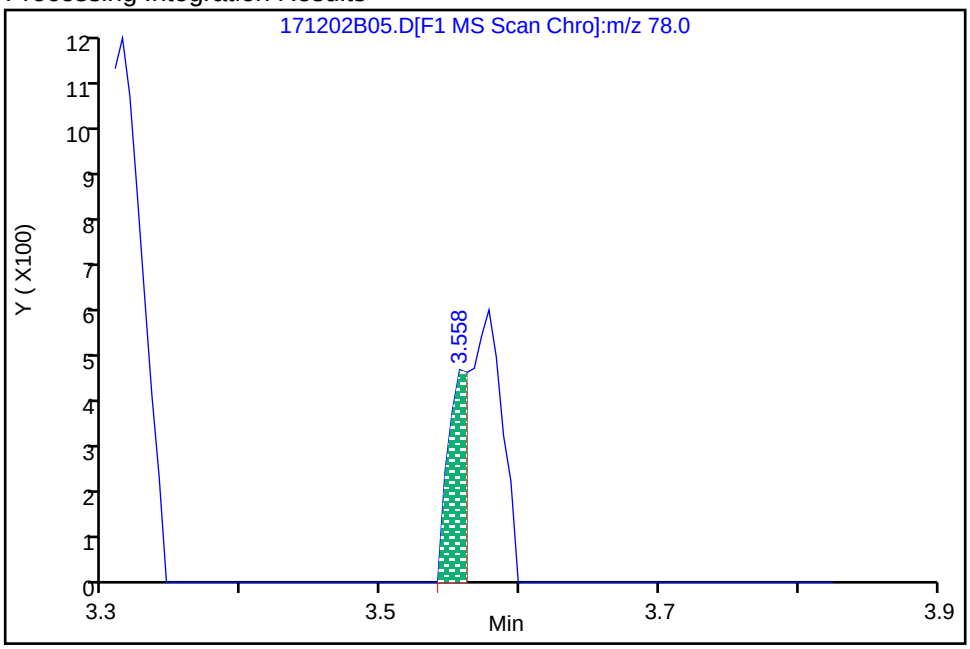
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

17 Allyl chloride, CAS: 107-05-1

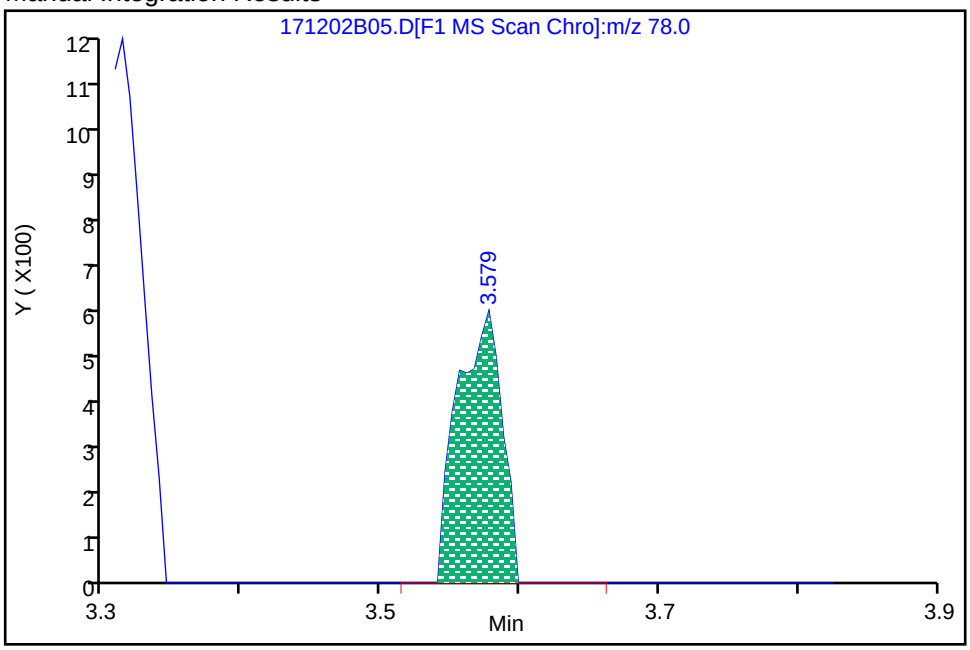
Processing Integration Results

RT: 3.558
Area: 414
Amount: 0.46287
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.579
Area: 1317
Amount: 0.45442
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

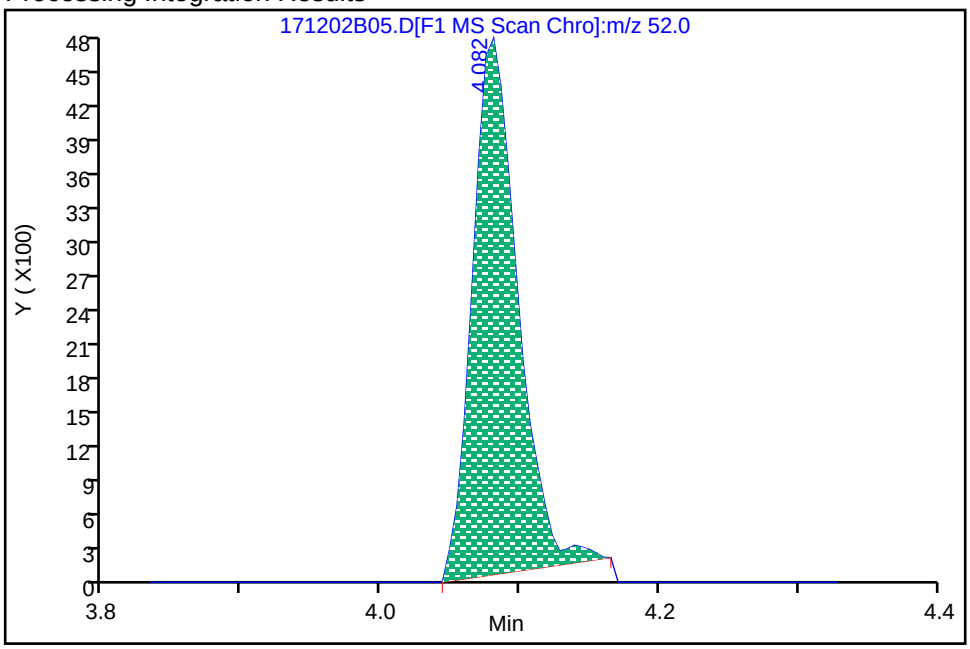
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

20 Acrylonitrile, CAS: 107-13-1

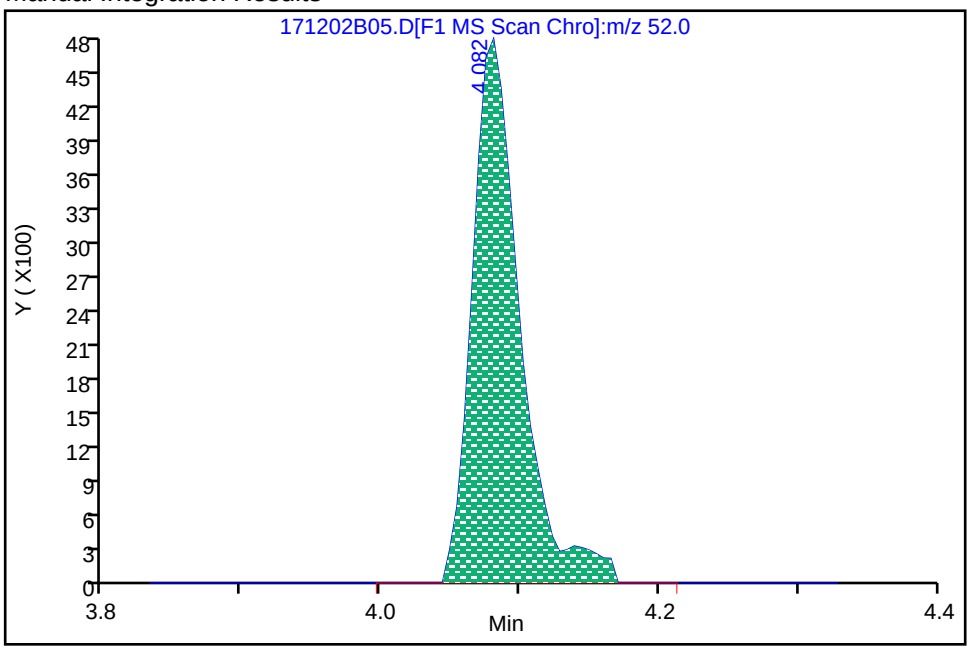
Processing Integration Results

RT: 4.082
Area: 10552
Amount: 1.0076
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.082
Area: 11360
Amount: 1.0496
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:40:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

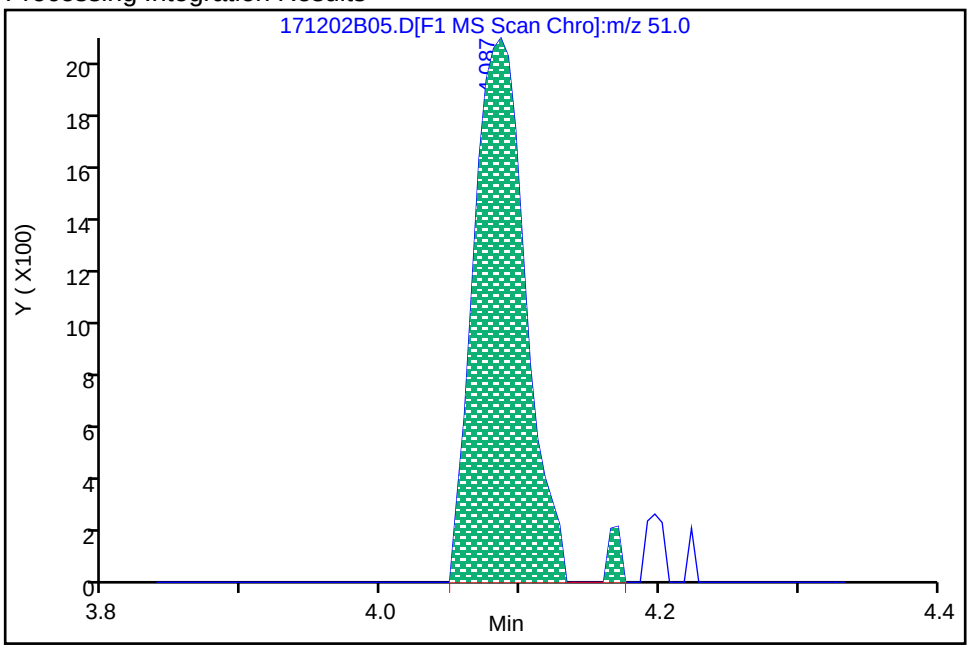
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

20 Acrylonitrile, CAS: 107-13-1

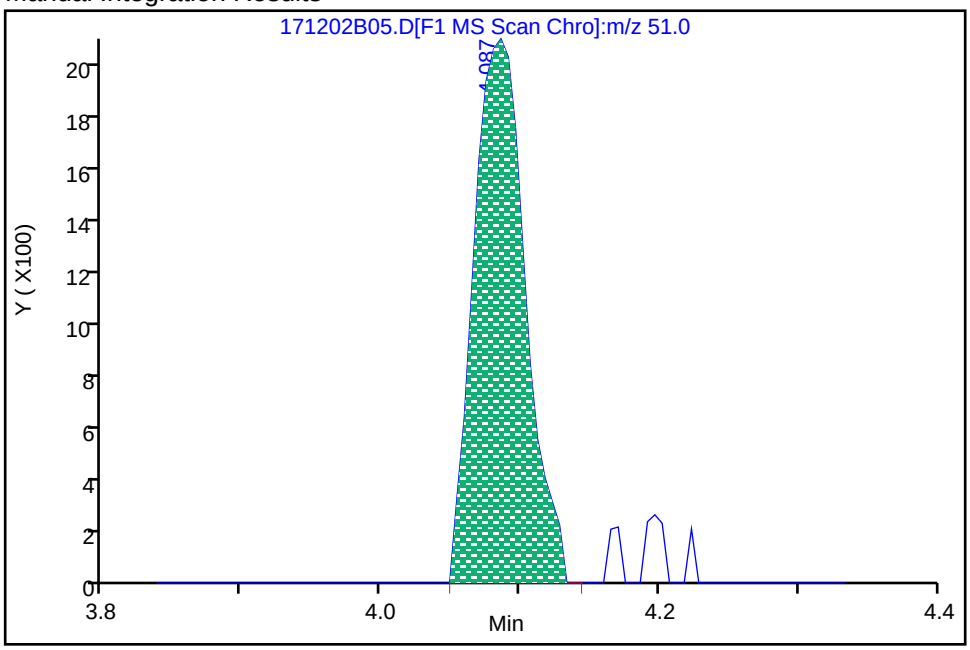
Processing Integration Results

RT: 4.087
Area: 5403
Amount: 1.0076
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.087
Area: 5274
Amount: 1.0496
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

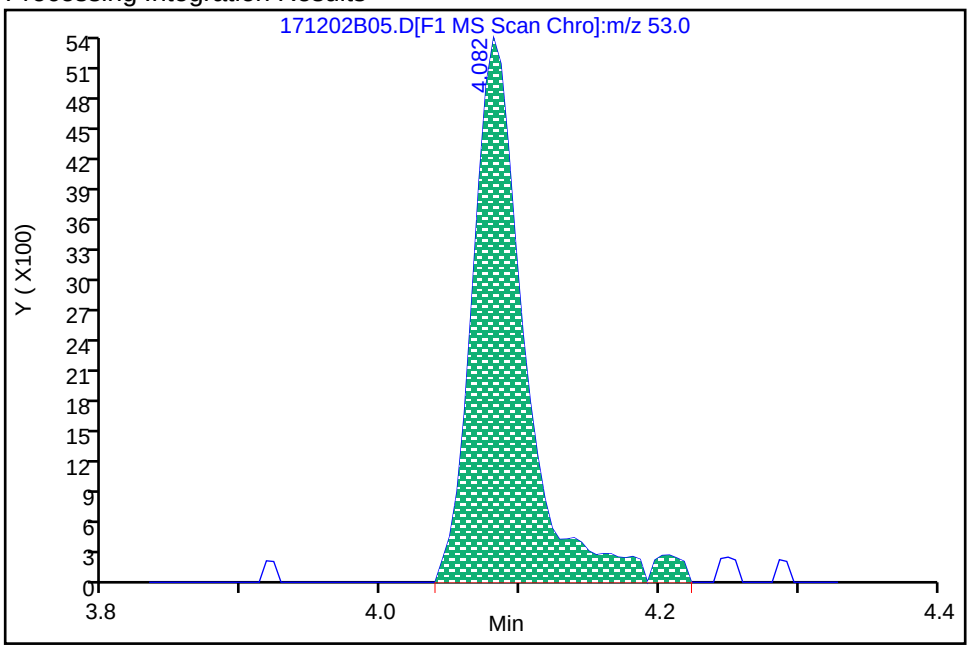
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

20 Acrylonitrile, CAS: 107-13-1

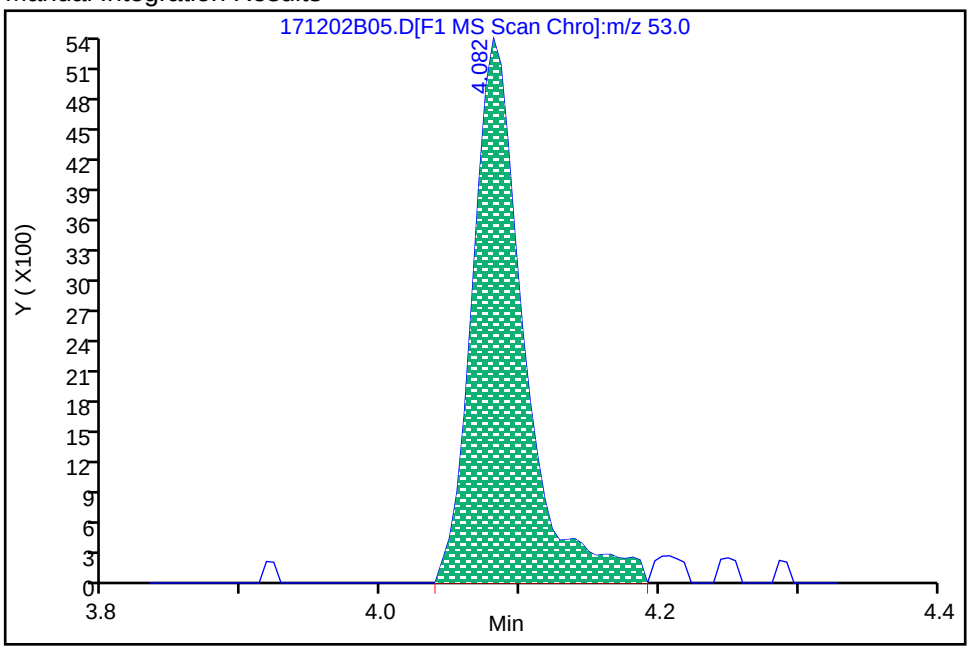
Processing Integration Results

RT: 4.082
Area: 14002
Amount: 1.0076
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.082
Area: 13628
Amount: 1.0496
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

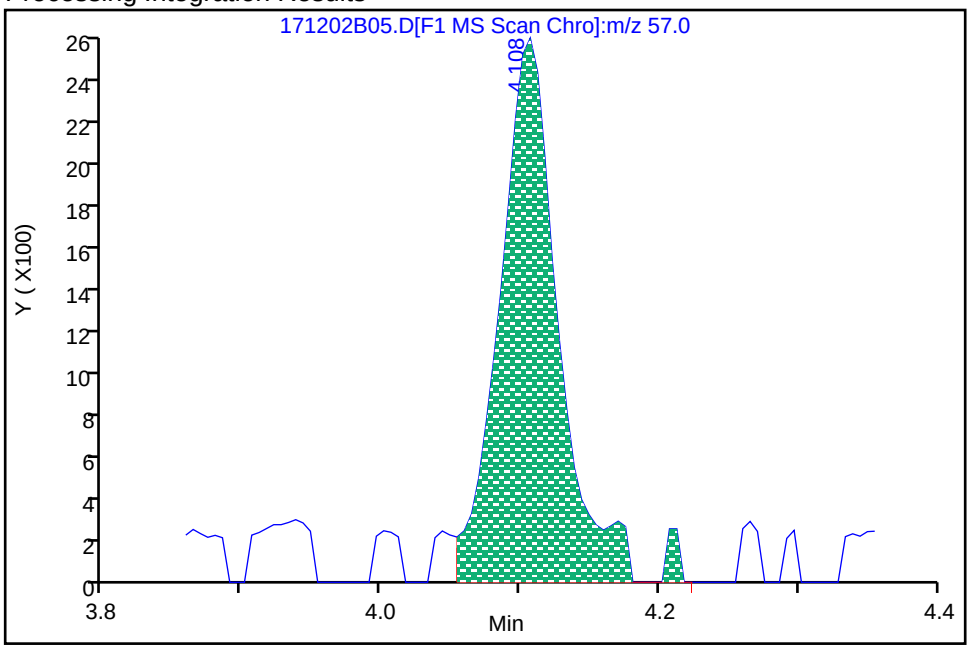
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

22 tert-Butyl methyl ether(MTBE), CAS: 1634-04-4

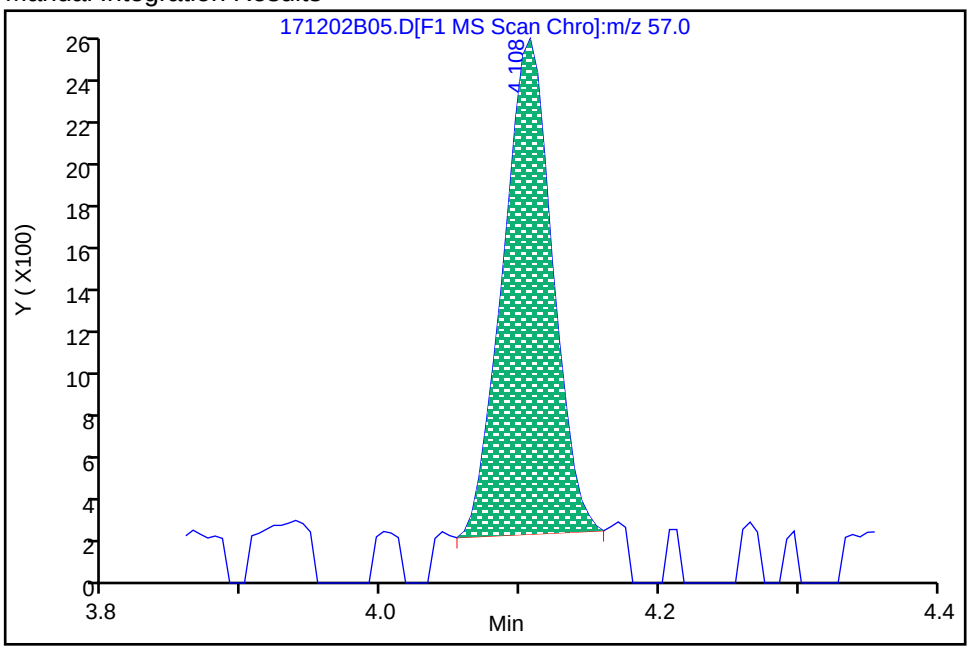
Processing Integration Results

RT: 4.108
Area: 7469
Amount: 0.49836
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.108
Area: 5615
Amount: 0.52300
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

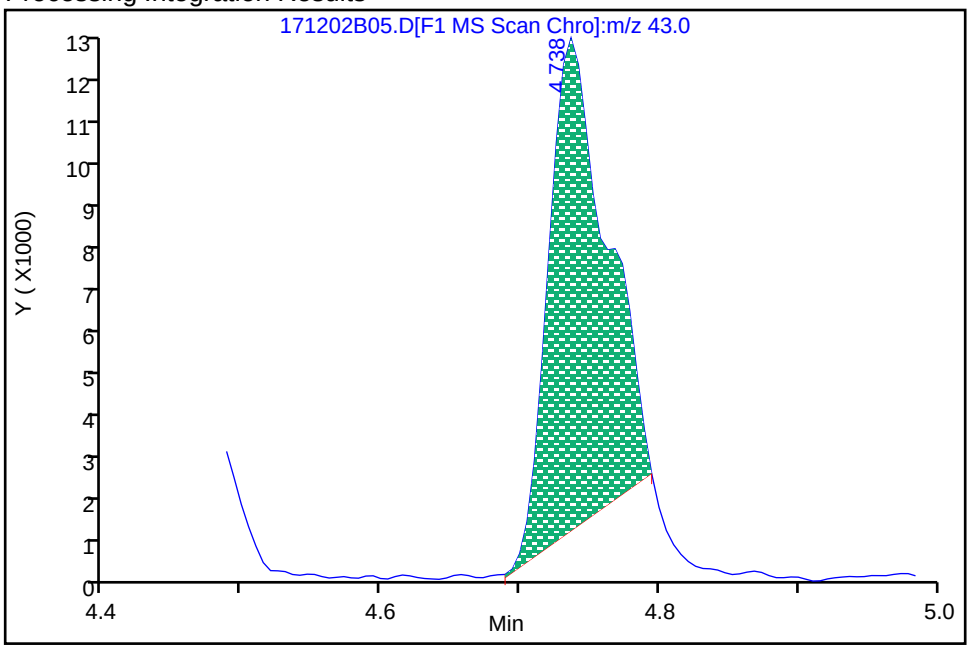
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

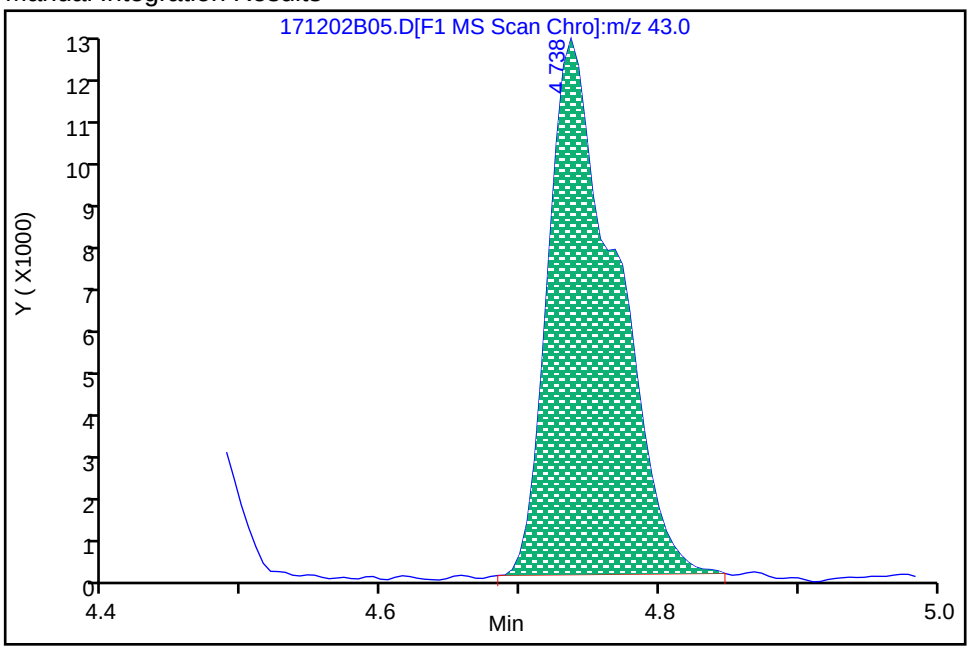
Processing Integration Results

RT: 4.738
Area: 31566
Amount: 0.44231
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.738
Area: 39983
Amount: 0.43124
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:05 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

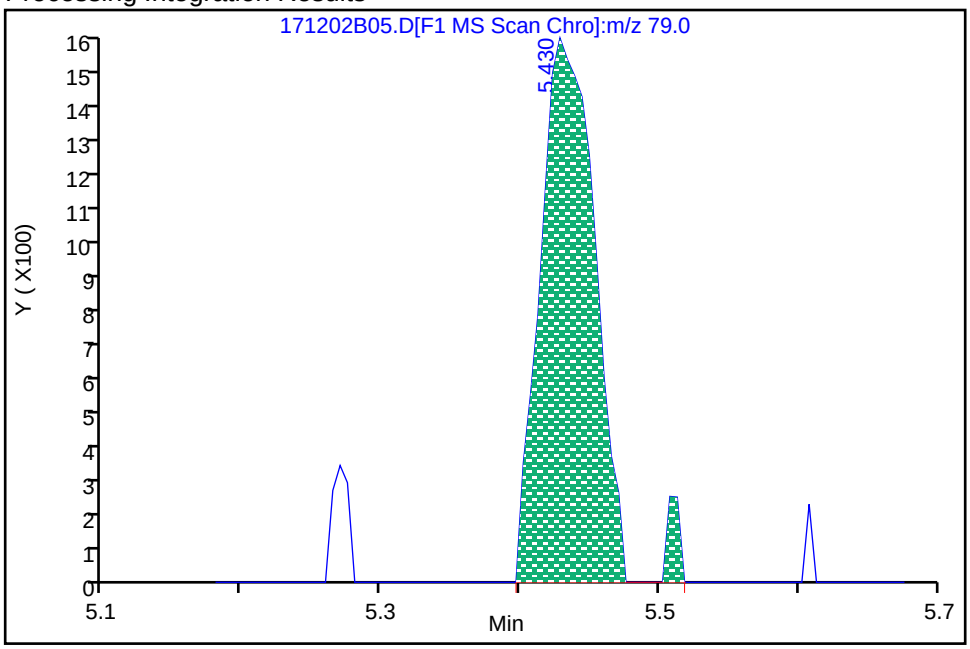
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

31 2,2-Dichloropropane, CAS: 594-20-7

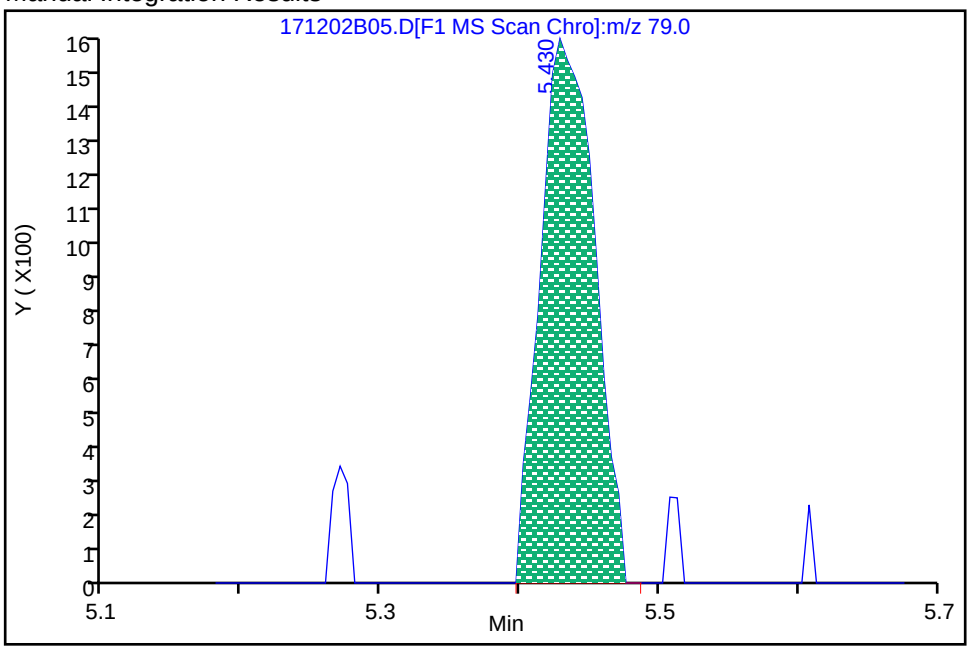
Processing Integration Results

RT: 5.430
Area: 4364
Amount: 0.51298
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.430
Area: 4211
Amount: 0.52490
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

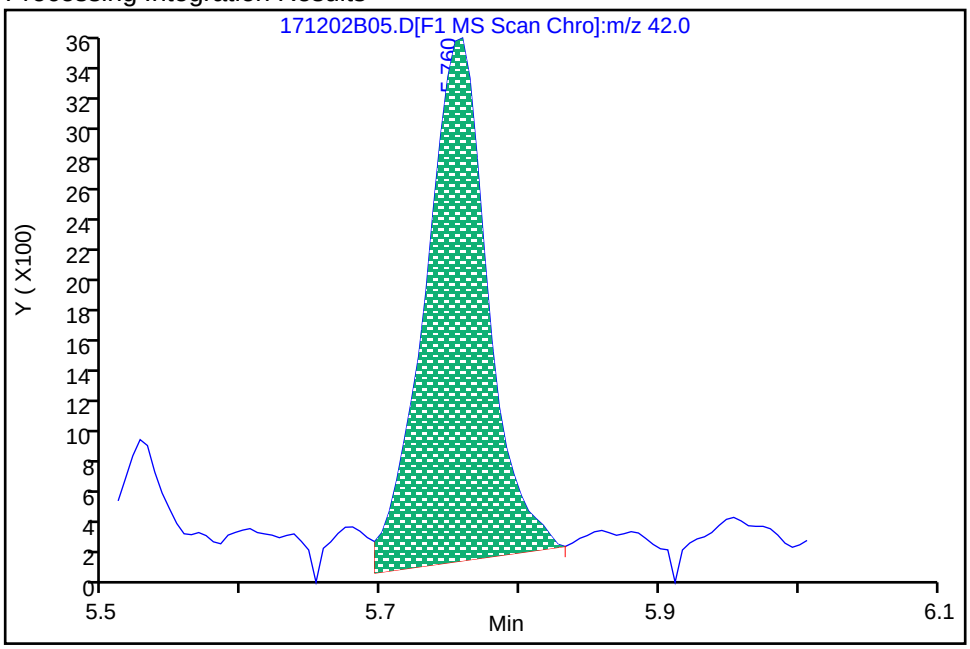
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

36 Tetrahydrofuran, CAS: 109-99-9

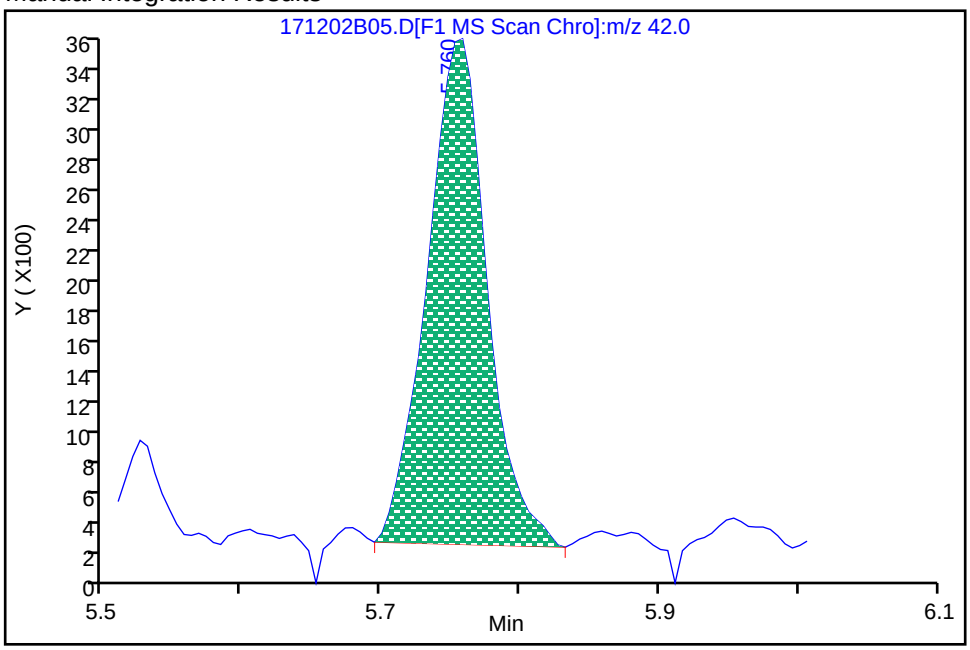
Processing Integration Results

RT: 5.760
Area: 10804
Amount: 0.56465
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.760
Area: 9950
Amount: 0.58817
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

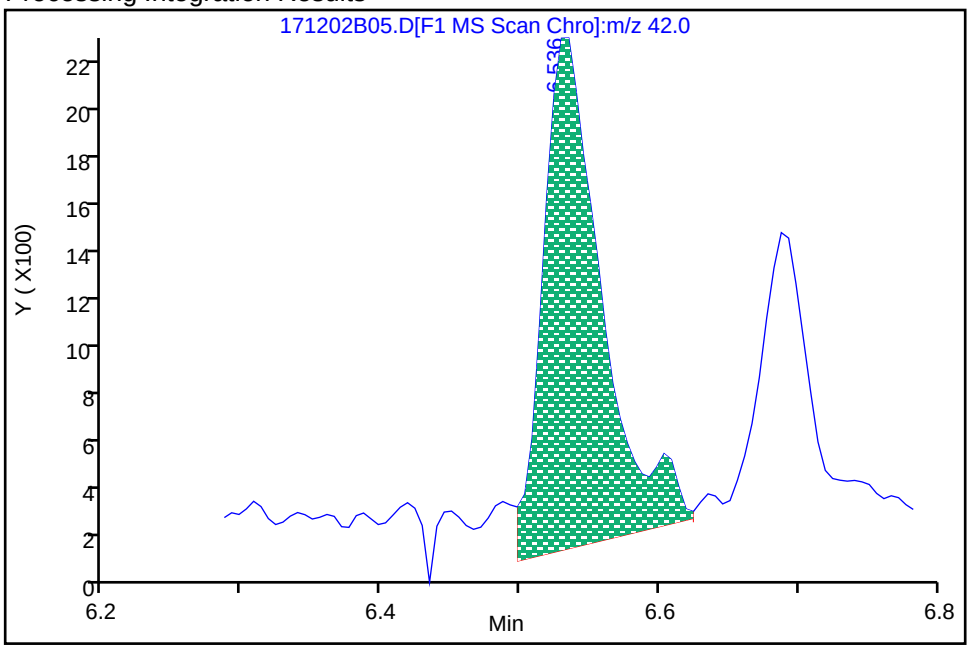
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

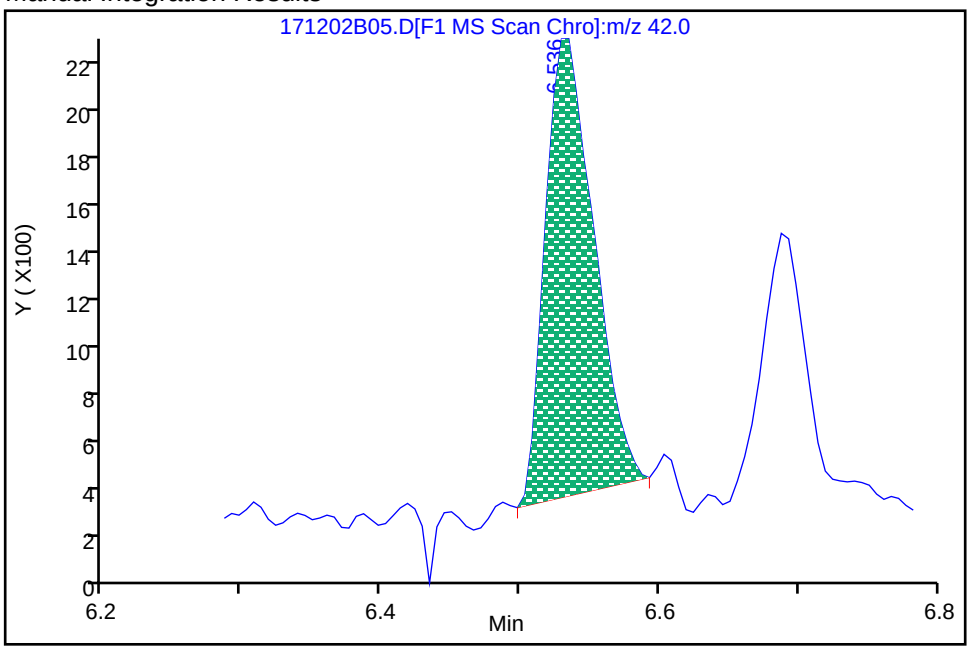
Processing Integration Results

RT: 6.536
Area: 6234
Amount: 5.0834
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.536
Area: 4617
Amount: 4.0508
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

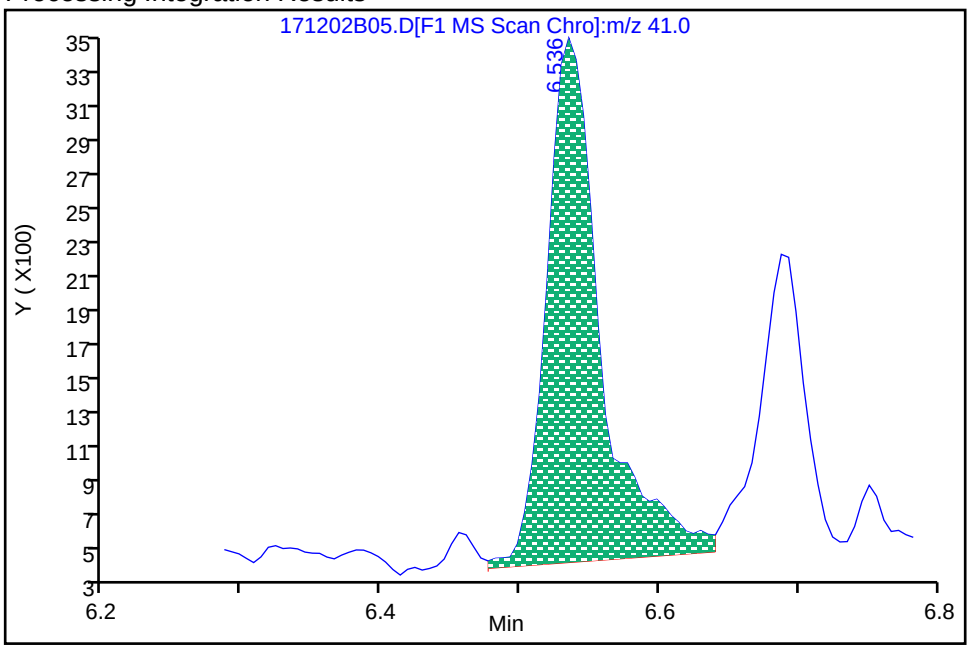
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

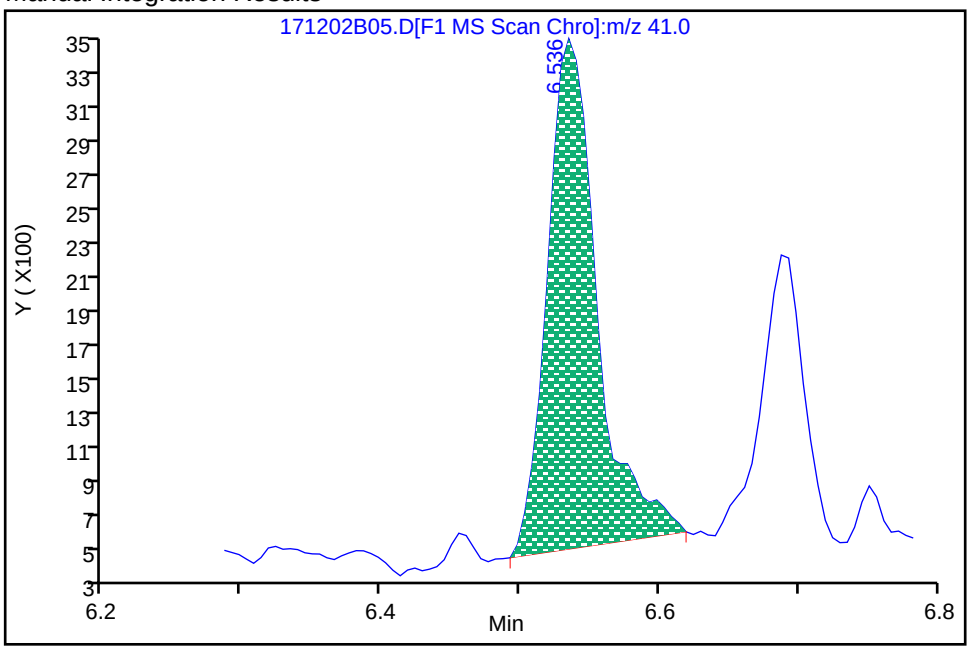
Processing Integration Results

RT: 6.536
Area: 8008
Amount: 5.0834
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.536
Area: 7123
Amount: 4.0508
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

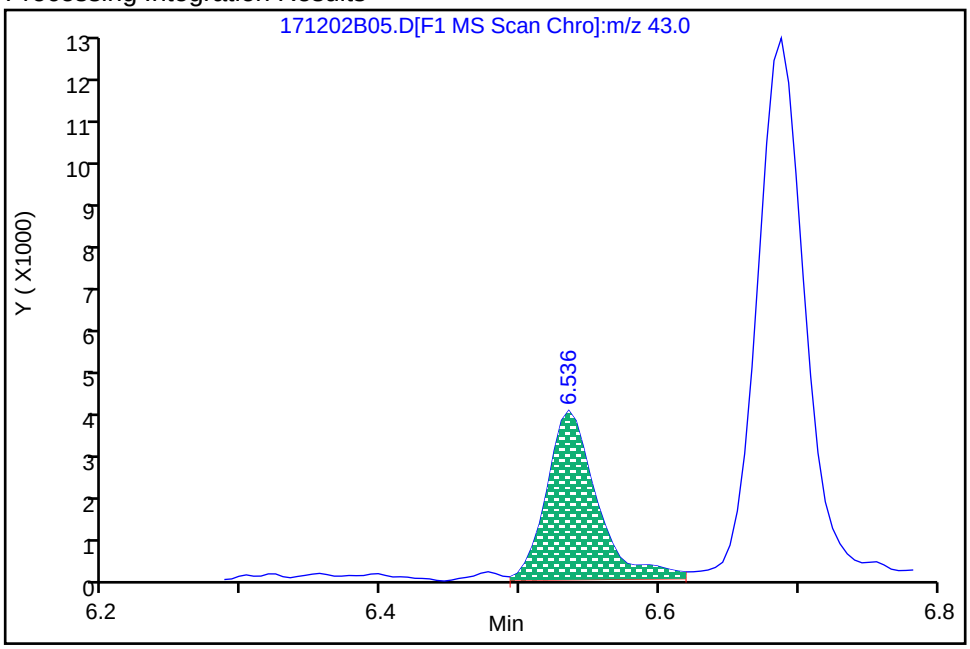
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

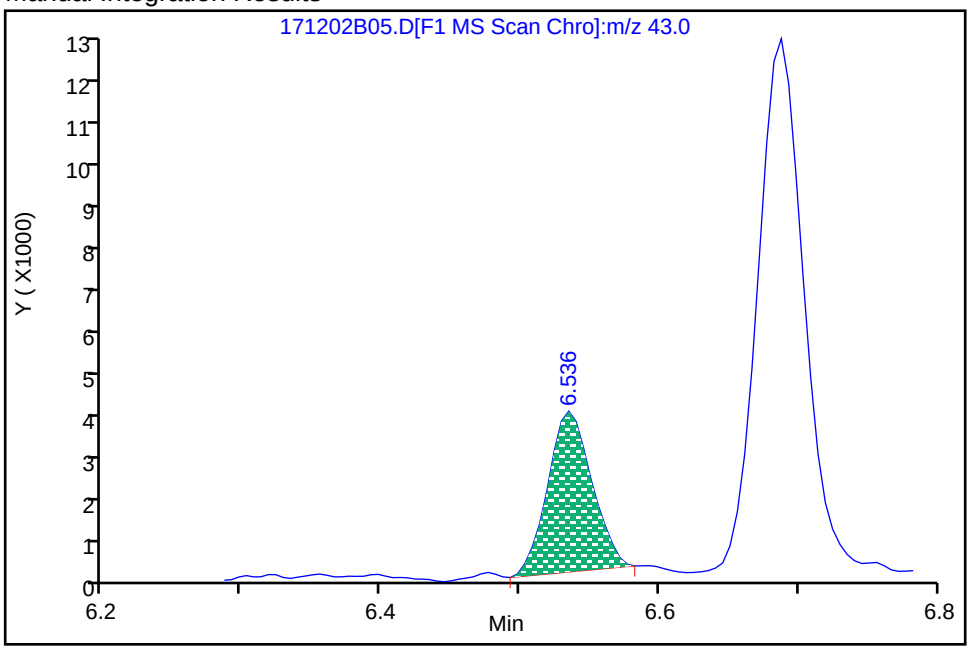
Processing Integration Results

RT: 6.536
Area: 9235
Amount: 5.0834
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.536
Area: 7664
Amount: 4.0508
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

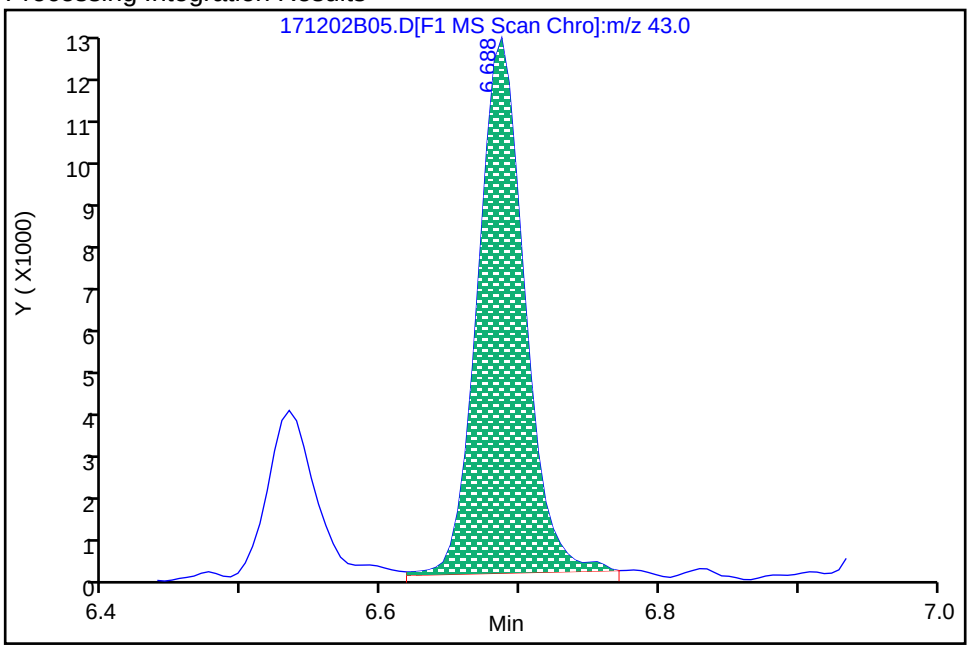
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

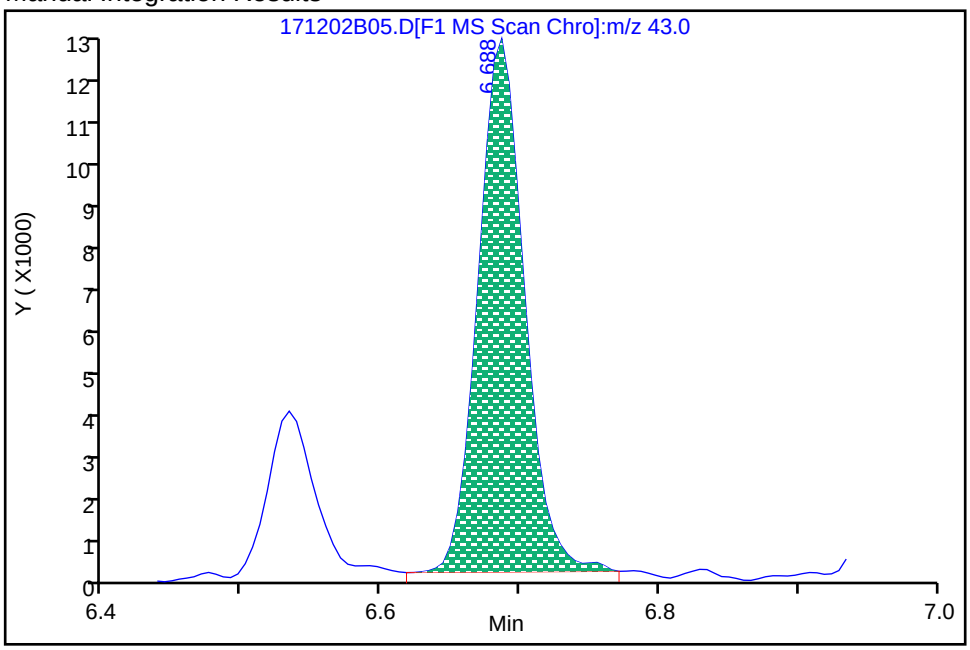
Processing Integration Results

RT: 6.688
Area: 27098
Amount: 0.48974
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 26742
Amount: 0.48455
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

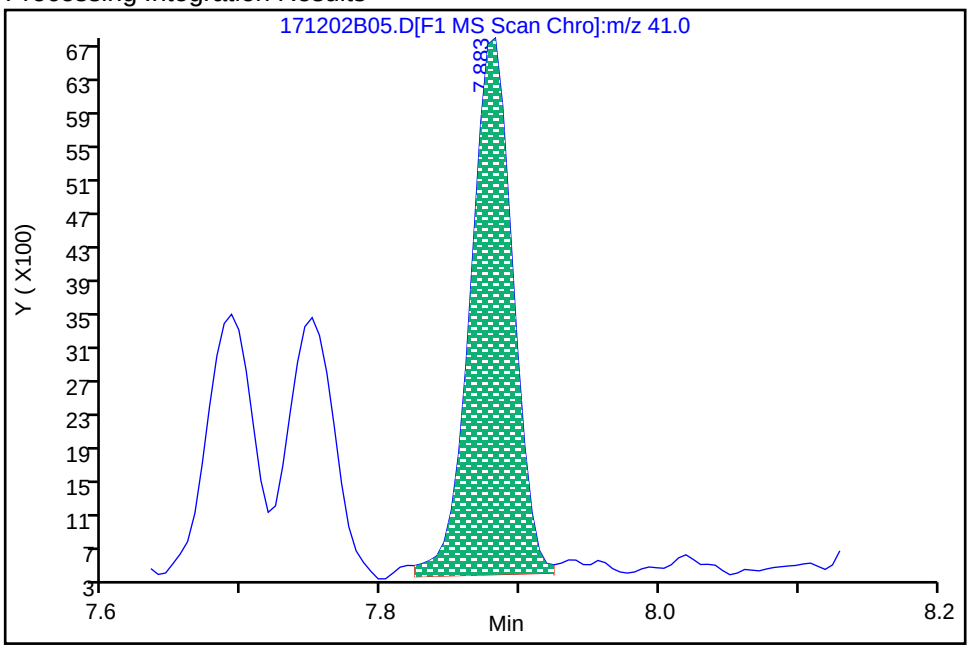
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

57 Methyl methacrylate, CAS: 80-62-6

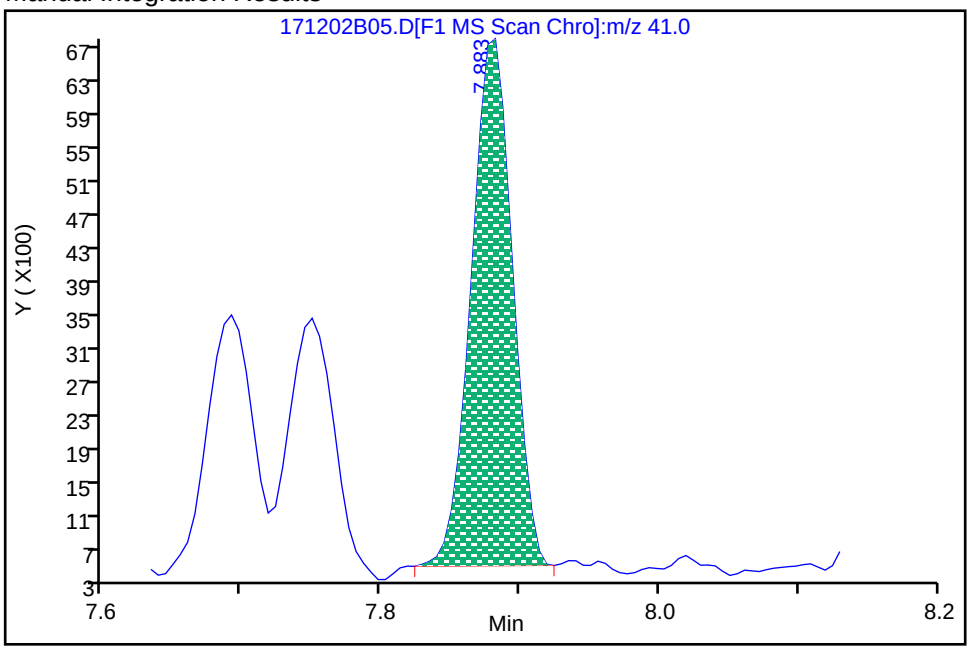
Processing Integration Results

RT: 7.883
Area: 13250
Amount: 0.49432
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 7.883
Area: 12565
Amount: 0.46554
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

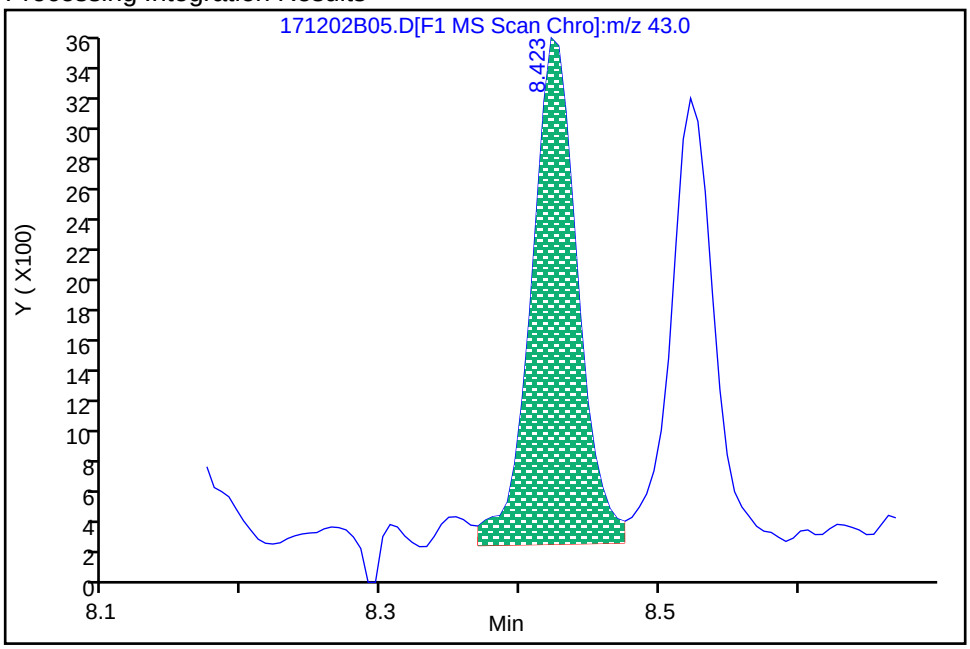
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

60 2-nitropropane, CAS: 79-46-9

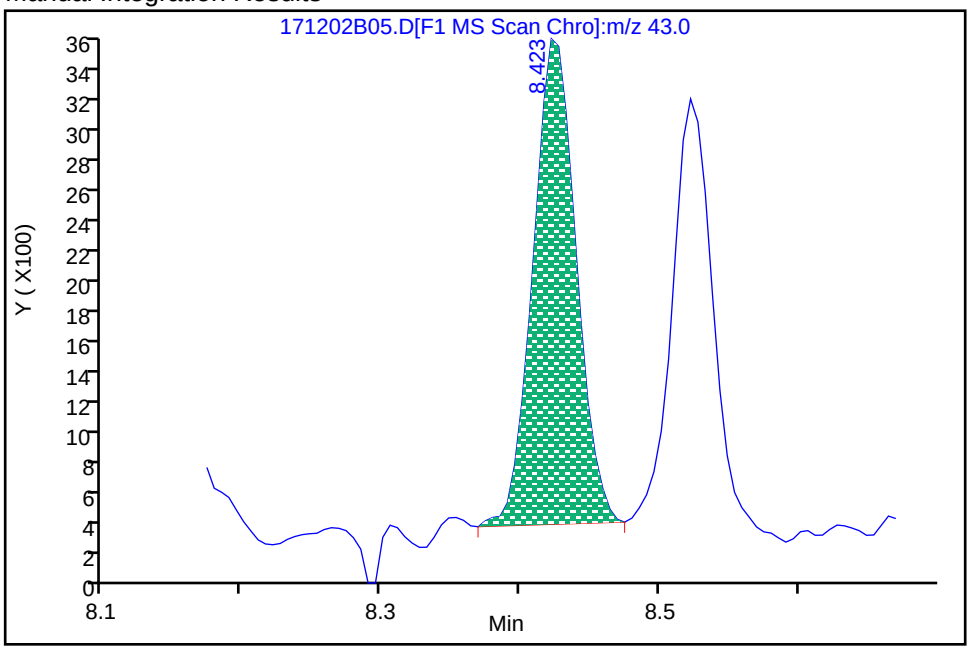
Processing Integration Results

RT: 8.423
Area: 7568
Amount: 0.52181
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 8.423
Area: 6729
Amount: 0.48797
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

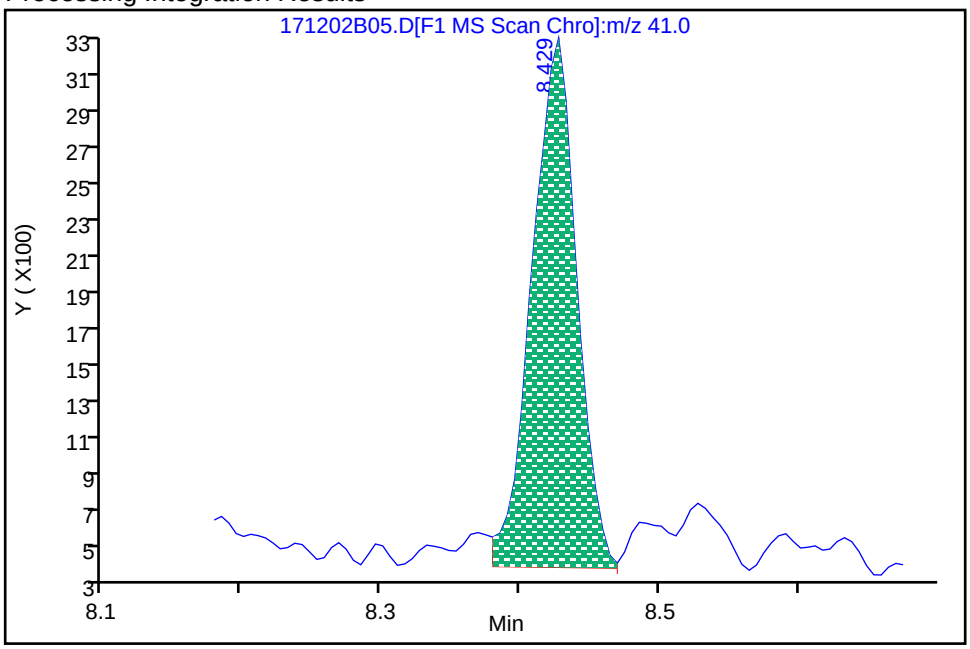
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

60 2-nitropropane, CAS: 79-46-9

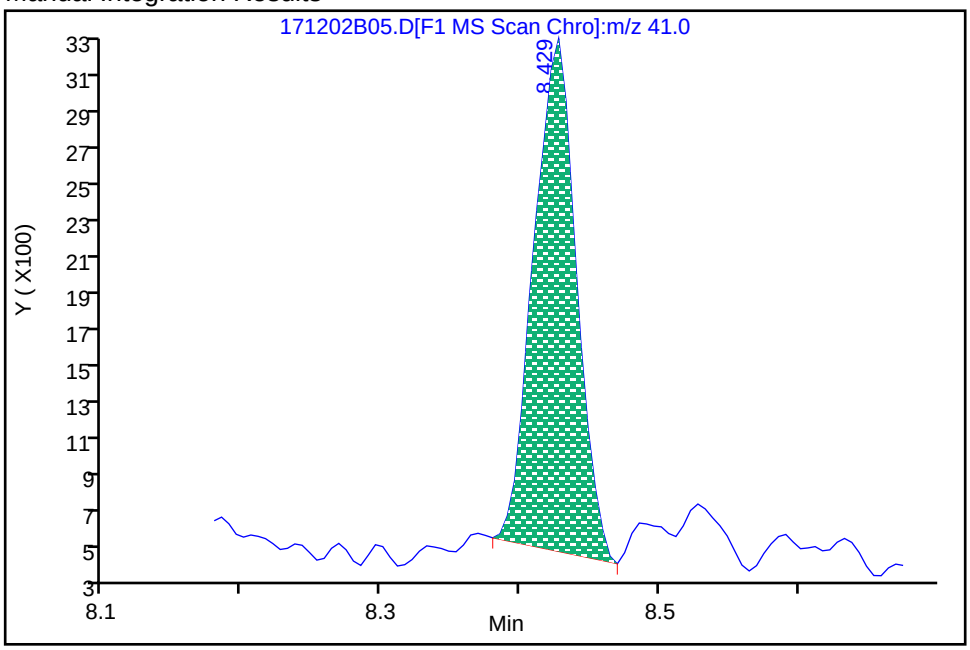
Processing Integration Results

RT: 8.429
Area: 6200
Amount: 0.52181
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 8.429
Area: 5711
Amount: 0.48797
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

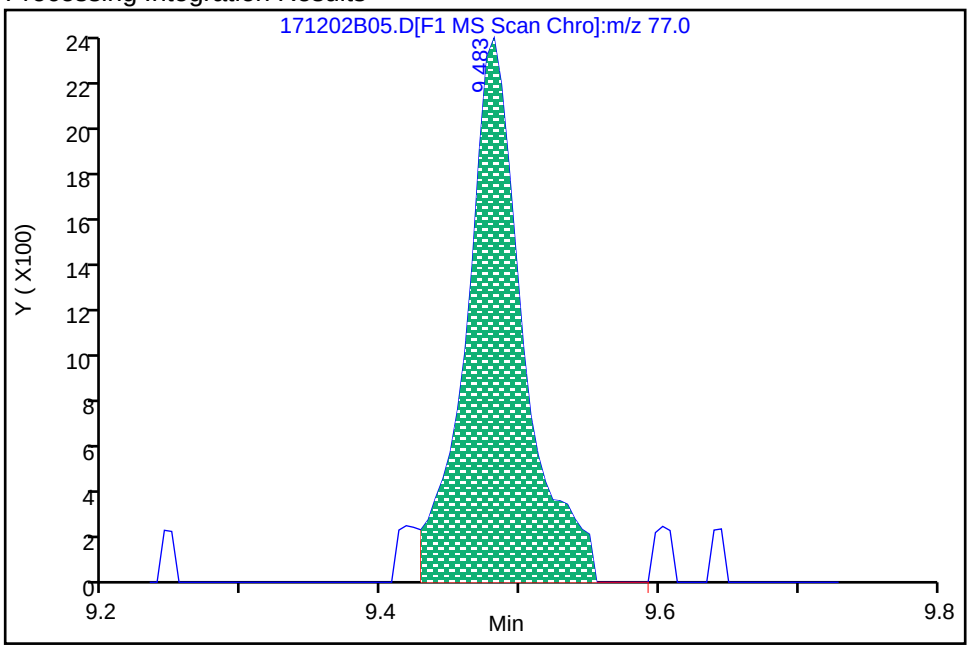
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

66 trans-1,3-Dichloropropene, CAS: 10061-02-6

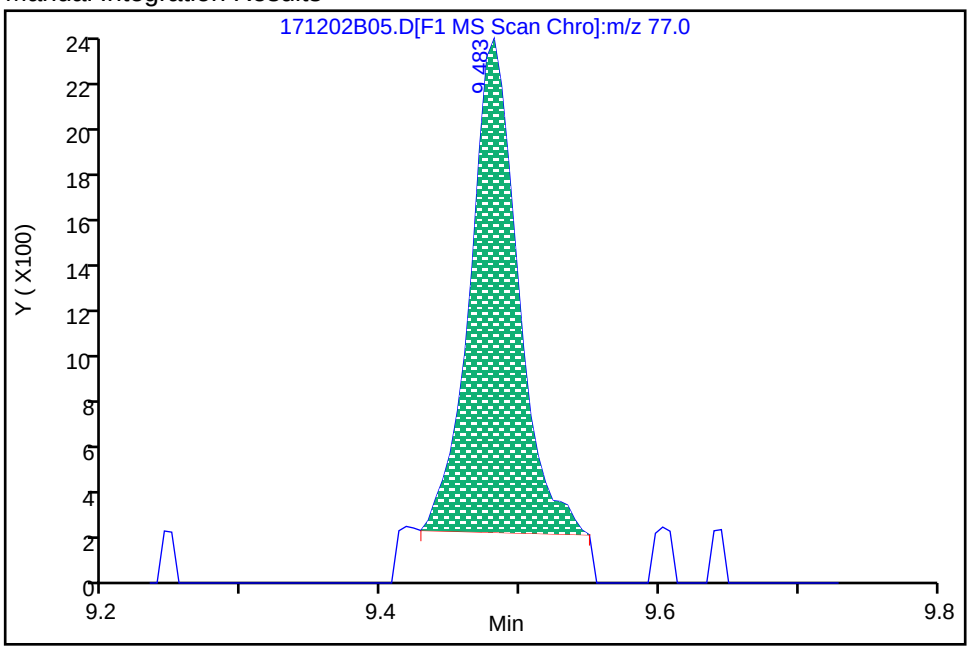
Processing Integration Results

RT: 9.483
Area: 6717
Amount: 0.46463
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 9.483
Area: 5103
Amount: 0.44815
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

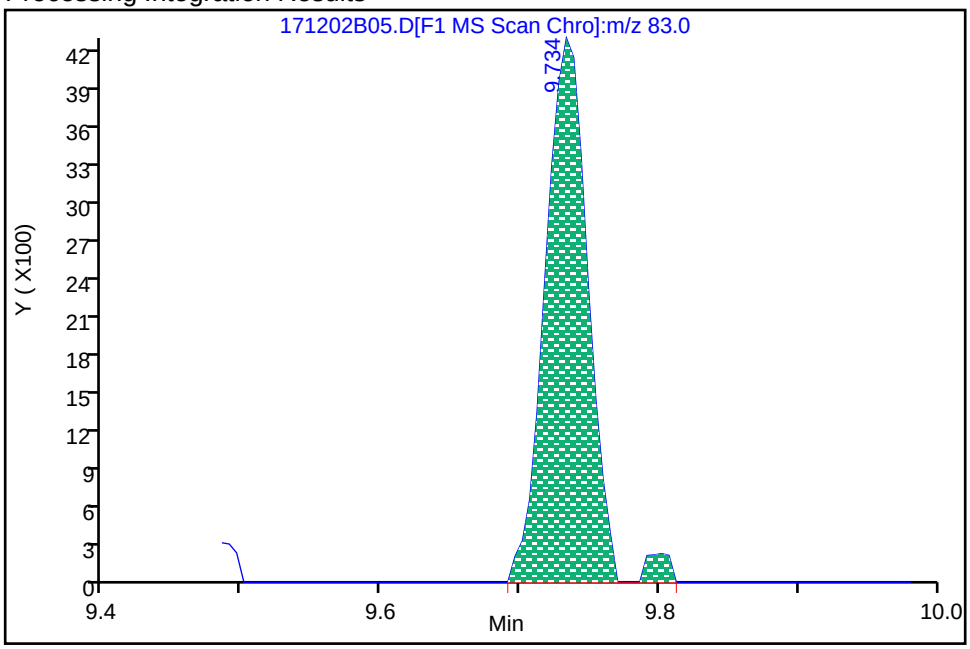
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

68 1,1,2-Trichloroethane, CAS: 79-00-5

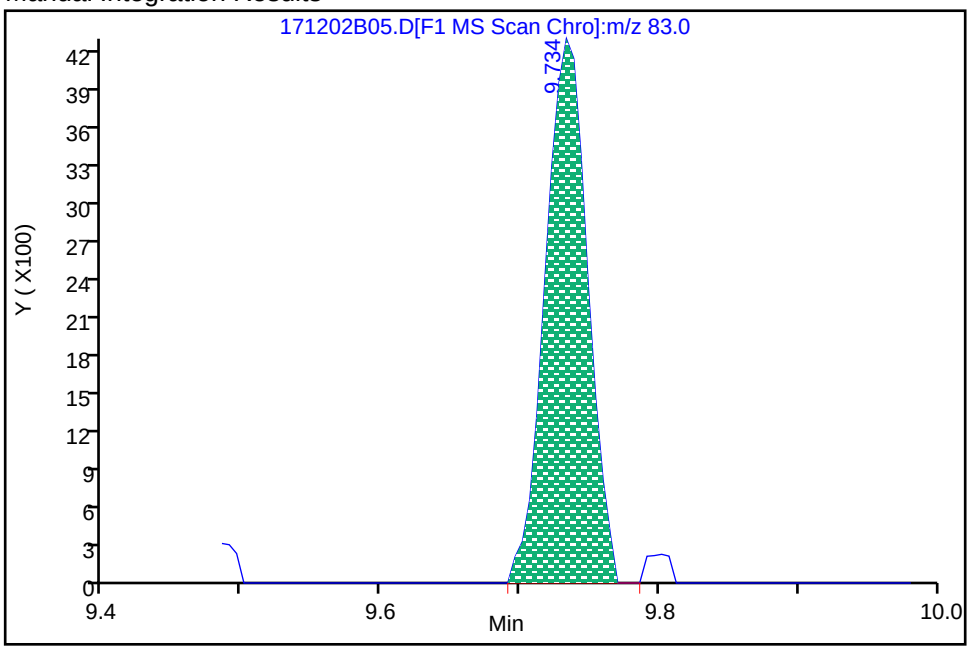
Processing Integration Results

RT: 9.734
Area: 9189
Amount: 0.51160
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 9.734
Area: 8922
Amount: 0.50694
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:42:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

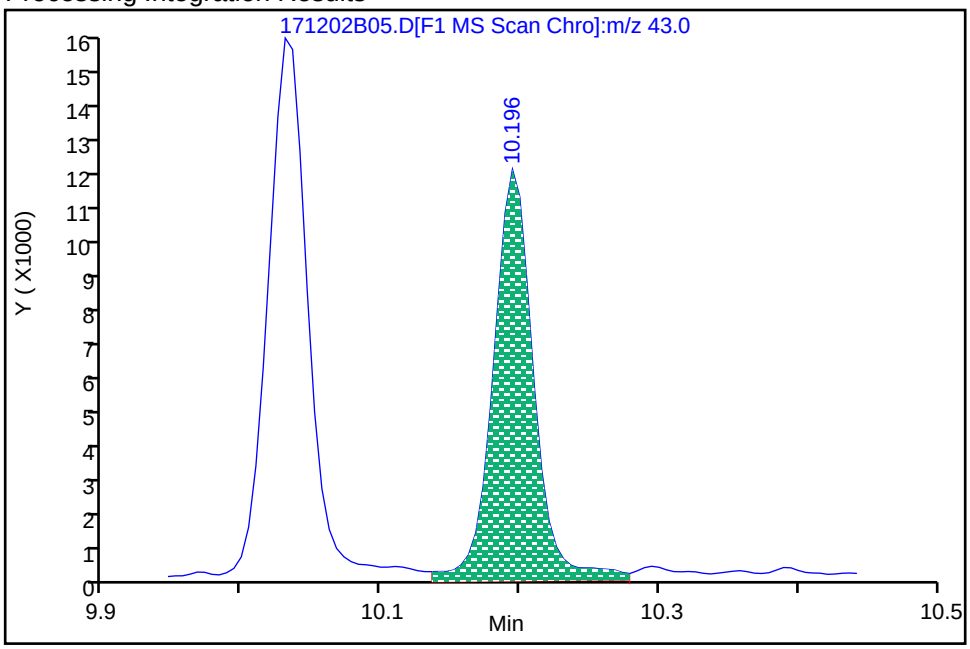
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

73 n-Butyl acetate, CAS: 123-86-4

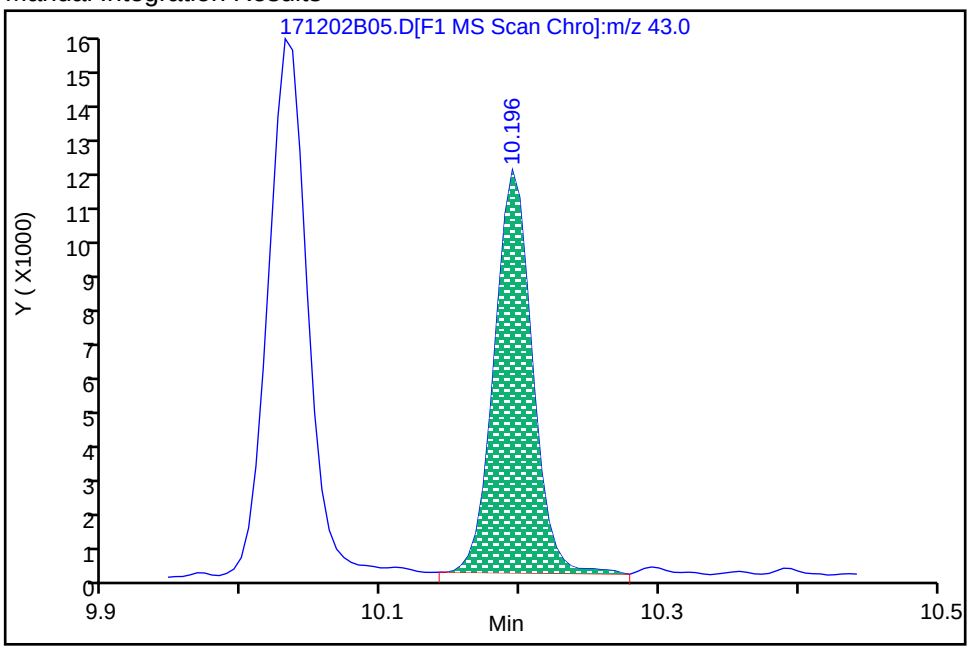
Processing Integration Results

RT:	10.196
Area:	23905
Amount:	0.51615
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	10.196
Area:	21806
Amount:	0.47943
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:53:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

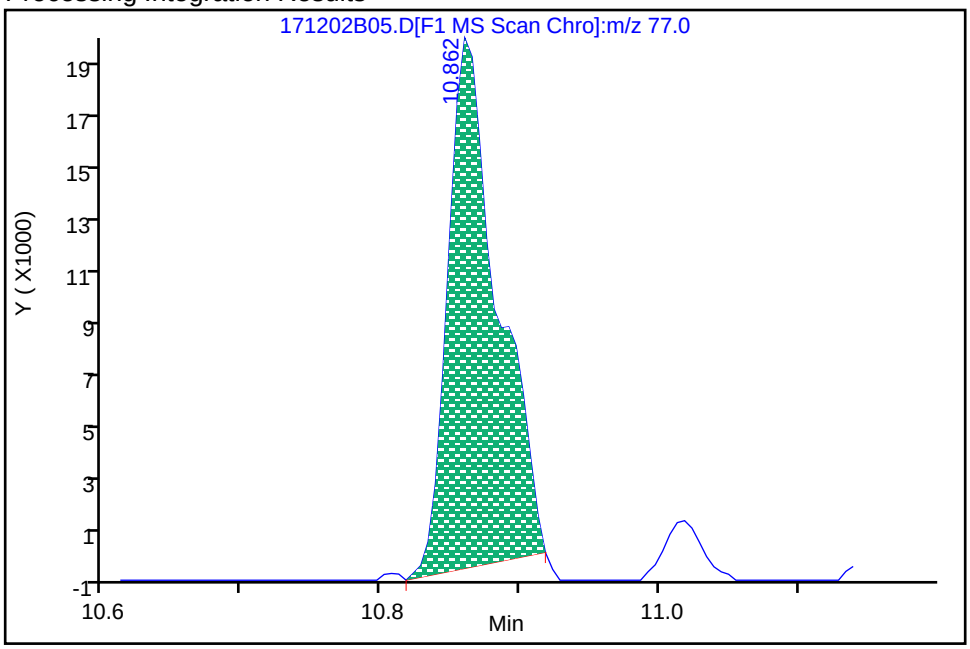
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

77 Chlorobenzene, CAS: 108-90-7

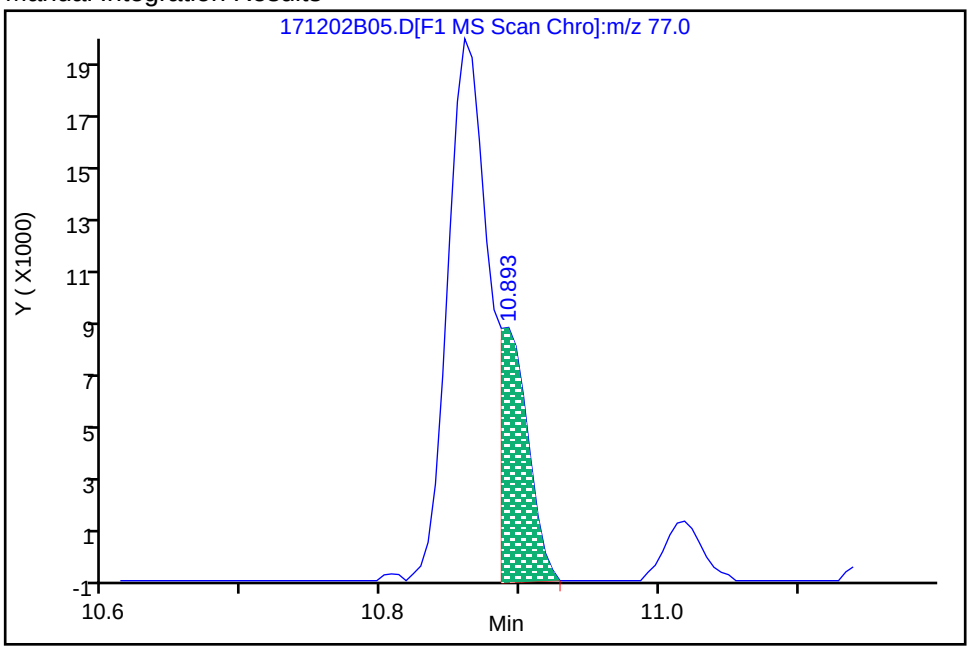
Processing Integration Results

RT: 10.862
Area: 46397
Amount: 0.49393
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.893
Area: 12923
Amount: 0.49079
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:47:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

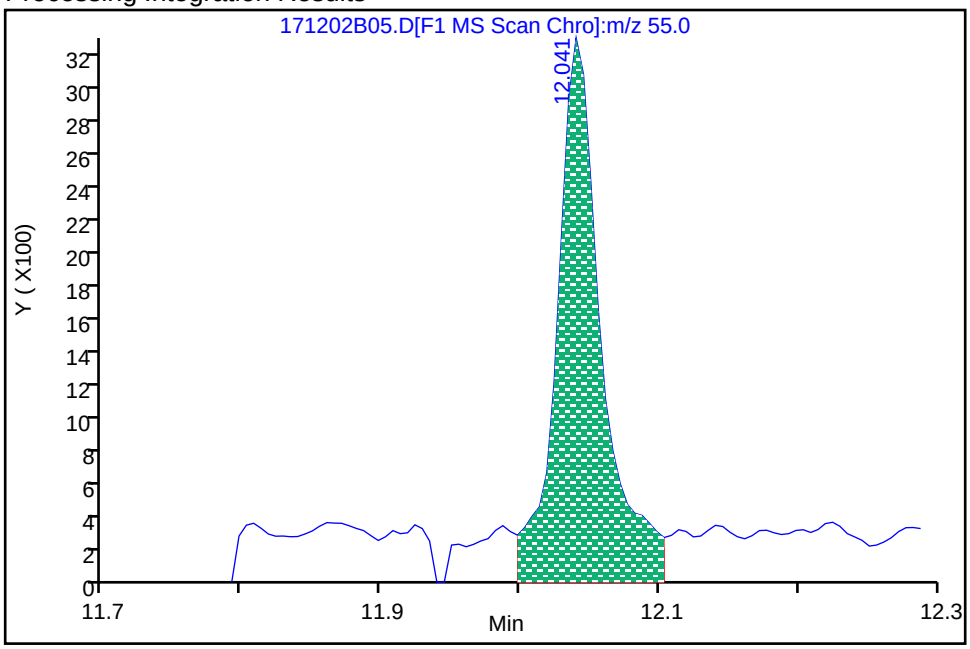
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

85 Cyclohexanone, CAS: 108-94-1

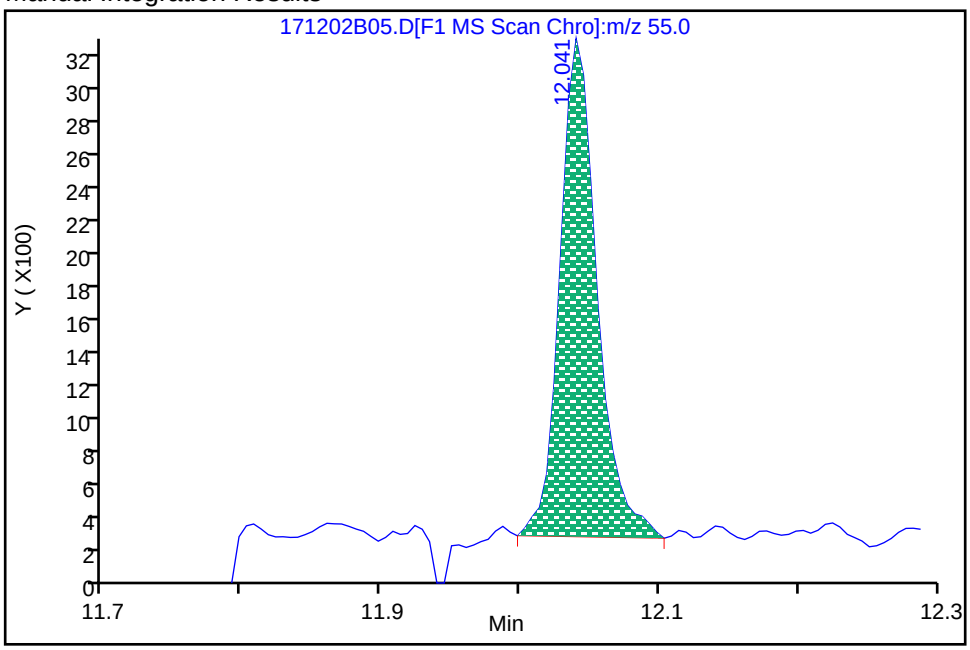
Processing Integration Results

RT:	12.041
Area:	7120
Amount:	6.1689
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	12.041
Area:	5418
Amount:	6.1322
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:43:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

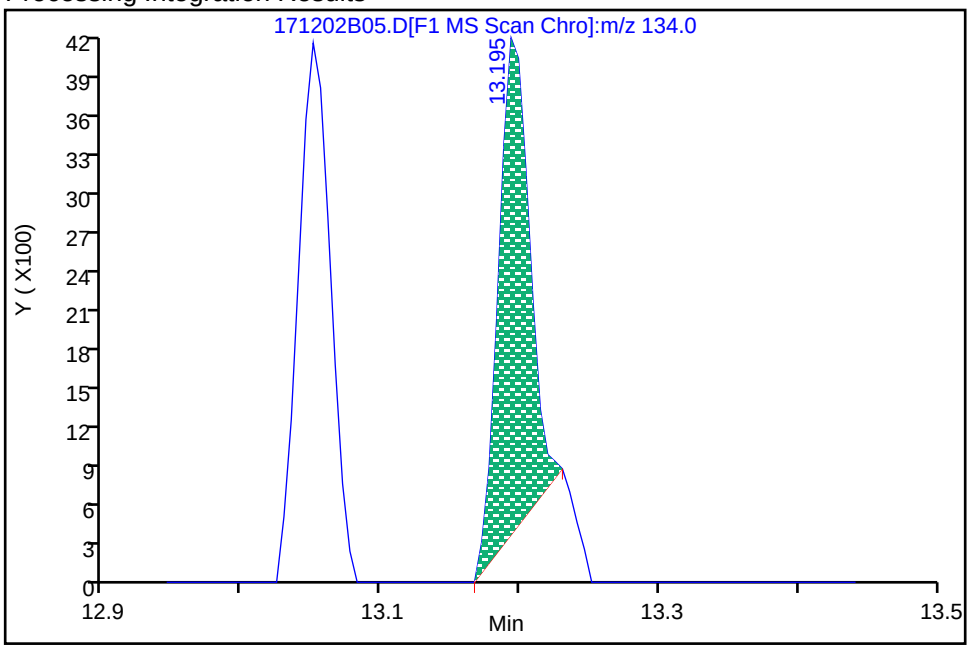
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

99 p-Isopropyltoluene, CAS: 99-87-6

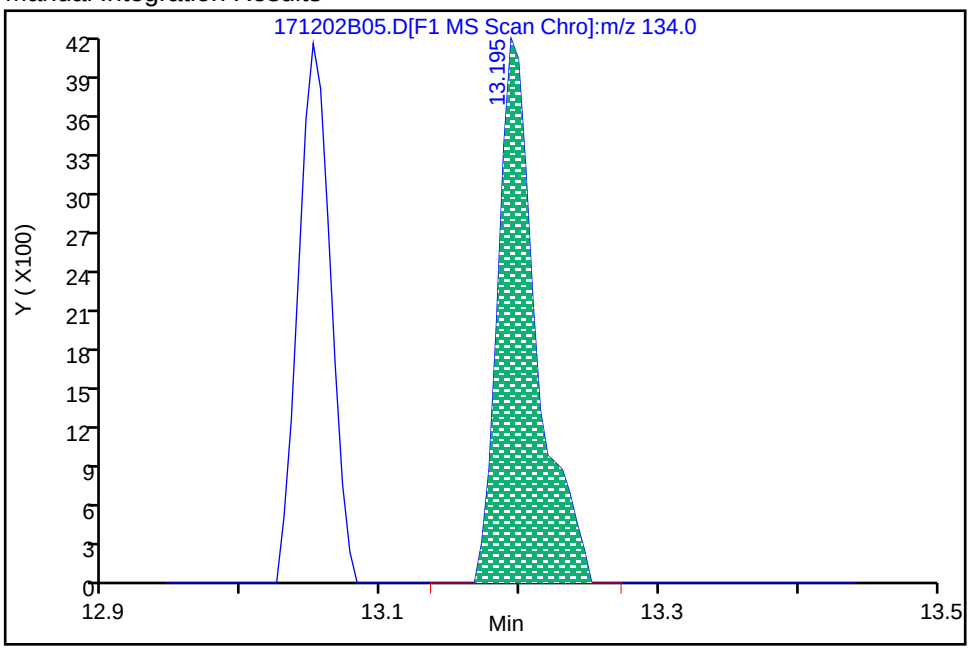
Processing Integration Results

RT: 13.195
Area: 5845
Amount: 0.49621
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 13.195
Area: 8078
Amount: 0.49498
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:43:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

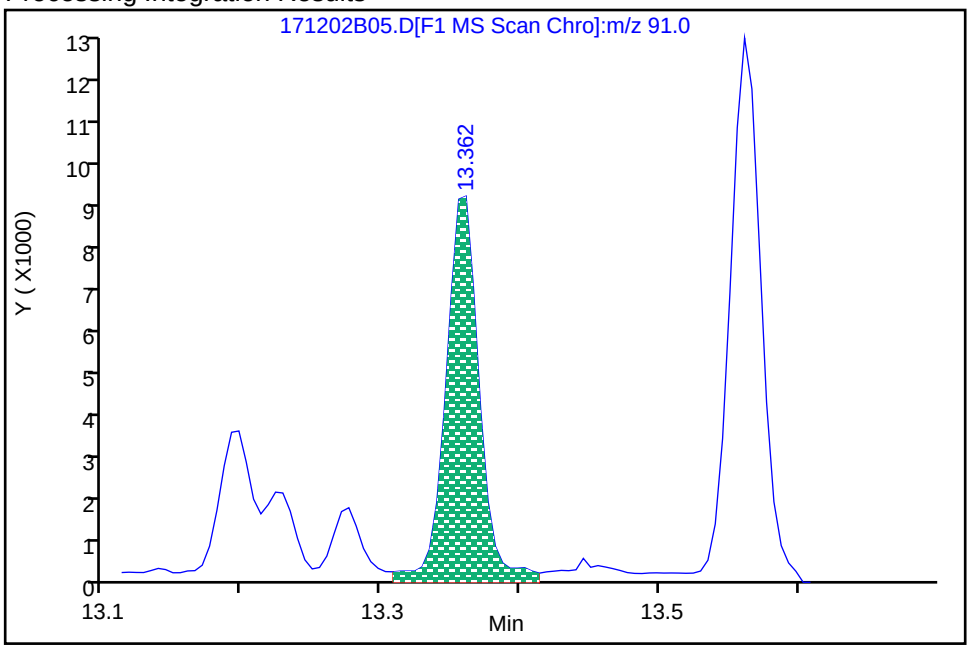
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B05.D		
Injection Date:	03-Dec-2019 01:21:30	Inst. ID:	msd17.i
Client ID:	1mL/100mL VSTD050	Lab ID:	VSTD0.5BQ
Sample Info:	17120219B, VSTD0.5BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

102 Benzyl chloride, CAS: 100-44-7

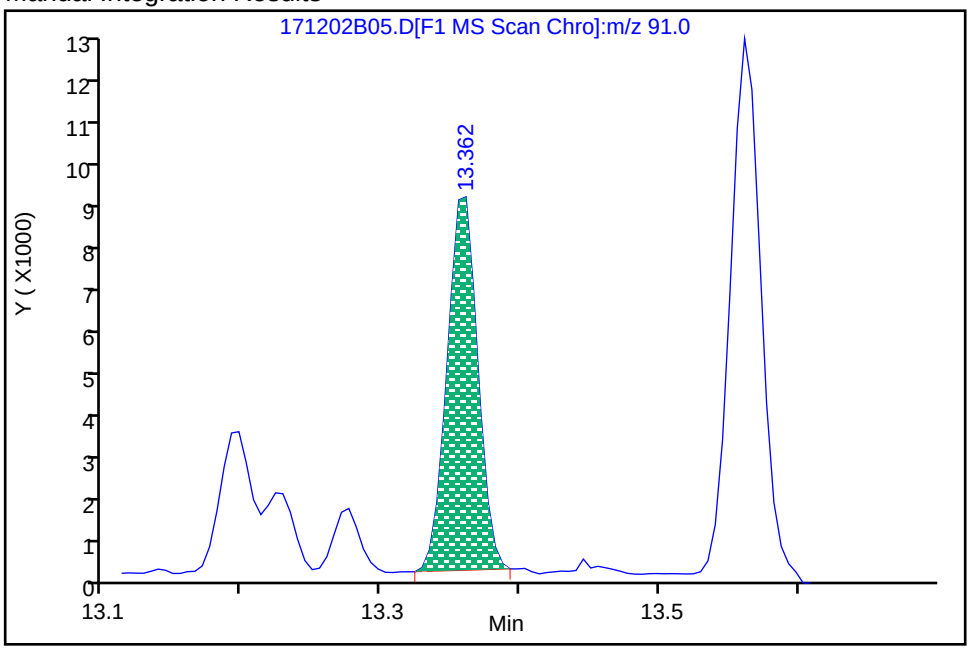
Processing Integration Results

RT:	13.362
Area:	15029
Amount:	0.47621
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	13.362
Area:	13208
Amount:	0.43370
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:43:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D
Lab Sample ID: VSTD001BQ Client Sample ID: 2mL/100mL VSTD050
Injection Date: 03-Dec-2019 01:44:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD001BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 2 ALS Bottle: 6
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:45:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	10982	1.0000	0.89514	
2 Chloromethane	50.0	1.576	1.577	0.000	10152	1.0000	0.98302	
3 Vinyl chloride	62.0	1.692	1.697	-0.004	10925	1.0000	0.90087	
4 Bromomethane	94.0	2.027	2.027	0.001	11792	1.0000	1.0159	
5 Chloroethane	64.0	2.148	2.148	0.000	8435	1.0000	0.98000	M
6 Trichlorofluoromethane	101.0	2.426	2.431	-0.004	24523	1.0000	0.93982	
8 Ethyl ether	59.0	2.782	2.782	0.001	16517	1.0000	0.94398	
9 Acrolein	56.0	2.960	2.955	0.006	44158	10.000	8.9508	
10 Acetone	43.0	3.160	3.149	0.011	22779	2.0000	2.0970	M
11 1,1-Dichloroethene	96.0	3.065	3.066	0.000	13949	1.0000	0.91963	
12 Freon 113	101.0	3.107	3.107	0.001	13505	1.0000	0.90348	
13 Methyl iodide	142.0	3.238	3.244	-0.004	30693	1.0000	0.96171	
14 Carbon disulfide	76.0	3.312	3.312	0.000	43819	1.0000	0.92387	
15 Acetonitrile	40.0	3.542	3.532	0.011	15086	10.000	9.7884	M
17 Allyl chloride	76.0	3.569	3.569	0.000	8246	1.0000	0.86170	M
16 Methyl Acetate	43.0	3.584	3.579	0.006	26409	1.0000	0.95499	M
18 Methylene chloride	84.0	3.747	3.747	0.000	19894	1.0000	1.0132	
20 Acrylonitrile	53.0	4.082	4.077	0.006	24334	2.0000	1.8803	
21 trans-1,2-Dichloroethene	96.0	4.098	4.104	-0.004	21199	1.0000	0.96957	
22 tert-Butyl methyl ether(MTBE)	73.0	4.109	4.109	0.000	53088	1.0000	0.96783	
23 Hexane	57.0	4.486	4.481	0.006	27186	1.0000	0.93407	
24 1,1-Dichloroethane	63.0	4.691	4.691	0.000	34987	1.0000	0.95236	
25 Vinyl acetate	86.0	4.738	4.733	0.005	5078	1.0000	0.80746	
26 Diisopropyl ether (IPE)	87.0	4.769	4.775	-0.004	18172	1.0000	0.97289	
27 Chloroprene	53.0	4.780	4.780	0.000	25378	1.0000	0.89303	
29 cis-1,2-Dichloroethene	96.0	5.446	5.446	0.000	25068	1.0000	0.97101	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.001	12090	2.0000	1.9703	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.001	24522	1.0000	1.0231	
32 Propionitrile	54.0	5.545	5.540	0.006	49411	10.000	9.3459	
33 Ethyl Acetate	43.0	5.530	5.530	0.000	42352	1.0000	1.0340	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	77649	5.0000	5.1577	
35 Bromochloromethane	128.0	5.744	5.745	0.000	13963	1.0000	0.96573	
36 Tetrahydrofuran	42.0	5.760	5.750	0.011	17290	1.0000	1.0254	
37 Chloroform	83.0	5.907	5.907	0.001	39345	1.0000	0.96970	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	25686	1.0000	0.97407	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	32401	1.0000	0.93312	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3358266	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.149	0.000	15041	1.0000	0.96817	Q
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	27312	1.0000	0.92451	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	28683	1.0000	0.88803	
45 Isobutyl alcohol	42.0	6.536	6.536	0.001	11476	10.000	10.102	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	30254	1.0000	1.0346	
48 Benzene	78.0	6.536	6.536	0.001	79952	1.0000	0.96081	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	54950	1.0000	1.0006	M
50 1,2-Dichloroethane	62.0	6.631	6.631	0.000	31147	1.0000	0.96312	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4566594	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	25304	1.0000	0.92432	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	32216	1.0000	0.93651	
55 1,2-Dichloropropane	63.0	7.753	7.753	0.000	20381	1.0000	0.98805	
56 Dibromomethane	93.0	7.863	7.863	0.000	15848	1.0000	0.96437	
57 Methyl methacrylate	41.0	7.878	7.879	0.000	26906	1.0000	1.0018	
58 1,4-Dioxane	88.0	7.863	7.858	0.005	3126	10.000	11.185	
59 Bromodichloromethane	83.0	8.120	8.119	0.000	26618	1.0000	0.91154	
60 2-nitropropane	43.0	8.424	8.423	0.000	13471	1.0000	0.98175	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	17583	1.0000	0.96040	
62 cis-1,3-Dichloropropene	75.0	8.702	8.702	0.000	31356	1.0000	0.92590	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	73603	2.0000	2.0324	
$ 64 Toluene-d8	98.0	9.037	9.037	0.001	84800	1.0000	0.9986	
65 Toluene	92.0	9.126	9.127	0.000	52577	1.0000	0.95726	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	28197	1.0000	0.88822	
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	32555	1.0000	0.93300	
68 1,1,2-Trichloroethane	97.0	9.735	9.735	0.000	21897	1.0000	0.98058	
69 Tetrachloroethene	164.0	9.808	9.803	0.005	20727	1.0000	0.92679	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	35614	1.0000	1.0165	
71 2-Hexanone	43.0	10.033	10.034	0.000	61332	2.0000	1.9502	
72 Dibromochloromethane	129.0	10.191	10.191	0.000	21259	1.0000	0.86659	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	44428	1.0000	0.95348	M
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.317	0.000	22855	1.0000	0.94570	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3613790	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.894	0.005	56565	1.0000	0.97278	M
78 1,1,1,2-Tetrachloroethane	131.0	11.009	11.009	0.000	19022	1.0000	0.90753	
79 Ethylbenzene	106.0	11.019	11.019	0.001	27485	1.0000	0.89281	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	33683	1.0000	0.91695	
81 o-Xylene	106.0	11.575	11.575	0.000	29552	1.0000	0.90698	
82 Styrene	104.0	11.596	11.596	0.000	46744	1.0000	0.84857	
83 Bromoform	173.0	11.774	11.774	0.001	12022	1.0000	0.94142	
84 Isopropylbenzene	105.0	11.958	11.958	0.000	75450	1.0000	0.94794	
85 Cyclohexanone	55.0	12.047	12.042	0.005	8925	10.000	9.8603	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.131	12.131	0.000	24591	1.0000	1.0121	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	21249	1.0000	0.9938	M
87 Bromobenzene	156.0	12.262	12.257	0.005	20462	1.0000	0.97505	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	8888	1.0000	1.0274	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	3863	1.0000	0.88189	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	79195	1.0000	0.97549	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	46833	1.0000	1.0084	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	47820	1.0000	0.95936	
94 4-Chlorotoluene	126.0	12.571	12.571	0.001	15894	1.0000	0.91326	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	47859	1.0000	1.0209	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.902	0.000	44607	1.0000	0.93812	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	63760	1.0000	1.0048	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	30254	1.0000	1.0064	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.006	47672	1.0000	0.95036	
* 100 1,4-Dichlorobenzene-d4	152.0	13.232	13.232	0.000	1181830	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.253	13.253	0.000	29176	1.0000	0.98308	Q
102 Benzyl chloride	91.0	13.357	13.358	0.000	25965	1.0000	0.84954	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	36639	1.0000	0.90877	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	26559	1.0000	0.9920	
105 1,2-Dibromo-3-chloropropane	75.0	14.265	14.260	0.005	4099	1.0000	0.91458	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.001	15523	1.0000	0.93619	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	7686	1.0000	0.95418	
108 Naphthalene	128.0	15.166	15.167	0.000	42200	1.0000	0.89626	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	14952	1.0000	0.96766	
S 110 Xylenes (total)	106.0	16.000		0.000		2.0000	1.8239	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		2.0000	1.9406	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

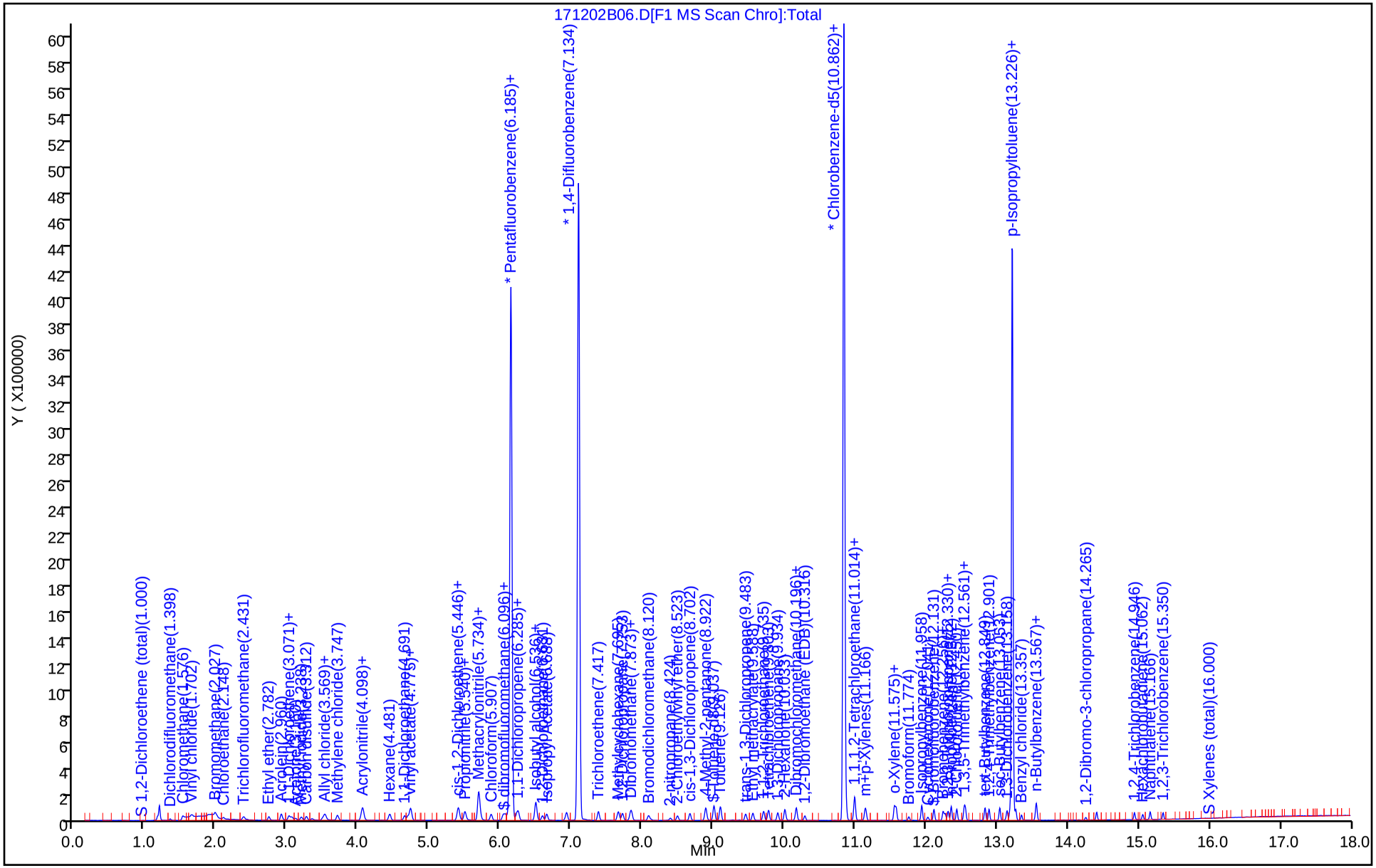
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D				
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ		
Sample Info:	17120219B, VSTD001BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

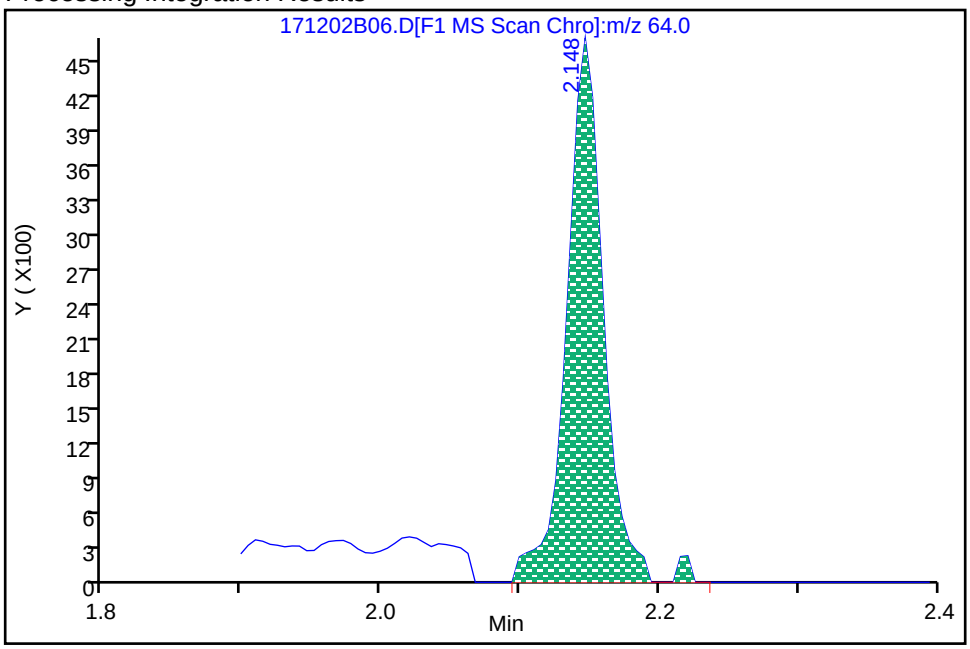
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

5 Chloroethane, CAS: 75-00-3

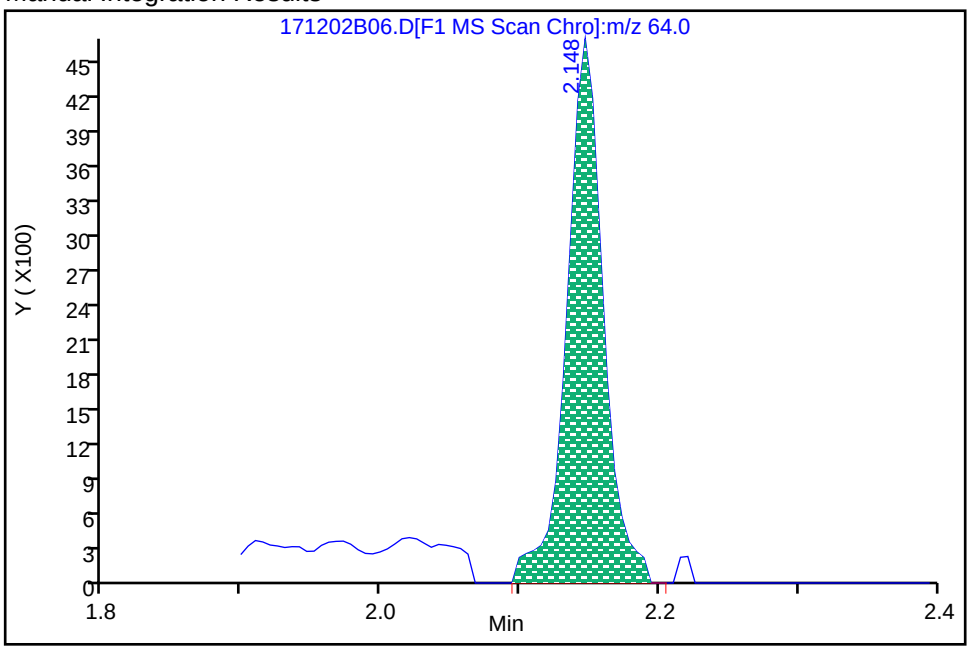
Processing Integration Results

RT: 2.148
Area: 8575
Amount: 1.0025
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.148
Area: 8435
Amount: 0.98000
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:43:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

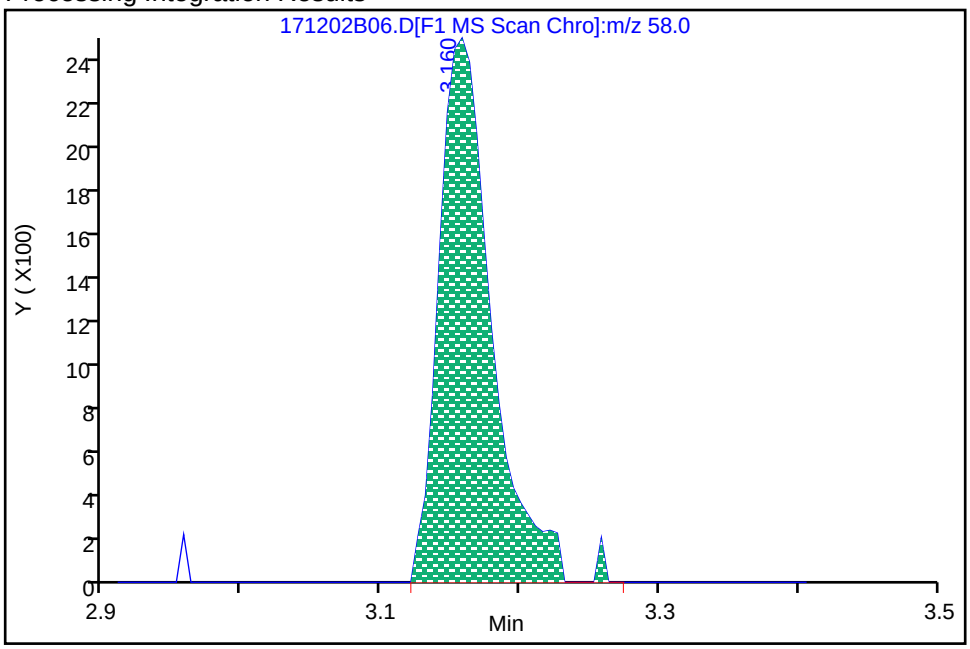
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

10 Acetone, CAS: 67-64-1

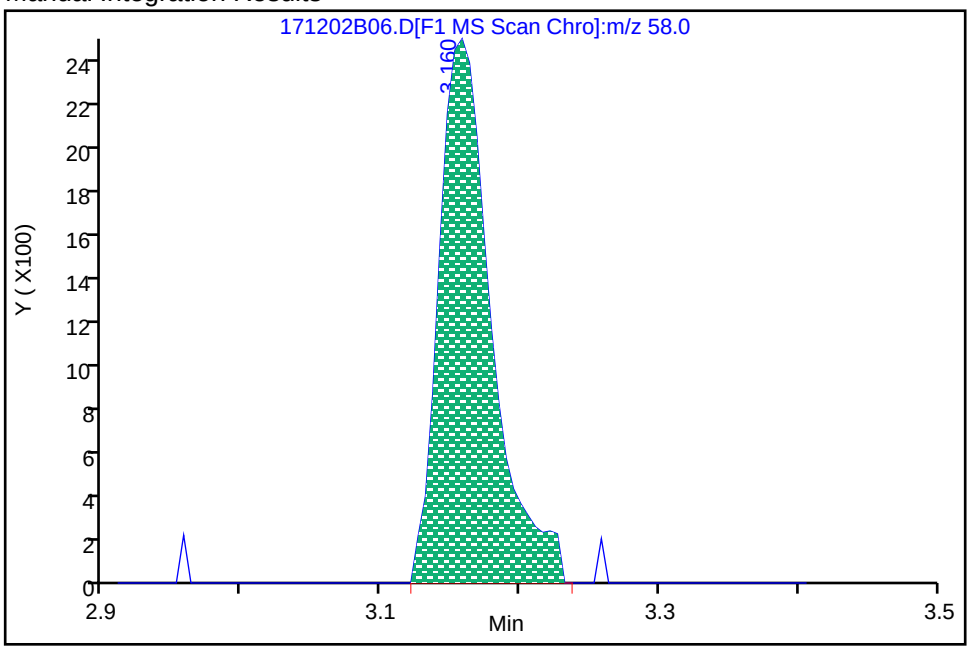
Processing Integration Results

RT: 3.160
Area: 6599
Amount: 1.8444
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.160
Area: 6535
Amount: 2.0970
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

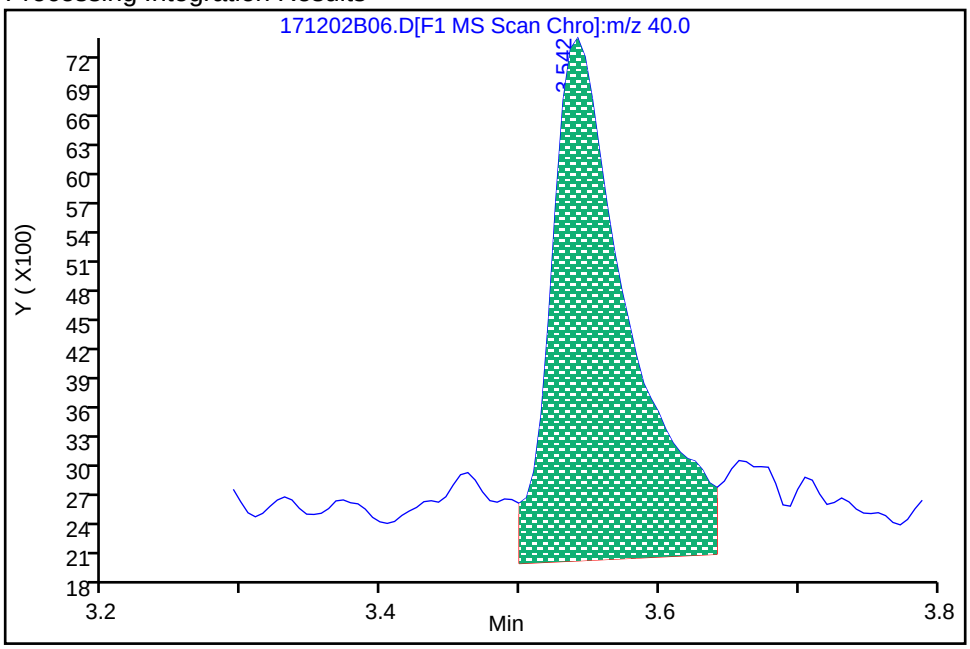
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

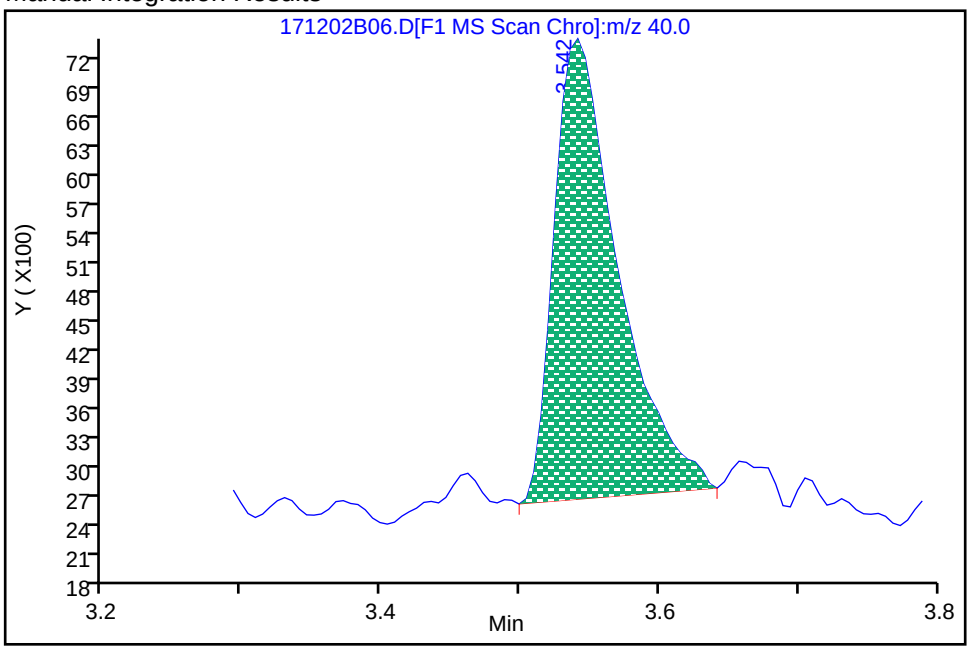
Processing Integration Results

RT: 3.542
Area: 20645
Amount: 10.198
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.542
Area: 15086
Amount: 9.7884
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

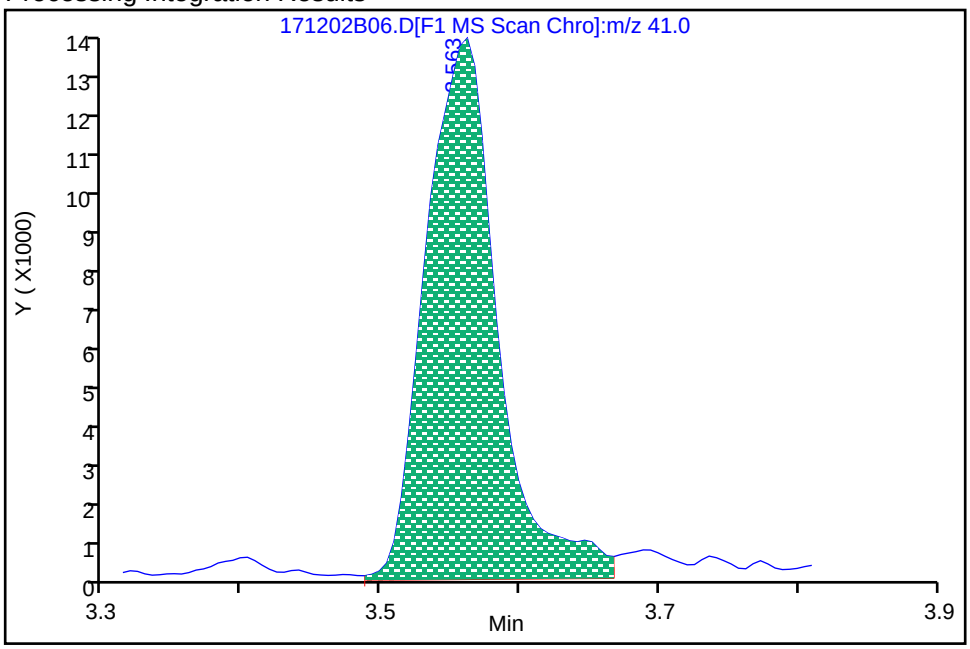
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

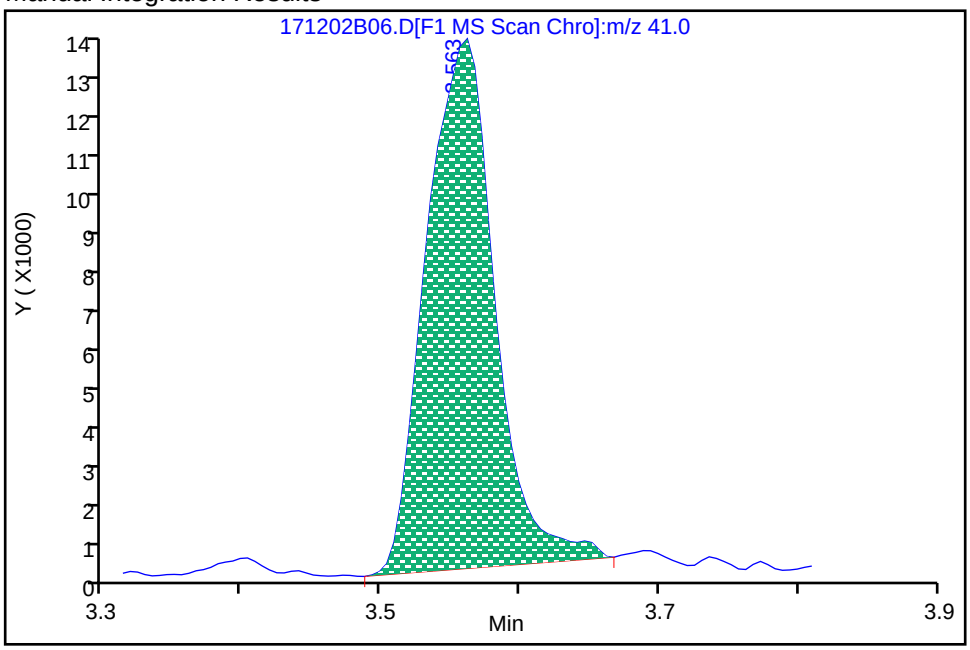
Processing Integration Results

RT: 3.563
Area: 47942
Amount: 10.198
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 44461
Amount: 9.7884
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

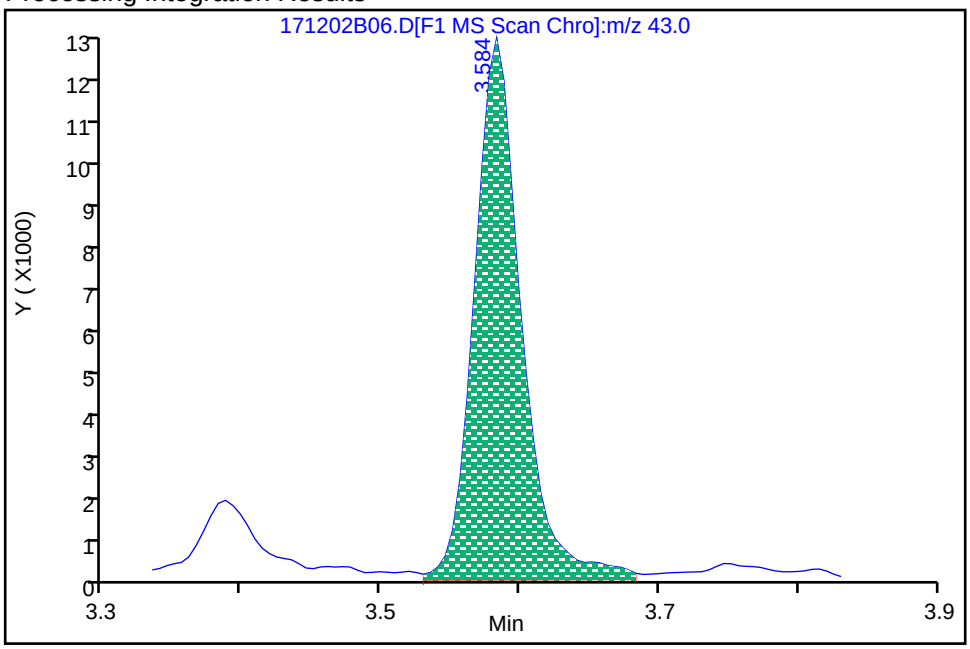
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

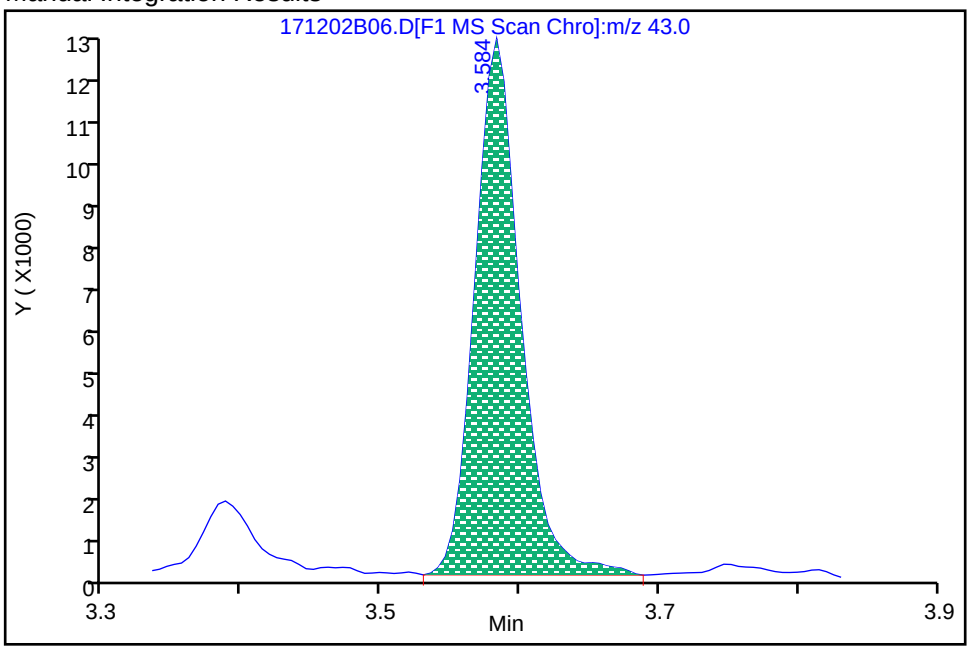
Processing Integration Results

RT: 3.584
Area: 27635
Amount: 0.96257
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.584
Area: 26409
Amount: 0.95499
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:50:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

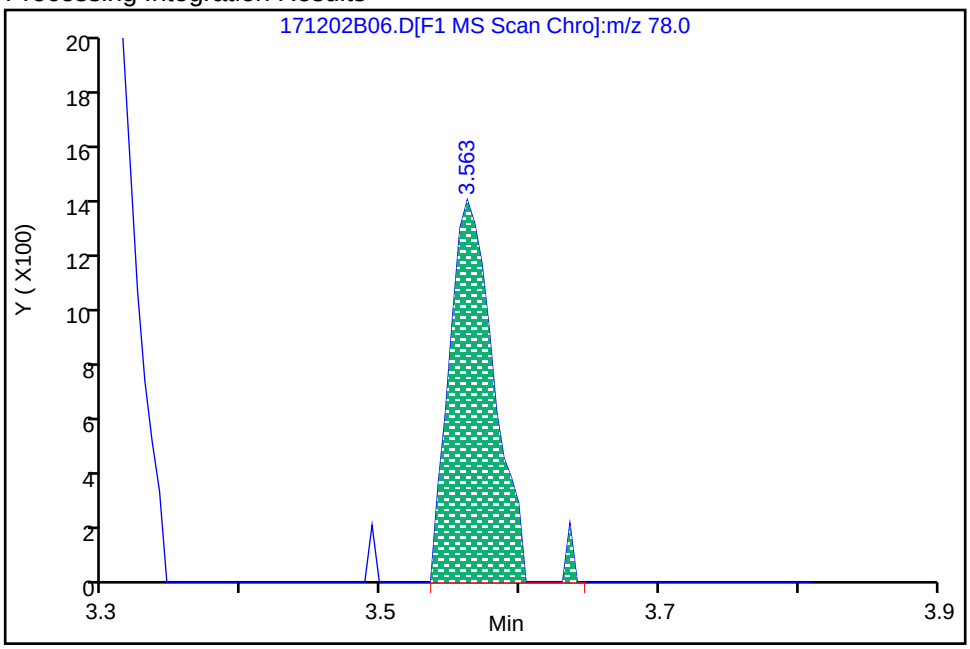
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

17 Allyl chloride, CAS: 107-05-1

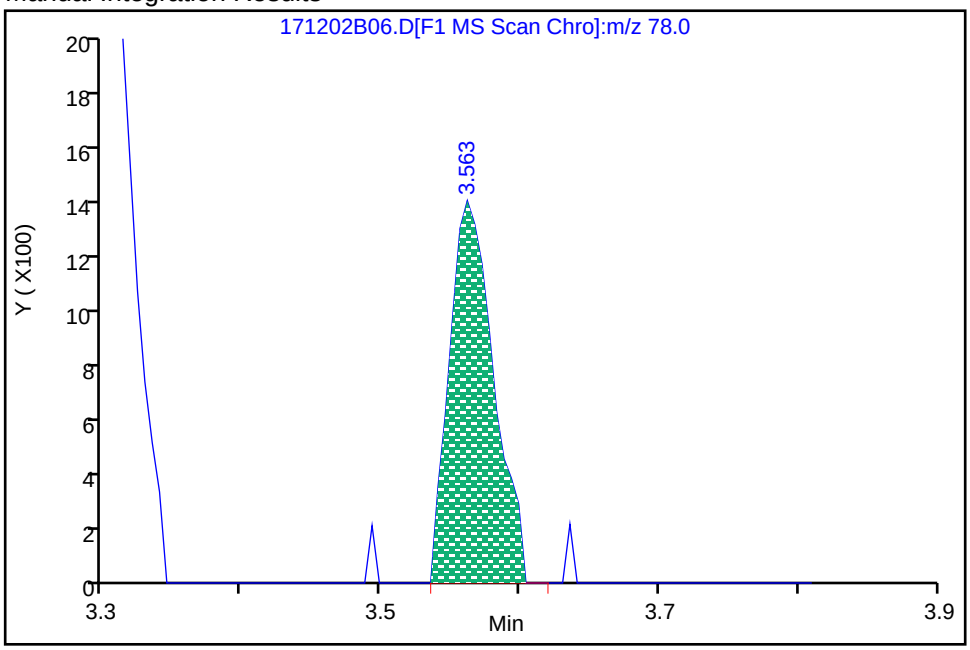
Processing Integration Results

RT: 3.563
Area: 3063
Amount: 0.91501
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 2998
Amount: 0.86170
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:44:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

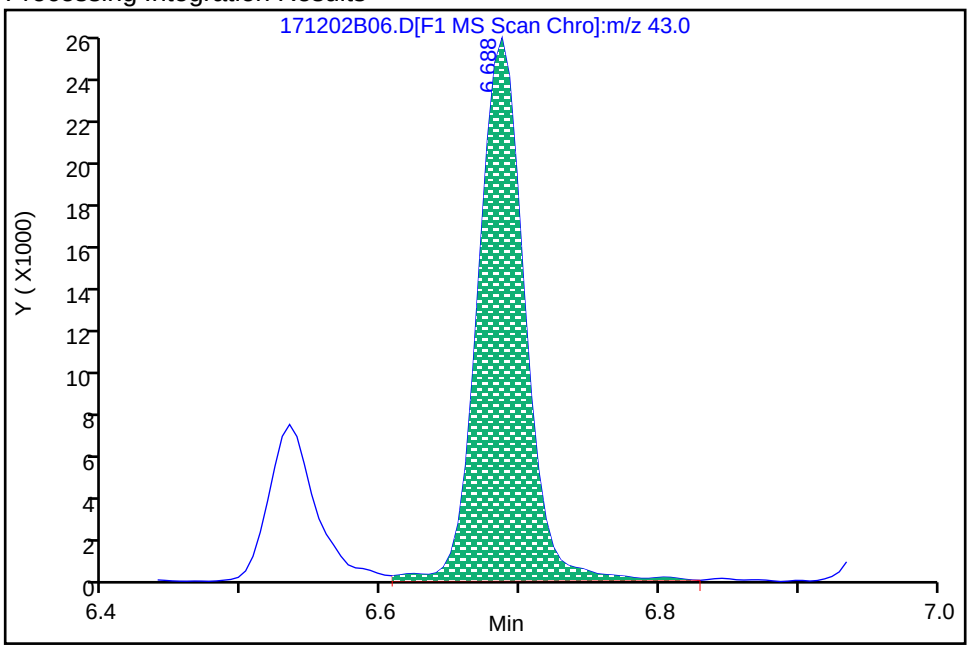
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

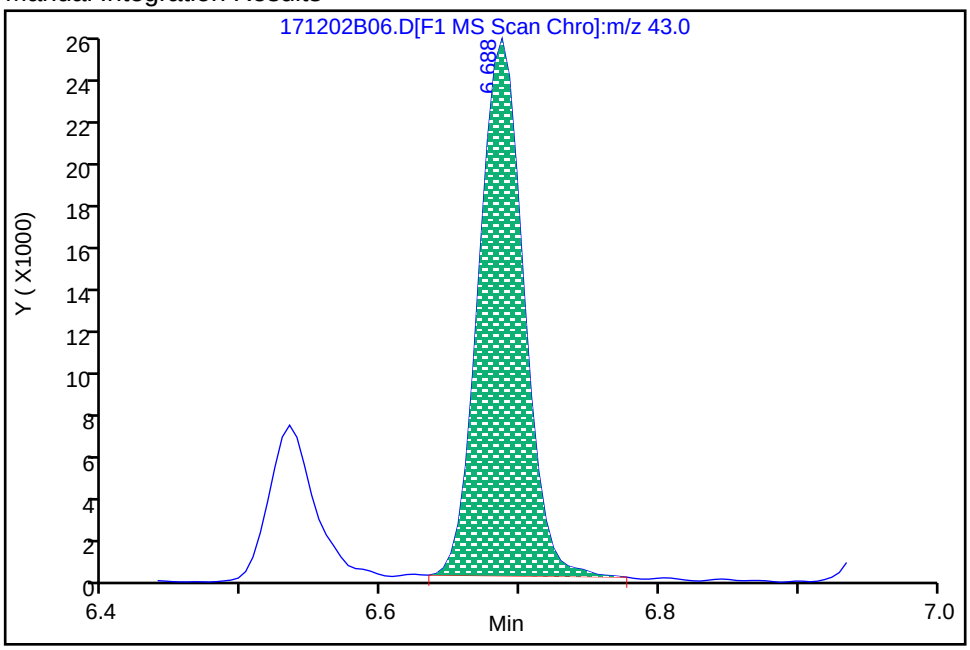
Processing Integration Results

RT: 6.688
Area: 57770
Amount: 1.0323
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 54950
Amount: 1.0006
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:51:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

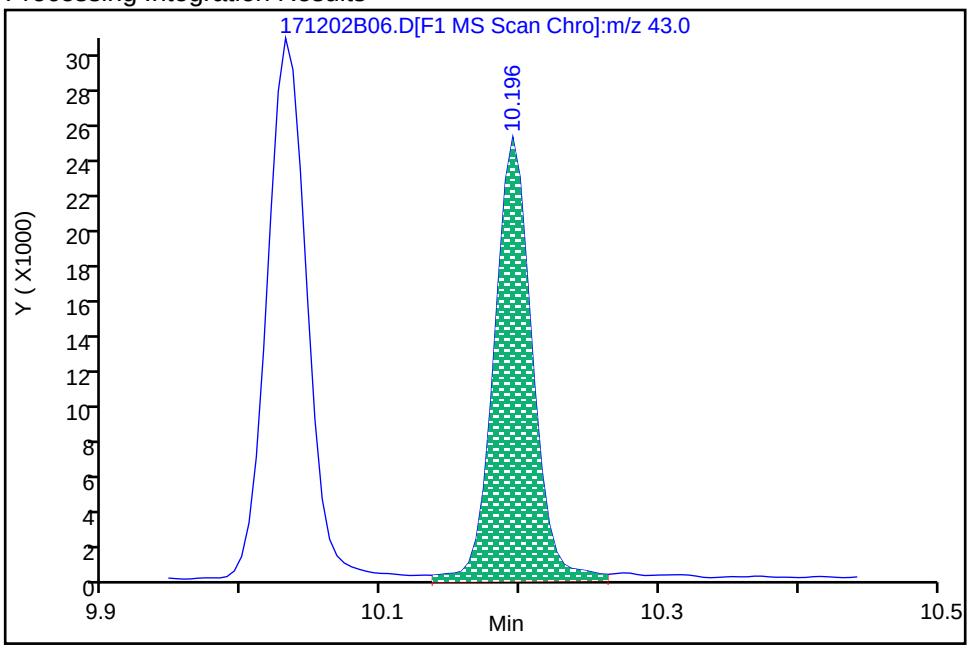
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

73 n-Butyl acetate, CAS: 123-86-4

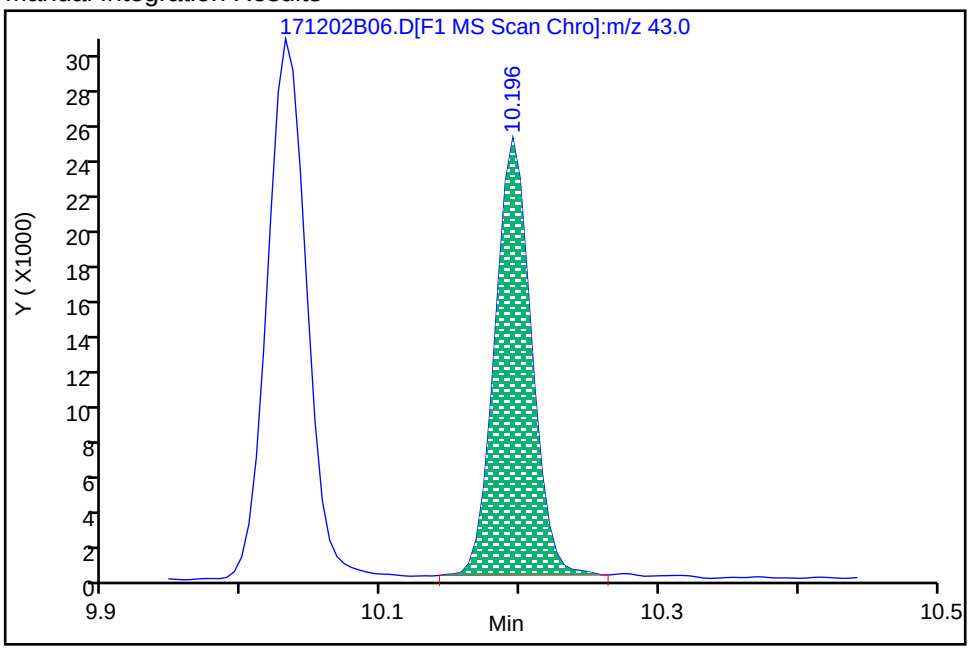
Processing Integration Results

RT: 10.196
Area: 47373
Amount: 0.9990
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.196
Area: 44428
Amount: 0.95348
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

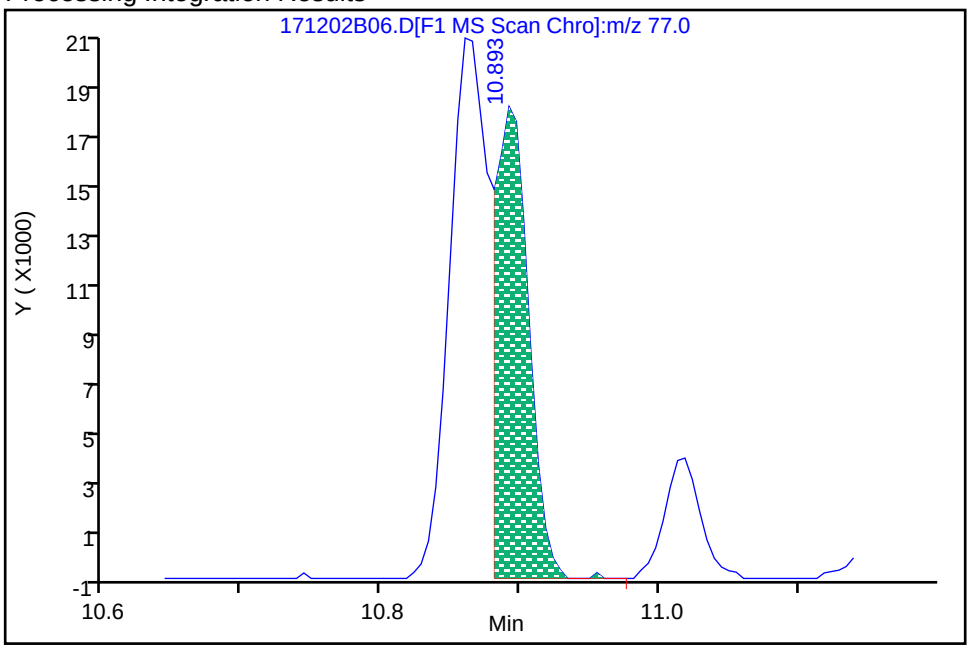
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

77 Chlorobenzene, CAS: 108-90-7

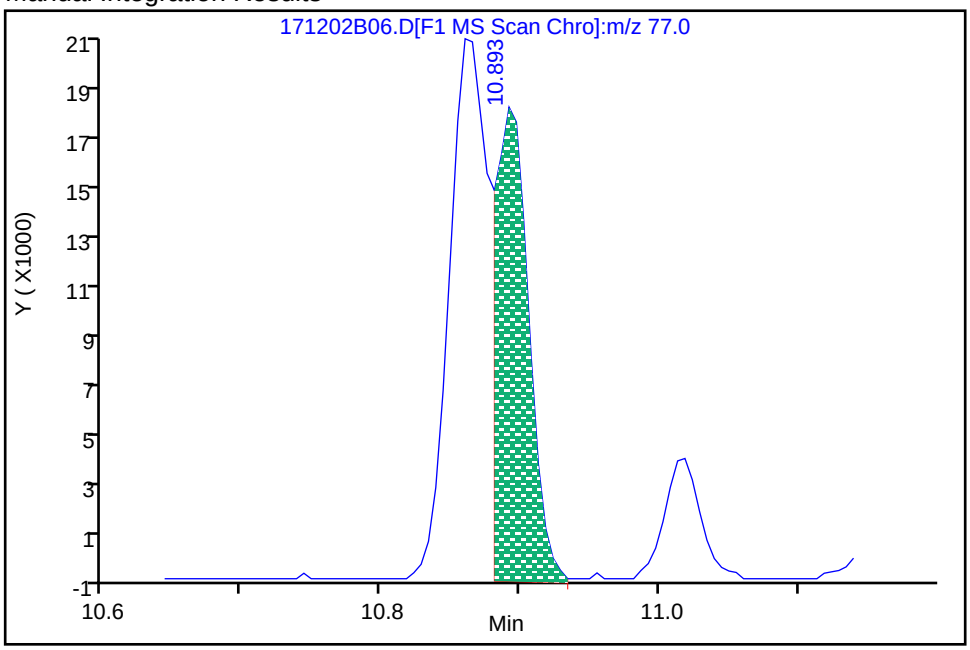
Processing Integration Results

RT: 10.893
Area: 27501
Amount: 0.98590
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.893
Area: 30163
Amount: 0.97278
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:48:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

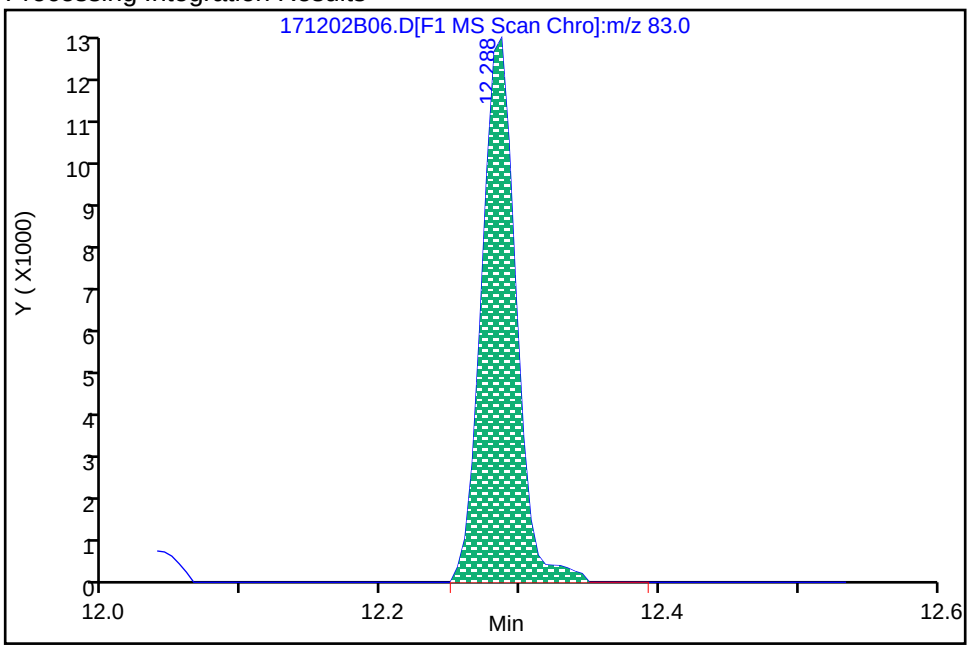
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

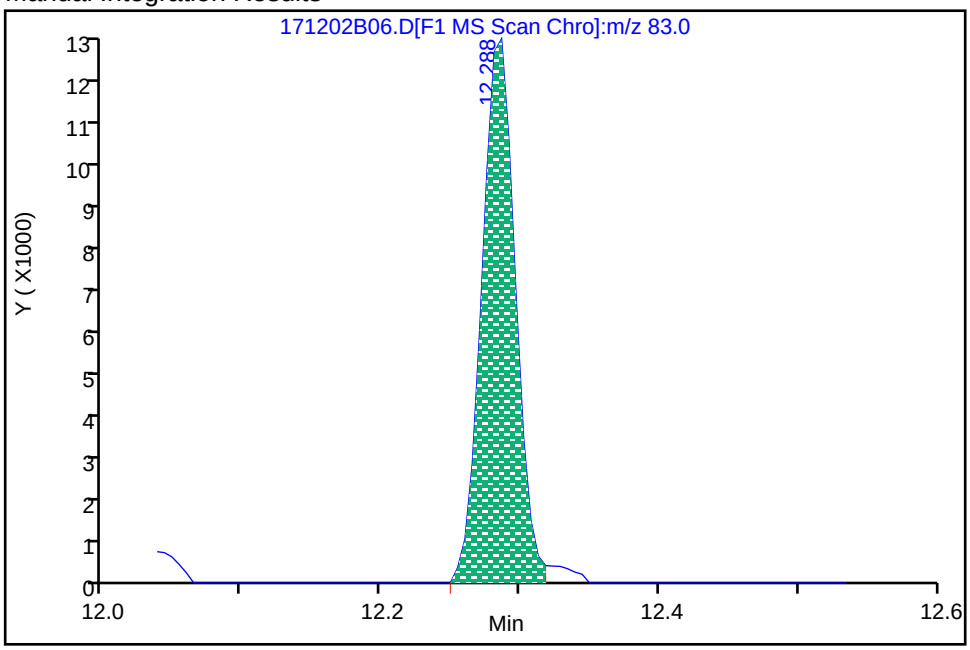
Processing Integration Results

RT: 12.288
Area: 21742
Amount: 1.0203
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 21249
Amount: 0.9938
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

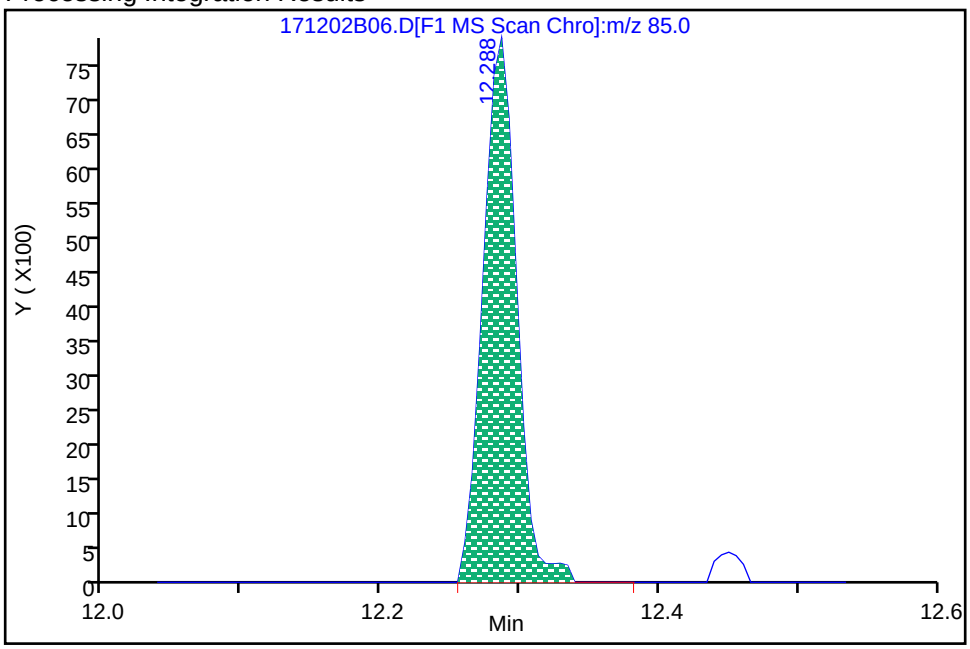
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B06.D		
Injection Date:	03-Dec-2019 01:44:30	Inst. ID:	msd17.i
Client ID:	2mL/100mL VSTD050	Lab ID:	VSTD001BQ
Sample Info:	17120219B, VSTD001BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

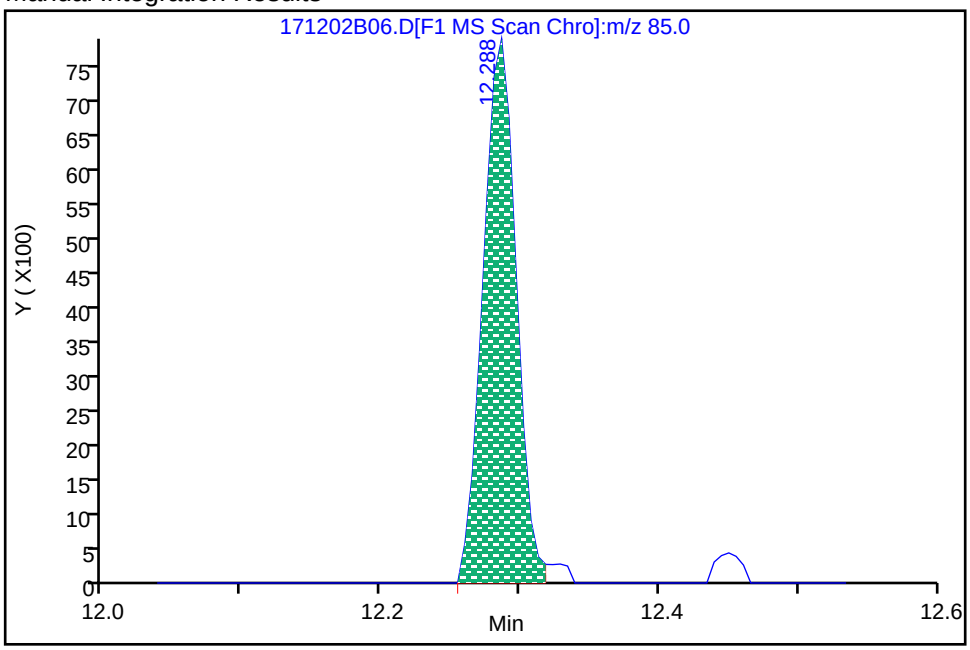
Processing Integration Results

RT: 12.288
Area: 13230
Amount: 1.0203
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 12982
Amount: 0.9938
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D
Lab Sample ID: VSTD005BQ Client Sample ID: 5uL/100mL 15613/10
Injection Date: 03-Dec-2019 02:08:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD005BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 3 ALS Bottle: 7
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	64301	5.0000	5.4317	
2 Chloromethane	50.0	1.576	1.577	0.000	53690	5.0000	5.3879	
3 Vinyl chloride	62.0	1.697	1.697	0.000	62602	5.0000	5.3499	
4 Bromomethane	94.0	2.027	2.027	0.000	59560	5.0000	5.3177	
5 Chloroethane	64.0	2.147	2.148	0.000	43803	5.0000	5.2742	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	139329	5.0000	5.5338	
8 Ethyl ether	59.0	2.782	2.782	0.000	90021	5.0000	5.3319	
9 Acrolein	56.0	2.955	2.955	0.000	251603	50.000	52.854	
10 Acetone	43.0	3.154	3.149	0.006	107508	10.000	10.257	
11 1,1-Dichloroethene	96.0	3.065	3.066	0.000	81060	5.0000	5.5384	
12 Freon 113	101.0	3.102	3.107	-0.004	78192	5.0000	5.4212	
13 Methyl iodide	142.0	3.238	3.244	-0.005	170802	5.0000	5.5464	
14 Carbon disulfide	76.0	3.311	3.312	0.000	253247	5.0000	5.5336	
15 Acetonitrile	40.0	3.537	3.532	0.005	83745	50.000	56.313	M
17 Allyl chloride	76.0	3.563	3.569	-0.004	48884	5.0000	5.2941	
16 Methyl Acetate	43.0	3.579	3.579	0.000	141743	5.0000	5.3120	
18 Methylene chloride	84.0	3.747	3.747	0.000	101855	5.0000	5.3759	
20 Acrylonitrile	53.0	4.077	4.077	0.000	131689	10.000	10.546	
21 trans-1,2-Dichloroethene	96.0	4.098	4.104	-0.005	111967	5.0000	5.3072	
22 tert-Butyl methyl ether(MTBE)	73.0	4.103	4.109	-0.004	288166	5.0000	5.4445	
23 Hexane	57.0	4.481	4.481	0.000	152844	5.0000	5.4424	
24 1,1-Dichloroethane	63.0	4.690	4.691	0.000	193429	5.0000	5.4567	
25 Vinyl acetate	86.0	4.732	4.733	0.000	32295	5.0000	5.3220	M
26 Diisopropyl ether (IPE)	87.0	4.774	4.775	0.000	91261	5.0000	5.0636	
27 Chloroprene	53.0	4.779	4.780	0.000	154376	5.0000	5.6299	
29 cis-1,2-Dichloroethene	96.0	5.445	5.446	0.000	132173	5.0000	5.3059	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.000	59404	10.000	10.033	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	126195	5.0000	5.4563	
32 Propionitrile	54.0	5.540	5.540	0.000	280848	50.000	55.053	
33 Ethyl Acetate	43.0	5.529	5.530	0.000	208185	5.0000	5.2674	
34 Methacrylonitrile	67.0	5.728	5.729	0.000	382475	25.000	26.329	
35 Bromochloromethane	128.0	5.744	5.745	0.000	73927	5.0000	5.2989	
36 Tetrahydrofuran	42.0	5.749	5.750	0.000	83593	5.0000	5.1381	
37 Chloroform	83.0	5.907	5.907	0.000	208971	5.0000	5.3376	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	129112	5.0000	5.0743	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	178713	5.0000	5.3339	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3240441	50.000	50.000	
42 Cyclohexane	41.0	6.143	6.149	-0.005	83817	5.0000	5.5914	
43 1,1-Dichloropropene	75.0	6.289	6.290	0.000	155004	5.0000	5.4377	
44 Carbon tetrachloride	119.0	6.263	6.269	-0.004	165500	5.0000	5.3102	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	63283	50.000	57.733	
$ 46 1,2-Dichloroethane-d4	65.0	6.525	6.526	0.000	144034	5.0000	4.9483	
48 Benzene	78.0	6.536	6.536	0.000	444974	5.0000	5.3719	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	275775	5.0000	5.0448	M
50 1,2-Dichloroethane	62.0	6.625	6.631	-0.004	173151	5.0000	5.3787	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4545769	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	143068	5.0000	5.2500	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	185799	5.0000	5.4259	
55 1,2-Dichloropropane	63.0	7.752	7.753	0.000	105900	5.0000	5.1575	
56 Dibromomethane	93.0	7.862	7.863	0.000	85338	5.0000	5.2167	
57 Methyl methacrylate	41.0	7.878	7.879	0.000	135828	5.0000	5.0807	
58 1,4-Dioxane	88.0	7.862	7.858	0.005	16001	50.000	57.516	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	149722	5.0000	5.1507	
60 2-nitropropane	43.0	8.423	8.423	0.000	67234	5.0000	4.9224	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	93168	5.0000	5.1122	
62 cis-1,3-Dichloropropene	75.0	8.701	8.702	0.000	176237	5.0000	5.2279	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	380067	10.000	10.543	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	438810	5.0000	5.0602	
65 Toluene	92.0	9.126	9.127	0.000	292828	5.0000	5.2207	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	160326	5.0000	4.9454	
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	176404	5.0000	4.9505	
68 1,1,2-Trichloroethane	97.0	9.734	9.735	0.000	119069	5.0000	5.2213	
69 Tetrachloroethene	164.0	9.802	9.803	0.000	120242	5.0000	5.2648	
70 1,3-Dichloropropane	76.0	9.933	9.934	0.000	183413	5.0000	5.1264	
71 2-Hexanone	43.0	10.033	10.034	0.000	322712	10.000	10.048	
72 Dibromochloromethane	129.0	10.190	10.191	0.000	124622	5.0000	4.9745	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	240832	5.0000	5.0612	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.317	0.000	127444	5.0000	5.1638	
* 76 Chlorobenzene-d5	117.0	10.861	10.862	0.000	3690473	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.894	0.005	314927	5.0000	5.3034	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.009	0.000	110398	5.0000	5.1576	
79 Ethylbenzene	106.0	11.019	11.019	0.000	167422	5.0000	5.3255	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	201987	5.0000	5.3844	
81 o-Xylene	106.0	11.575	11.575	0.000	180672	5.0000	5.4298	
82 Styrene	104.0	11.596	11.596	0.000	298043	5.0000	5.2981	
83 Bromoform	173.0	11.774	11.774	0.000	75260	5.0000	4.3624	
84 Isopropylbenzene	105.0	11.957	11.958	0.000	459216	5.0000	5.6496	
85 Cyclohexanone	55.0	12.041	12.042	0.000	48292	50.000	52.244	

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.131	0.000	132450	5.0000	5.3379	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	119276	5.0000	5.2286	M
87 Bromobenzene	156.0	12.256	12.257	0.000	117861	5.0000	5.2638	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	48007	5.0000	5.2010	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	26895	5.0000	4.3031	
91 n-Propylbenzene	91.0	12.371	12.372	0.000	493119	5.0000	5.6928	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	268730	5.0000	5.4233	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	301845	5.0000	5.6755	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	99312	5.0000	5.3482	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	283728	5.0000	5.6723	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.902	0.000	278700	5.0000	5.4935	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	381952	5.0000	5.6413	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	167329	5.0000	5.2170	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.005	294895	5.0000	5.5099	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.232	0.000	1260968	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.253	0.000	162218	5.0000	5.1229	
102 Benzyl chloride	91.0	13.362	13.358	0.005	154544	5.0000	4.7391	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	230686	5.0000	5.3627	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	147001	5.0000	5.1463	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.260	0.000	22534	5.0000	4.7123	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	86412	5.0000	4.8844	
107 Hexachlorobutadiene	225.0	15.066	15.067	0.000	44150	5.0000	5.1370	
108 Naphthalene	128.0	15.166	15.167	0.000	251344	5.0000	5.0031	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	80924	5.0000	4.9086	
S 110 Xylenes (total)	106.0	16.000		0.000		10.000	10.814	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		10.000	10.613	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

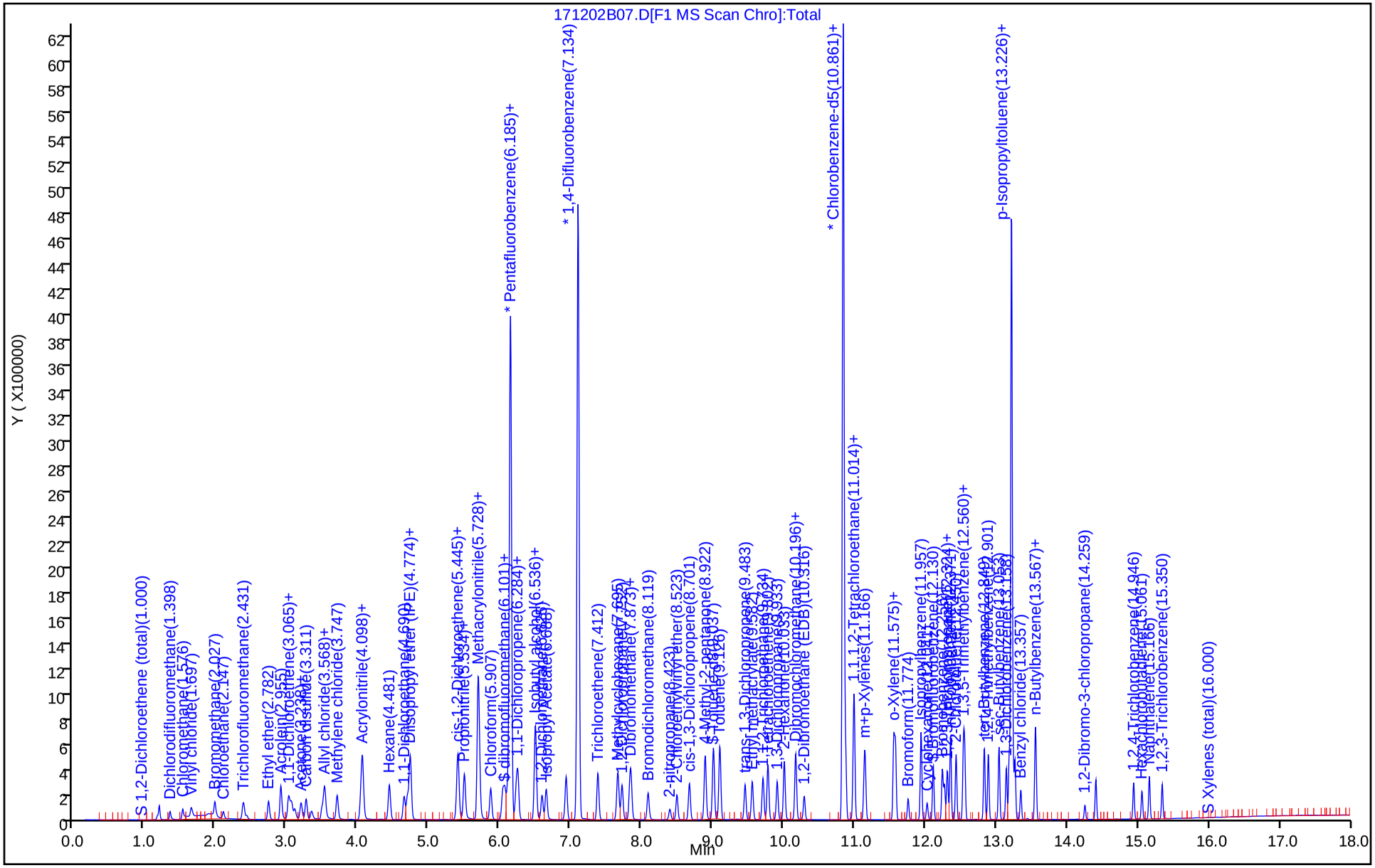
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D				
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ		
Sample Info:	17120219B, VSTD005BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

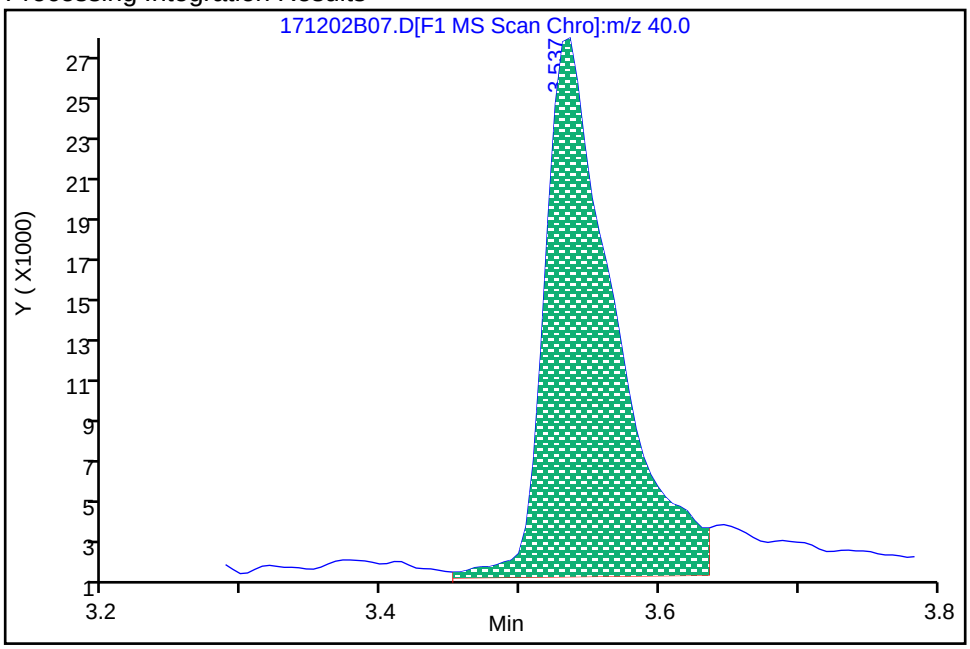
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

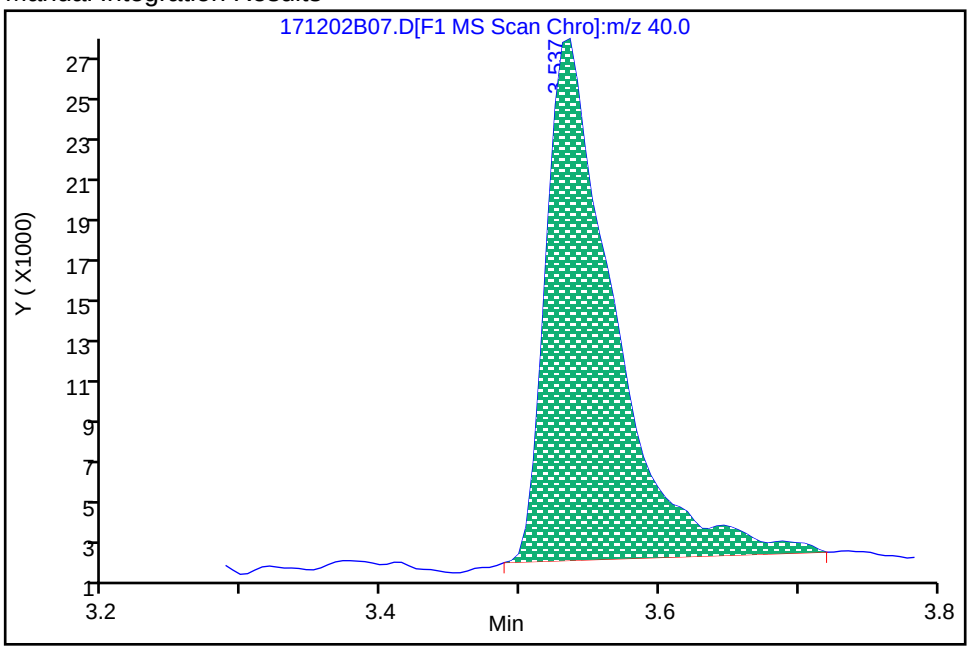
Processing Integration Results

RT: 3.537
Area: 88419
Amount: 46.361
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 83745
Amount: 56.313
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

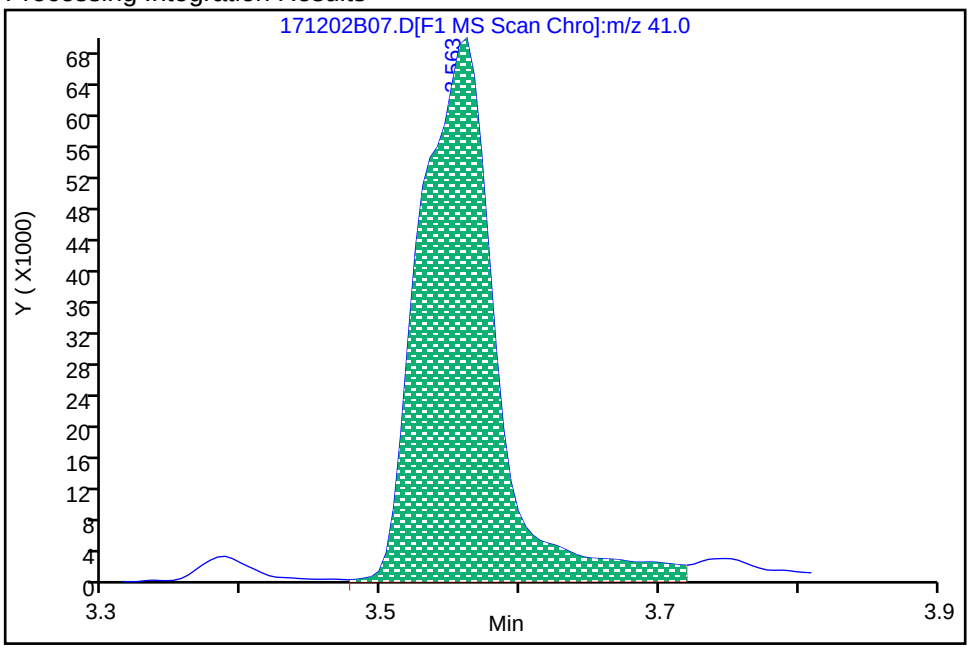
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

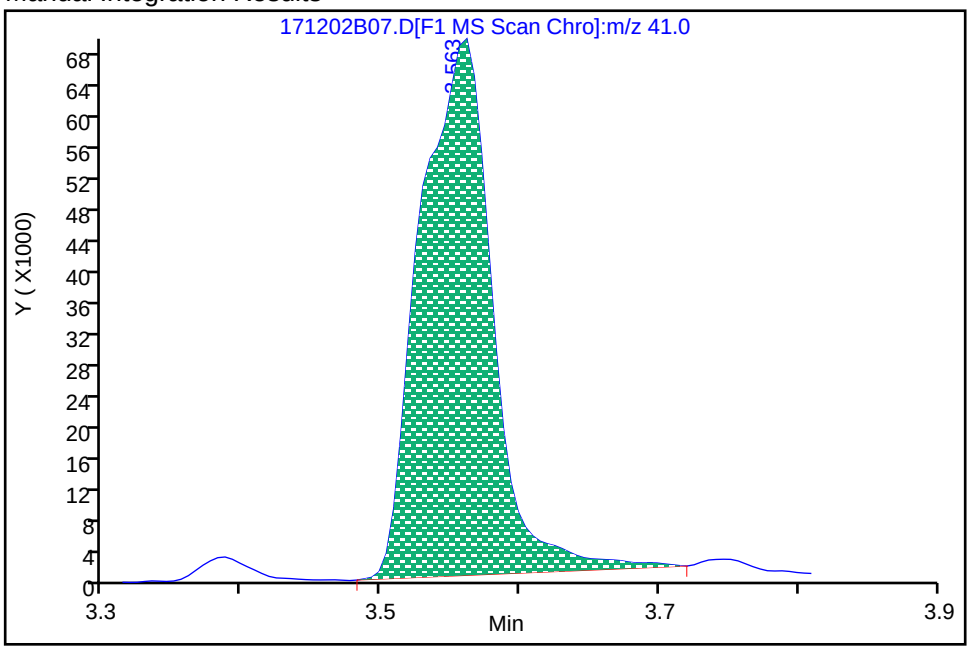
Processing Integration Results

RT: 3.563
Area: 261973
Amount: 46.361
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 245155
Amount: 56.313
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

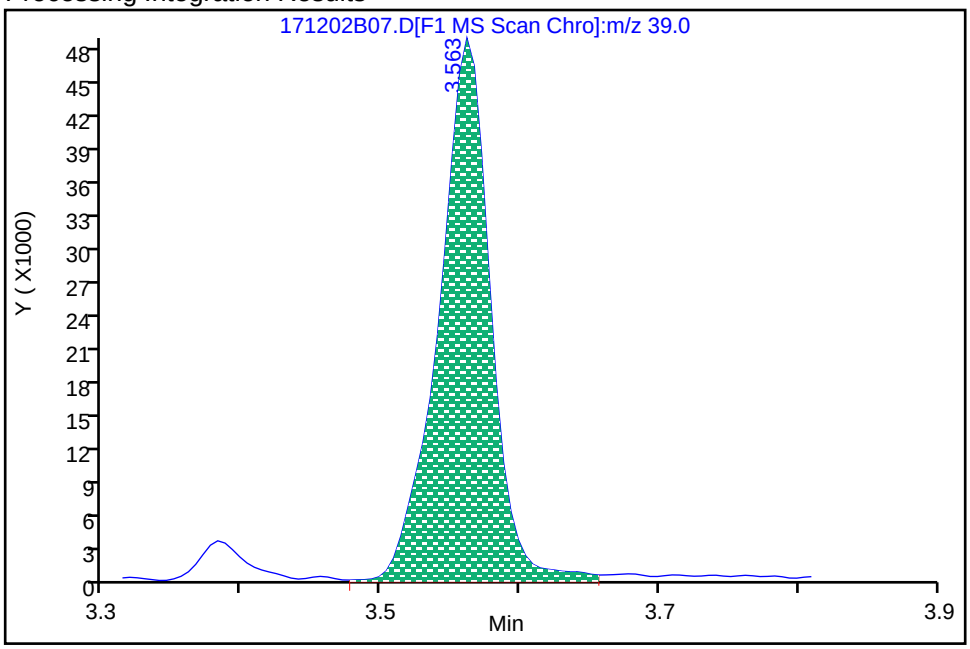
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

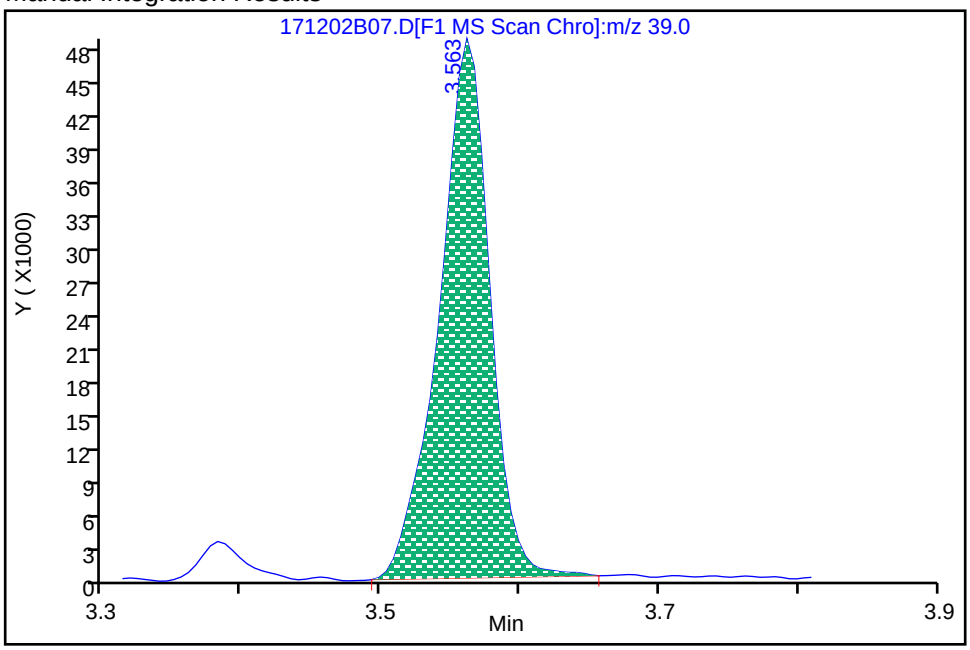
Processing Integration Results

RT: 3.563
Area: 123368
Amount: 46.361
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 119095
Amount: 56.313
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

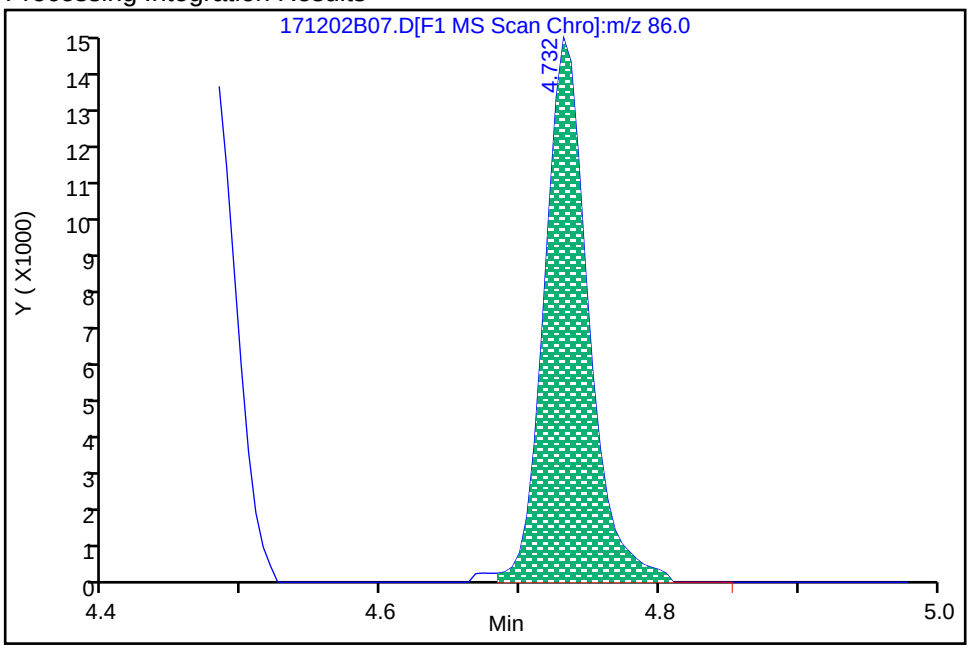
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

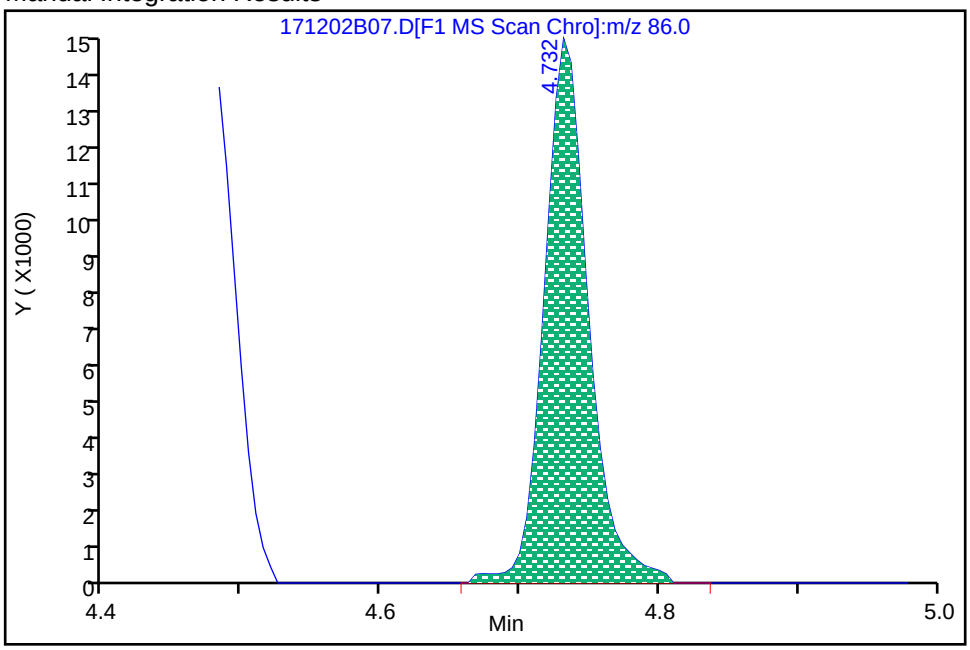
Processing Integration Results

RT: 4.732
Area: 32029
Amount: 5.5370
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.732
Area: 32295
Amount: 5.3220
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

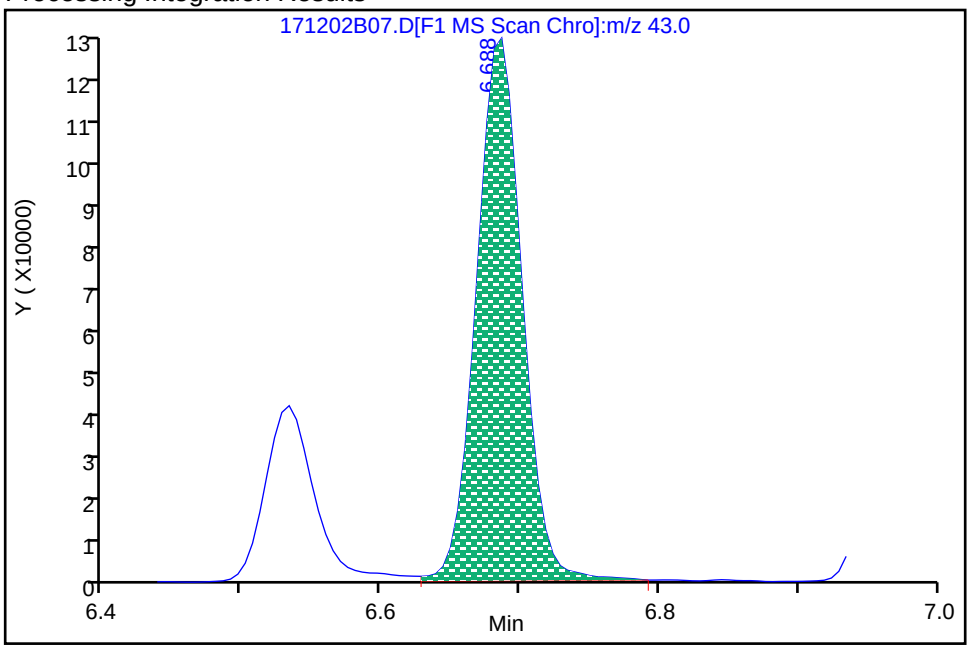
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

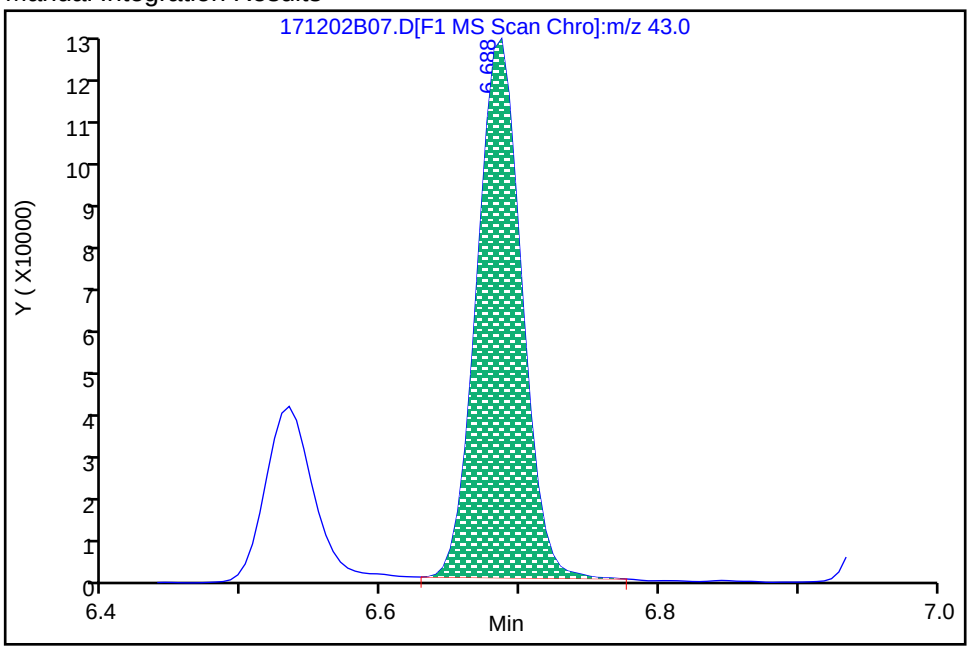
Processing Integration Results

RT:	6.688
Area:	282700
Amount:	5.0559
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	6.688
Area:	275775
Amount:	5.0448
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:52:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

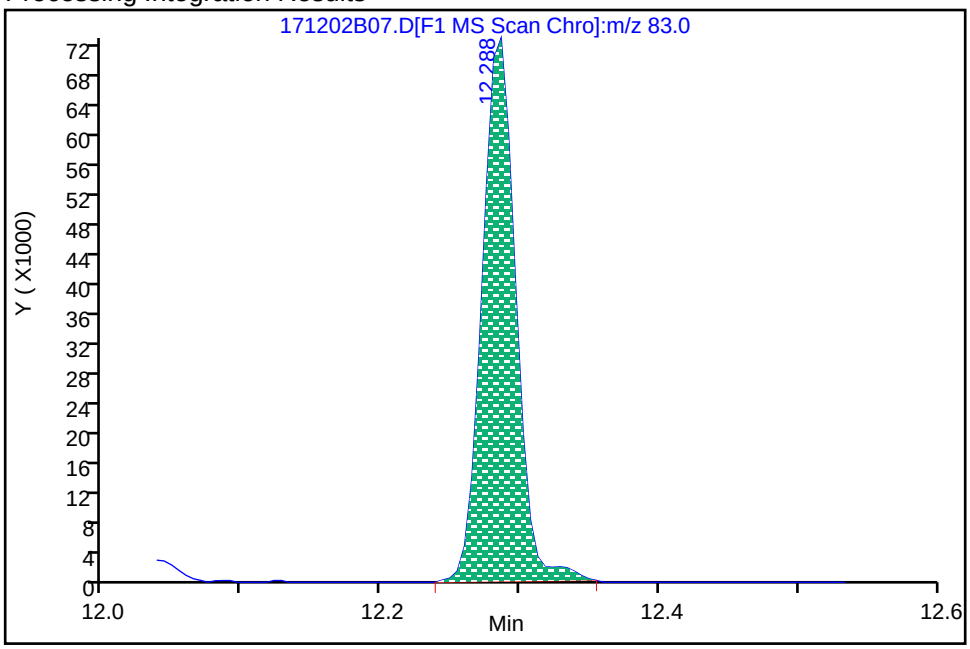
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

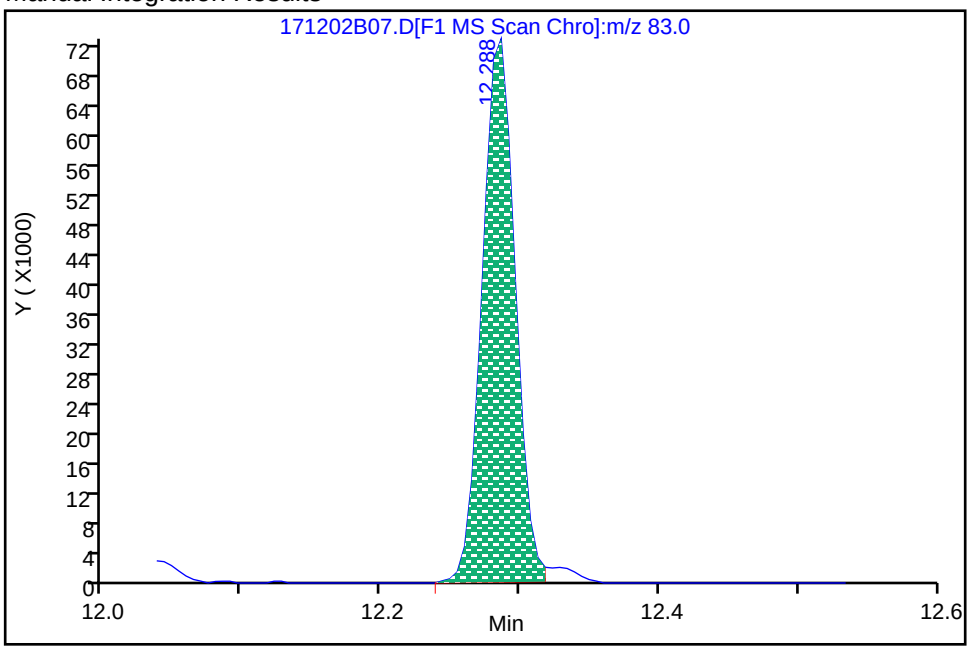
Processing Integration Results

RT: 12.288
Area: 121653
Amount: 5.2583
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 119276
Amount: 5.2286
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:08 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

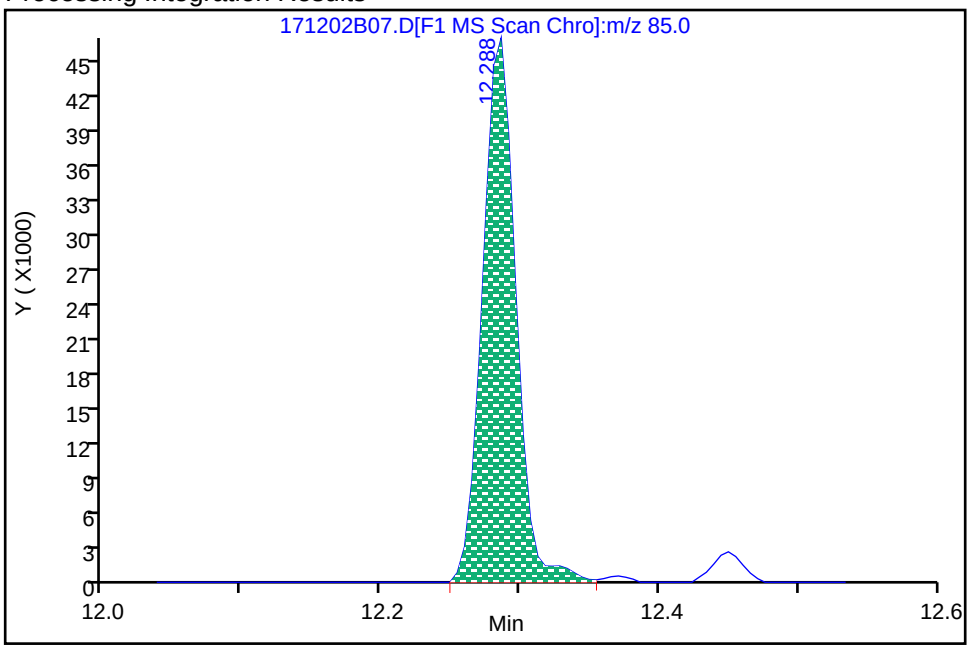
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B07.D		
Injection Date:	03-Dec-2019 02:08:30	Inst. ID:	msd17.i
Client ID:	5uL/100mL 15613/10	Lab ID:	VSTD005BQ
Sample Info:	17120219B, VSTD005BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

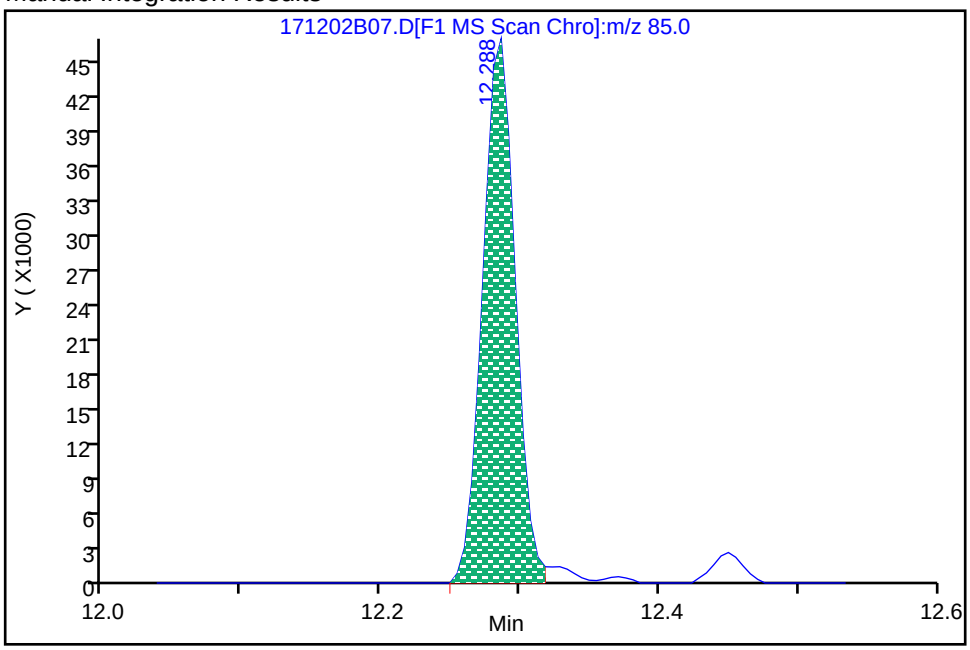
Processing Integration Results

RT: 12.288
Area: 76764
Amount: 5.2583
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 75036
Amount: 5.2286
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D
Lab Sample ID: VSTD020BQ Client Sample ID: 20uL/100mL 15613/10
Injection Date: 03-Dec-2019 02:32:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD020BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 4 ALS Bottle: 8
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	222861	20.000	18.763	
2 Chloromethane	50.0	1.576	1.577	0.000	198056	20.000	19.809	
3 Vinyl chloride	62.0	1.692	1.697	-0.004	239774	20.000	20.422	
4 Bromomethane	94.0	2.027	2.027	0.001	228827	20.000	20.362	
5 Chloroethane	64.0	2.148	2.148	0.000	167615	20.000	20.114	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	510056	20.000	20.190	
8 Ethyl ether	59.0	2.782	2.782	0.001	336262	20.000	19.850	
9 Acrolein	56.0	2.955	2.955	0.001	1007673	200.00	210.97	
10 Acetone	43.0	3.149	3.149	0.001	394467	40.000	37.507	
11 1,1-Dichloroethene	96.0	3.065	3.066	0.000	302334	20.000	20.588	
12 Freon 113	101.0	3.102	3.107	-0.004	289533	20.000	20.007	
13 Methyl iodide	142.0	3.238	3.244	-0.004	648728	20.000	20.995	
14 Carbon disulfide	76.0	3.312	3.312	0.000	967145	20.000	21.062	
15 Acetonitrile	40.0	3.532	3.532	0.000	309972	200.00	207.74	M
17 Allyl chloride	76.0	3.563	3.569	-0.004	192334	20.000	20.760	
16 Methyl Acetate	43.0	3.579	3.579	0.001	533290	20.000	19.919	
18 Methylene chloride	84.0	3.747	3.747	0.000	383417	20.000	20.169	
20 Acrylonitrile	53.0	4.077	4.077	0.001	492272	40.000	39.290	
21 trans-1,2-Dichloroethene	96.0	4.098	4.104	-0.004	424070	20.000	20.033	
22 tert-Butyl methyl ether(MTBE)	73.0	4.109	4.109	0.000	1068258	20.000	20.116	
23 Hexane	57.0	4.481	4.481	0.000	559469	20.000	19.855	
24 1,1-Dichloroethane	63.0	4.691	4.691	0.000	719863	20.000	20.239	
25 Vinyl acetate	86.0	4.733	4.733	0.000	128677	20.000	21.134	
26 Diisopropyl ether (IPE)	87.0	4.769	4.775	-0.004	366372	20.000	20.260	
27 Chloroprene	53.0	4.780	4.780	0.000	564091	20.000	20.503	
29 cis-1,2-Dichloroethene	96.0	5.446	5.446	0.000	498615	20.000	19.949	
30 2-Butanone (MEK)	72.0	5.451	5.456	-0.004	240473	40.000	40.478	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.001	472501	20.000	20.361	
32 Propionitrile	54.0	5.540	5.540	0.001	1017854	200.00	198.86	
33 Ethyl Acetate	43.0	5.530	5.530	0.000	808925	20.000	20.399	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	1480512	100.00	101.58	
35 Bromochloromethane	128.0	5.745	5.745	0.000	279274	20.000	19.951	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	322797	20.000	19.774	
37 Chloroform	83.0	5.907	5.907	0.001	795722	20.000	20.256	
$ 39 dibromofluoromethane	111.0	6.106	6.107	0.000	503690	20.000	19.729	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	689988	20.000	20.525	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3251337	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.149	0.000	301801	20.000	20.065	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	580193	20.000	20.285	
44 Carbon tetrachloride	119.0	6.264	6.269	-0.004	636344	20.000	20.349	
45 Isobutyl alcohol	42.0	6.536	6.536	0.001	239314	200.00	217.59	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	559925	20.000	19.390	
48 Benzene	78.0	6.536	6.536	0.001	1697144	20.000	20.652	
49 Isopropyl Acetate	43.0	6.688	6.689	0.000	1117180	20.000	20.600	M
50 1,2-Dichloroethane	62.0	6.625	6.631	-0.004	640940	20.000	20.069	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4509793	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	554336	20.000	20.504	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	677969	20.000	19.957	
55 1,2-Dichloropropane	63.0	7.753	7.753	0.000	418136	20.000	20.526	
56 Dibromomethane	93.0	7.863	7.863	0.000	326063	20.000	20.091	
57 Methyl methacrylate	41.0	7.878	7.879	0.000	561673	20.000	21.177	
58 1,4-Dioxane	88.0	7.857	7.858	0.000	57375	200.00	207.88	
59 Bromodichloromethane	83.0	8.120	8.119	0.000	592379	20.000	20.542	
60 2-nitropropane	43.0	8.424	8.423	0.000	276701	20.000	20.420	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	387244	20.000	21.418	
62 cis-1,3-Dichloropropene	75.0	8.702	8.702	0.000	703974	20.000	21.049	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	1551031	40.000	43.367	
$ 64 Toluene-d8	98.0	9.037	9.037	0.001	1730006	20.000	19.672	
65 Toluene	92.0	9.126	9.127	0.000	1145483	20.000	20.138	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	674707	20.000	20.522	
67 Ethyl methacrylate	69.0	9.582	9.583	0.000	745997	20.000	20.644	
68 1,1,2-Trichloroethane	97.0	9.735	9.735	0.000	461677	20.000	19.963	
69 Tetrachloroethene	164.0	9.803	9.803	0.000	458658	20.000	19.803	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	725002	20.000	19.982	
71 2-Hexanone	43.0	10.033	10.034	0.000	1392977	40.000	42.769	
72 Dibromochloromethane	129.0	10.191	10.191	0.000	518456	20.000	20.407	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	1029085	20.000	21.326	
75 1,2-Dibromoethane (EDB)	107.0	10.311	10.317	-0.004	509357	20.000	20.351	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3742570	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.894	0.000	1249008	20.000	20.741	
78 1,1,1,2-Tetrachloroethane	131.0	11.009	11.009	0.000	441692	20.000	20.348	
79 Ethylbenzene	106.0	11.019	11.019	0.001	657284	20.000	20.616	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	792298	20.000	20.826	
81 o-Xylene	106.0	11.575	11.575	0.000	704681	20.000	20.883	
82 Styrene	104.0	11.596	11.596	0.000	1221608	20.000	21.414	
83 Bromoform	173.0	11.774	11.774	0.001	333368	20.000	18.130	
84 Isopropylbenzene	105.0	11.958	11.958	0.000	1763777	20.000	21.397	
85 Cyclohexanone	55.0	12.041	12.042	0.000	180499	200.00	192.55	

Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.131	-0.004	501881	20.000	19.945	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	476871	20.000	20.530	
87 Bromobenzene	156.0	12.256	12.257	0.000	474529	20.000	20.814	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	192173	20.000	20.448	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.320	0.000	123963	20.000	18.552	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	1922214	20.000	21.794	
92 2-Chlorotoluene	91.0	12.450	12.451	0.000	1054957	20.000	20.910	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.556	0.000	1158445	20.000	21.393	
94 4-Chlorotoluene	126.0	12.571	12.571	0.001	397728	20.000	21.036	
95 tert-Butylbenzene	119.0	12.844	12.849	-0.004	1076564	20.000	21.138	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.902	0.000	1109758	20.000	21.483	
97 sec-Butylbenzene	105.0	13.053	13.054	0.000	1468138	20.000	21.296	
98 1,3-Dichlorobenzene	146.0	13.158	13.159	0.000	667758	20.000	20.447	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	1163237	20.000	21.346	
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.232	-0.004	1283920	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.253	13.253	0.000	667186	20.000	20.693	
102 Benzyl chloride	91.0	13.358	13.358	0.000	701140	20.000	21.116	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	930234	20.000	21.238	
104 1,2-Dichlorobenzene	146.0	13.572	13.573	0.000	591438	20.000	20.335	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.260	0.000	95611	20.000	19.637	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.001	353195	20.000	19.607	
107 Hexachlorobutadiene	225.0	15.062	15.067	-0.004	174387	20.000	19.928	
108 Naphthalene	128.0	15.166	15.167	0.000	1048784	20.000	20.503	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	328143	20.000	19.548	
S 110 Xylenes (total)	106.0	16.000		0.000		40.000	41.710	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		40.000	39.983	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

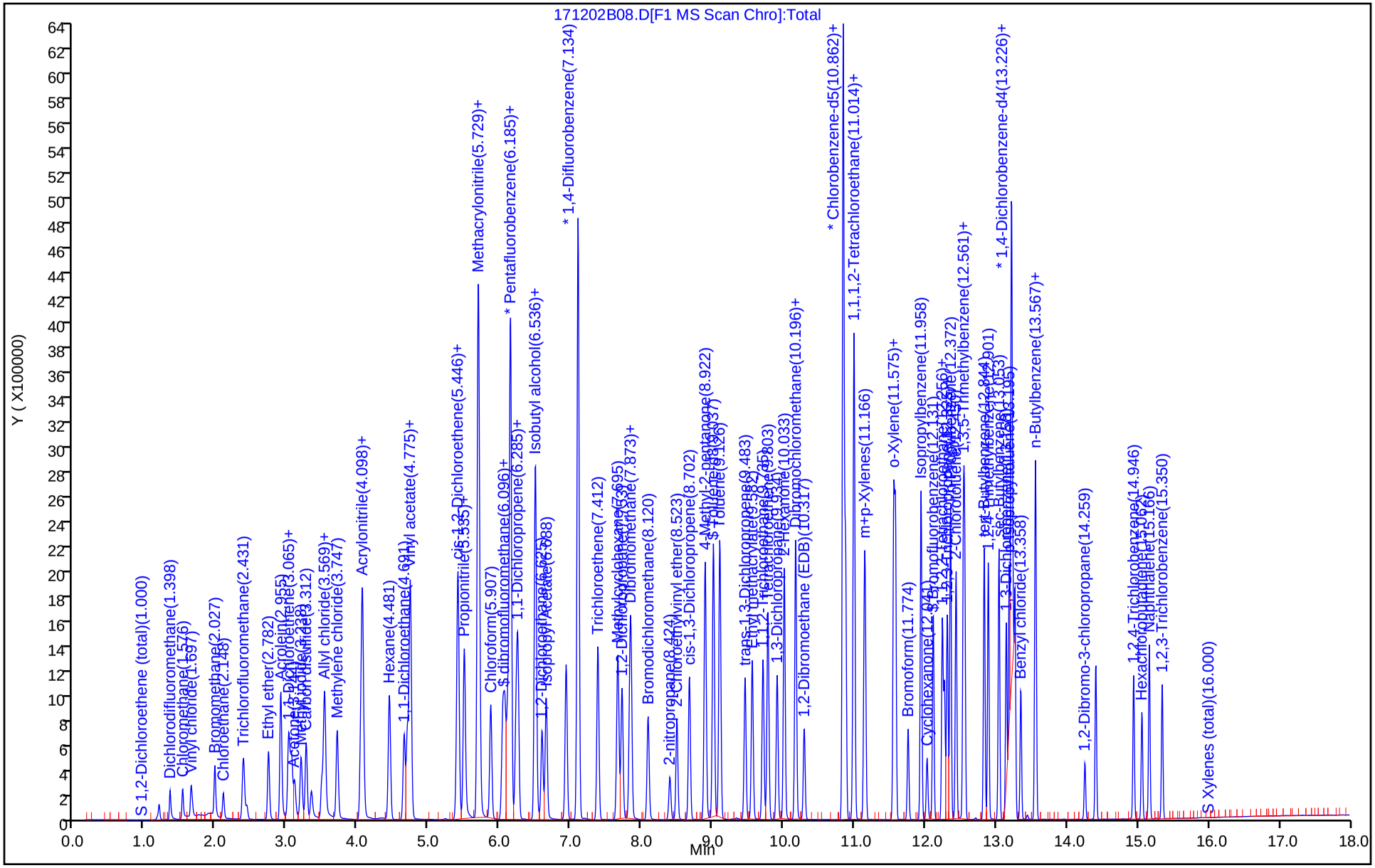
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D				
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ		
Sample Info:	17120219B, VSTD020BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

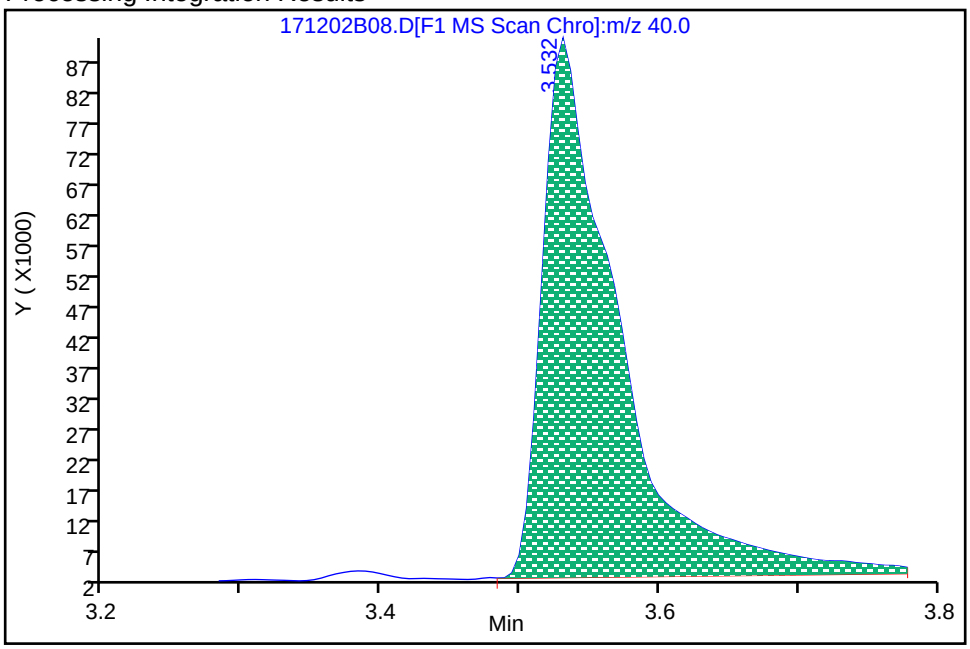
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ
Sample Info:	17120219B, VSTD020BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

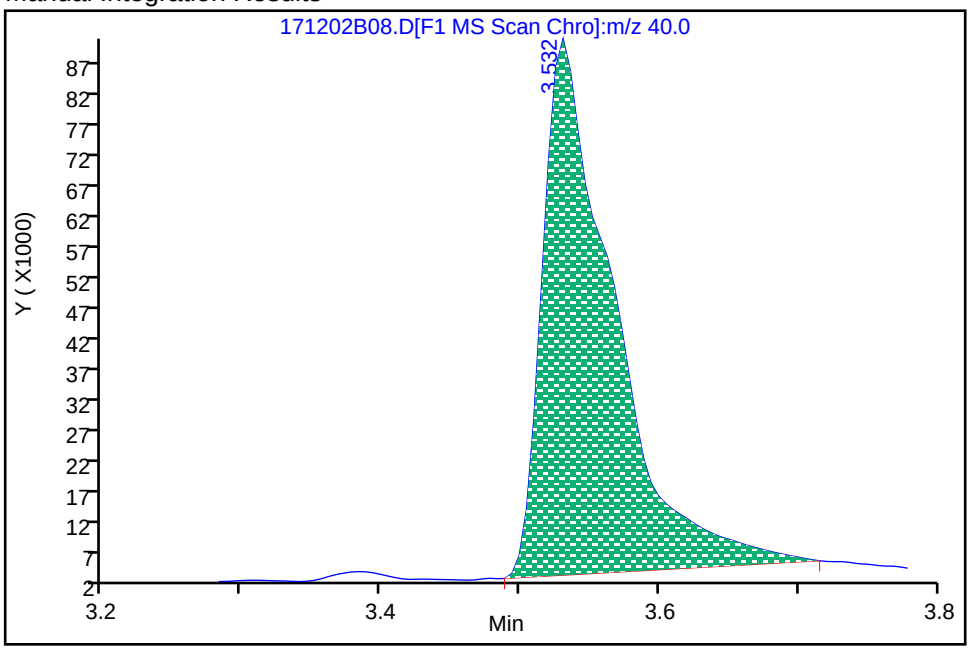
Processing Integration Results

RT: 3.532
Area: 333755
Amount: 178.99
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 309972
Amount: 207.74
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

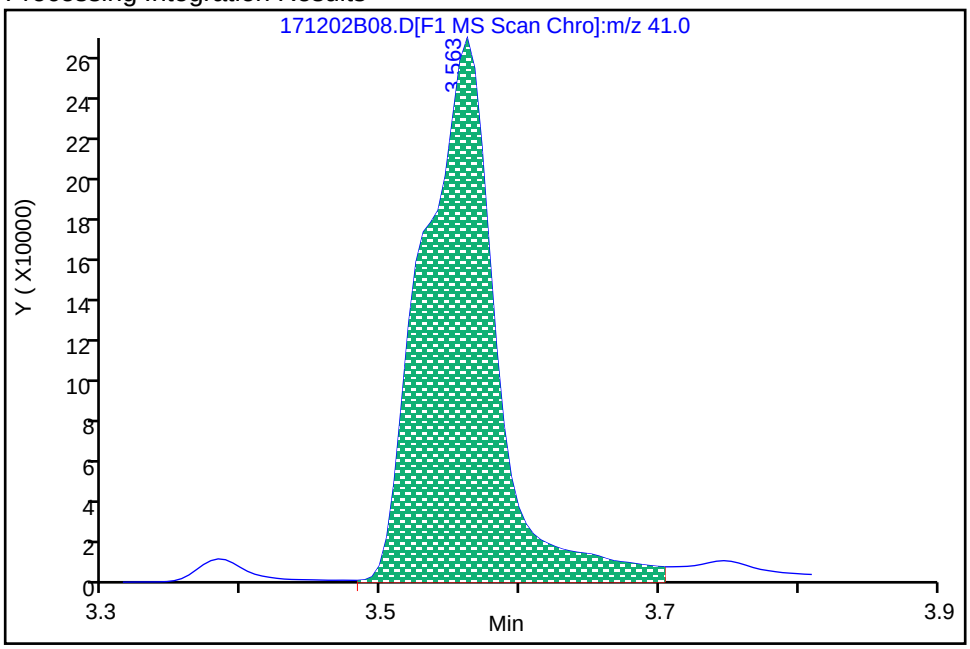
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ
Sample Info:	17120219B, VSTD020BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

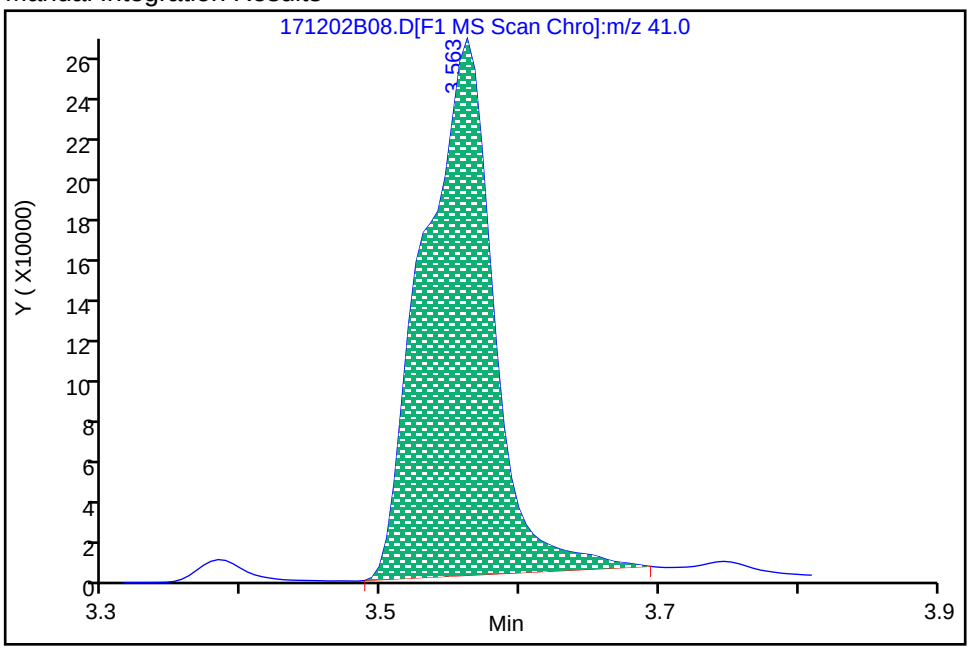
Processing Integration Results

RT: 3.563
Area: 967802
Amount: 178.99
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 907189
Amount: 207.74
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

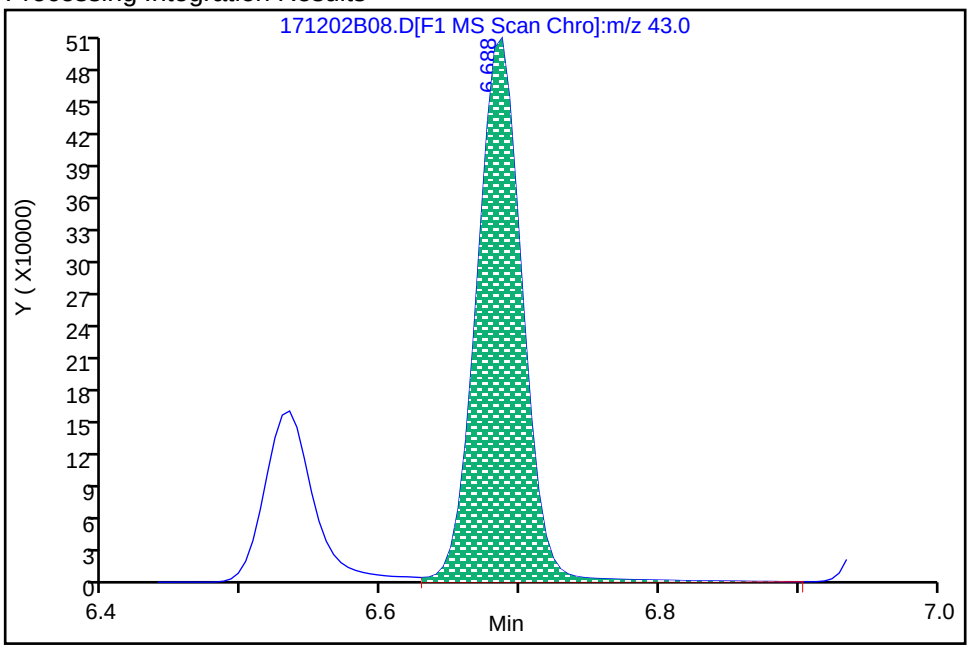
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B08.D		
Injection Date:	03-Dec-2019 02:32:30	Inst. ID:	msd17.i
Client ID:	20uL/100mL 15613/10	Lab ID:	VSTD020BQ
Sample Info:	17120219B, VSTD020BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

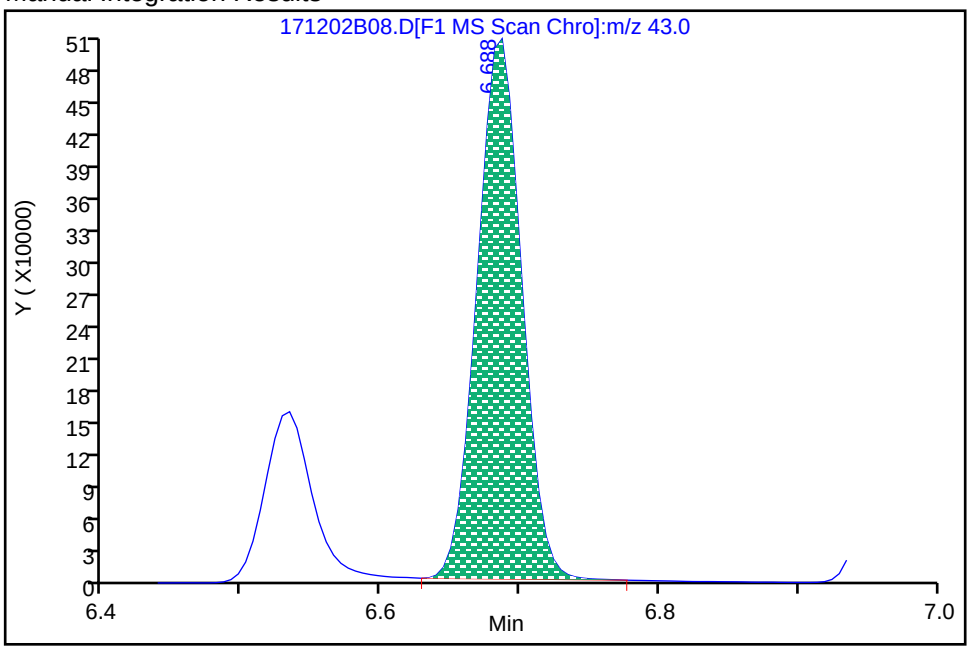
Processing Integration Results

RT: 6.688
Area: 1151923
Amount: 20.608
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.688
Area: 1117180
Amount: 20.600
Amount Units: ug/L



Data Editor: pap, 04-Dec-2019 12:52:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D
Lab Sample ID: VSTD050BQ Client Sample ID: 50uL/100mL 15613/10
Injection Date: 03-Dec-2019 02:56:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD050BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 5 ALS Bottle: 9
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	639547	50.000	55.012	
2 Chloromethane	50.0	1.576	1.576	0.000	498533	50.000	50.942	
3 Vinyl chloride	62.0	1.697	1.697	0.000	593947	50.000	51.685	
4 Bromomethane	94.0	2.027	2.027	0.000	567719	50.000	51.613	
5 Chloroethane	64.0	2.148	2.148	0.000	415038	50.000	50.886	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	1295297	50.000	52.386	
8 Ethyl ether	59.0	2.782	2.782	0.000	856966	50.000	51.685	
9 Acrolein	56.0	2.955	2.955	0.000	2640631	500.00	564.85	
10 Acetone	43.0	3.149	3.149	0.000	1023107	100.00	99.391	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	740593	50.000	51.525	
12 Freon 113	101.0	3.107	3.107	0.000	726211	50.000	51.269	
13 Methyl iodide	142.0	3.243	3.243	0.000	1596786	50.000	52.799	
14 Carbon disulfide	76.0	3.311	3.311	0.000	2399577	50.000	53.390	
15 Acetonitrile	40.0	3.532	3.532	0.000	750305	500.00	513.75	M
17 Allyl chloride	76.0	3.568	3.568	0.000	478186	50.000	52.733	
16 Methyl Acetate	43.0	3.579	3.579	0.000	1374664	50.000	52.458	
18 Methylene chloride	84.0	3.747	3.747	0.000	958850	50.000	51.533	
20 Acrylonitrile	53.0	4.077	4.077	0.000	1302614	100.00	106.22	
21 trans-1,2-Dichloroethene	96.0	4.103	4.103	0.000	1052454	50.000	50.797	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	2736428	50.000	52.645	
23 Hexane	57.0	4.481	4.481	0.000	1346235	50.000	48.812	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	1779108	50.000	51.106	
25 Vinyl acetate	86.0	4.732	4.732	0.000	324029	50.000	54.373	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	904307	50.000	51.092	
27 Chloroprene	53.0	4.780	4.780	0.000	1393844	50.000	51.760	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	1243727	50.000	50.840	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.000	579728	100.00	99.700	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	1131880	50.000	49.833	
32 Propionitrile	54.0	5.540	5.540	0.000	2570106	500.00	513.01	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	1905394	50.000	49.090	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	3650228	250.00	255.87	
35 Bromochloromethane	128.0	5.744	5.744	0.000	708100	50.000	51.682	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	786748	50.000	49.241	
37 Chloroform	83.0	5.907	5.907	0.000	1949276	50.000	50.698	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	1254282	50.000	50.195	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	1679158	50.000	51.032	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3182314	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.000	735105	50.000	49.934	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	1419965	50.000	50.723	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	1591858	50.000	52.009	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	569467	500.00	529.01	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	1382348	50.000	48.544	
48 Benzene	78.0	6.536	6.536	0.000	4081483	50.000	50.367	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	2656669	50.000	49.677	M
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	1581103	50.000	50.205	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4447059	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	1346410	50.000	50.504	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	1687093	50.000	50.361	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	980427	50.000	48.808	
56 Dibromomethane	93.0	7.862	7.862	0.000	809760	50.000	50.599	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	1313430	50.000	50.220	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	129450	500.00	475.64	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	1472112	50.000	51.768	
60 2-nitropropane	43.0	8.424	8.424	0.000	672053	50.000	50.295	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	915530	50.000	51.351	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	1736926	50.000	52.668	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	3574934	100.00	101.37	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	4018533	50.000	46.440	
65 Toluene	92.0	9.126	9.126	0.000	2684771	50.000	47.968	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	1670450	50.000	51.638	
67 Ethyl methacrylate	69.0	9.582	9.582	0.000	1755594	50.000	49.374	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	1101244	50.000	48.394	
69 Tetrachloroethene	164.0	9.802	9.802	0.000	1085533	50.000	47.632	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	1726261	50.000	48.352	
71 2-Hexanone	43.0	10.033	10.033	0.000	3105429	100.00	96.900	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	1311274	50.000	52.454	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	2339358	50.000	49.268	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	1256726	50.000	51.030	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3682563	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.893	0.000	2979665	50.000	50.286	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	1083259	50.000	50.716	
79 Ethylbenzene	106.0	11.019	11.019	0.000	1577977	50.000	50.301	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	1897816	50.000	50.699	
81 o-Xylene	106.0	11.575	11.575	0.000	1700059	50.000	51.202	
82 Styrene	104.0	11.596	11.596	0.000	3001354	50.000	53.468	
83 Bromoform	173.0	11.774	11.774	0.000	897137	50.000	49.108	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	4199548	50.000	51.777	
85 Cyclohexanone	55.0	12.041	12.041	0.000	461621	500.00	500.47	

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.130	0.000	1261797	50.000	50.962	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	1199036	50.000	50.307	
87 Bromobenzene	156.0	12.256	12.256	0.000	1185488	50.000	50.675	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	486180	50.000	50.413	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	342874	50.000	49.563	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	4579562	50.000	50.602	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	2559020	50.000	49.430	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.555	0.000	2805611	50.000	50.491	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	989595	50.000	51.008	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	2580512	50.000	49.377	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	2682545	50.000	50.608	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	3522157	50.000	49.790	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	1651820	50.000	49.293	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	2810139	50.000	50.254	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.231	0.000	1317460	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	1636512	50.000	49.465	
102 Benzyl chloride	91.0	13.357	13.357	0.000	1849401	50.000	54.280	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	2293112	50.000	51.021	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	1454663	50.000	48.742	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	247142	50.000	49.466	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	889230	50.000	48.108	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	433952	50.000	48.327	
108 Naphthalene	128.0	15.166	15.166	0.000	2644047	50.000	50.374	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	833595	50.000	48.395	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	101.90	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	101.64	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

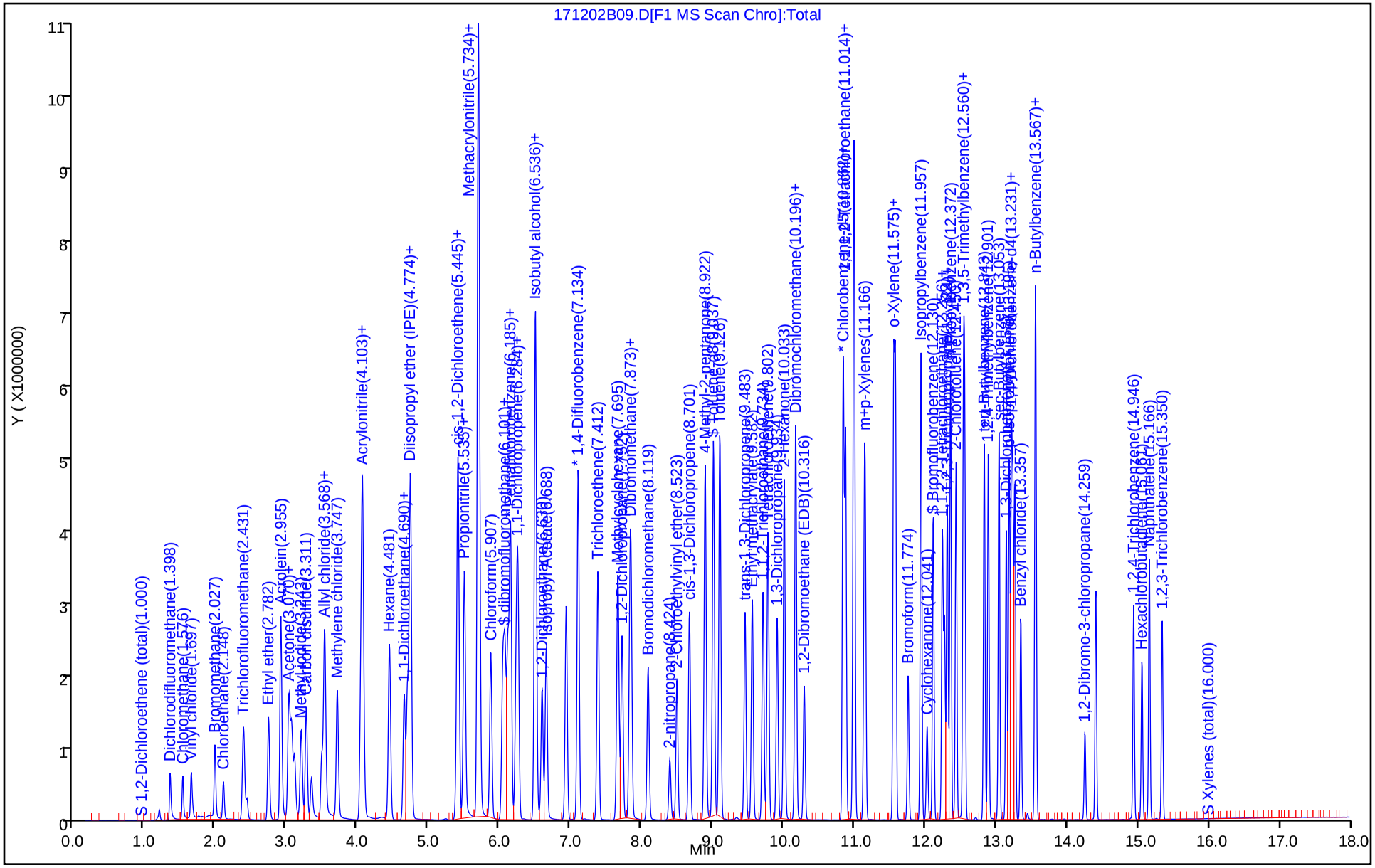
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D				
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ		
Sample Info:	17120219B, VSTD050BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

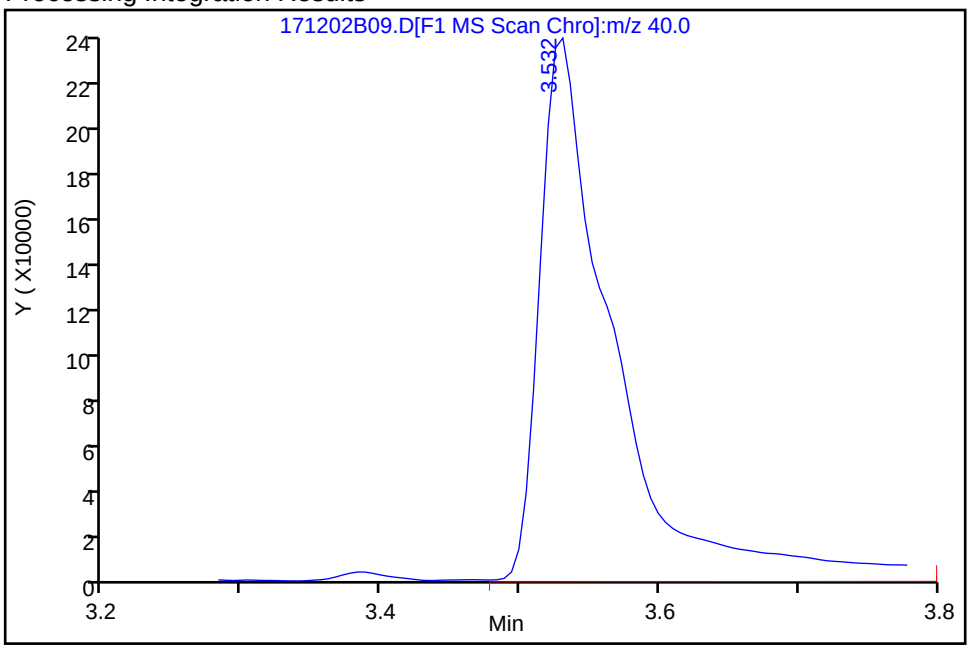
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D		
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ
Sample Info:	17120219B, VSTD050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

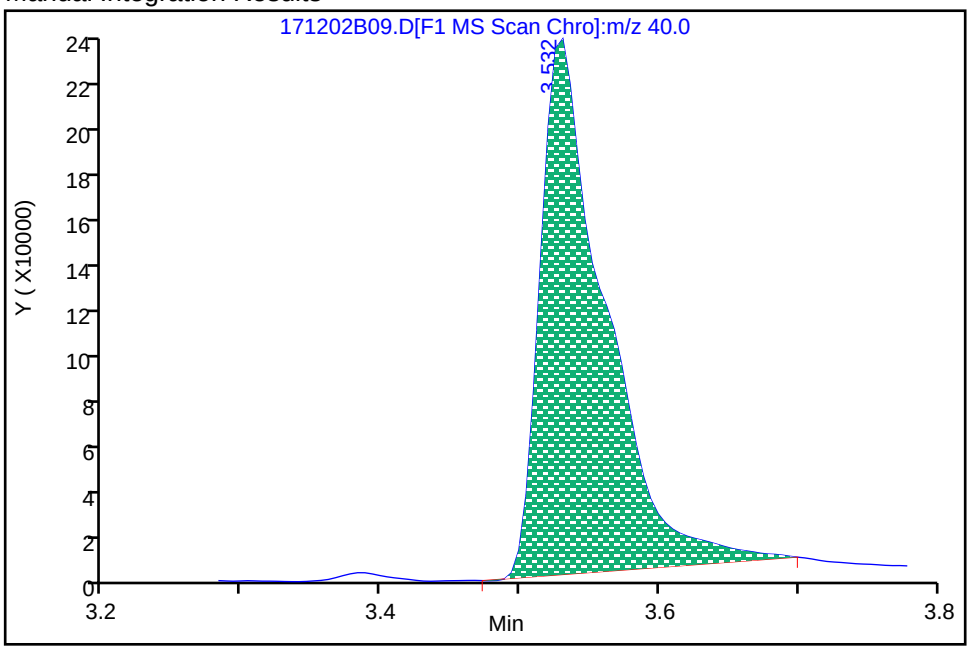
Processing Integration Results

RT: 3.532
Area: 876159
Amount: 500.00
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 750305
Amount: 513.75
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:36:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

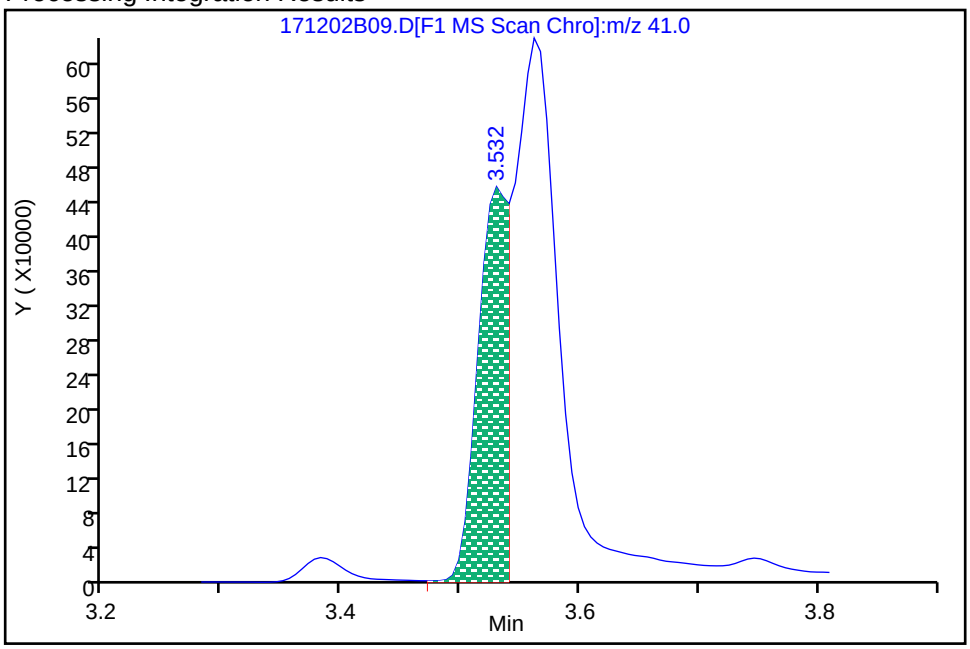
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D		
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ
Sample Info:	17120219B, VSTD050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

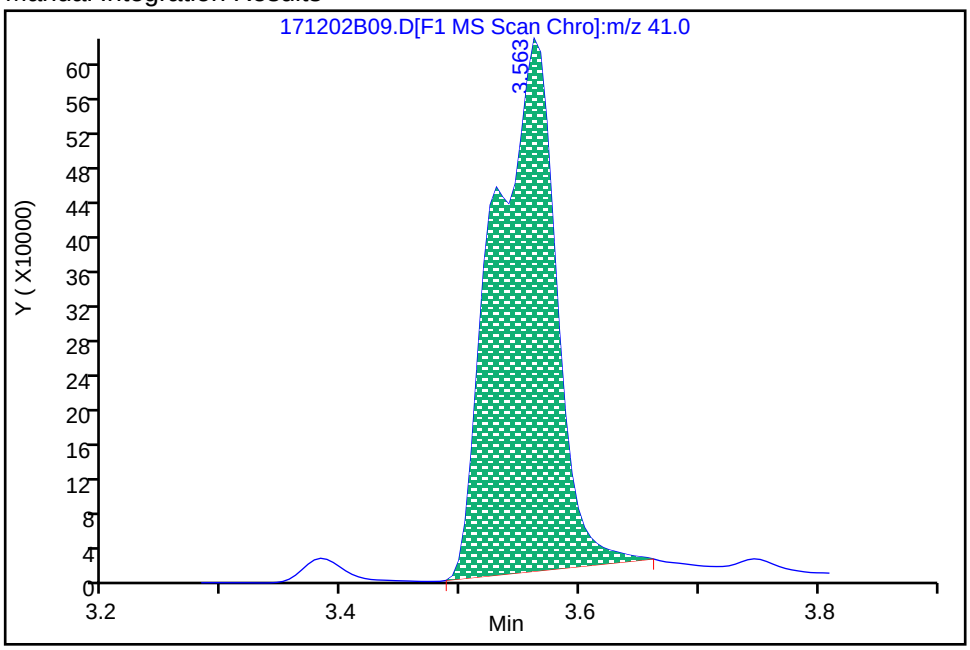
Processing Integration Results

RT:	3.532
Area:	768282
Amount:	500.00
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	3.563
Area:	2216909
Amount:	513.75
Amount Units:	ug/L



Data Editor: tml, 03-Dec-2019 07:36:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

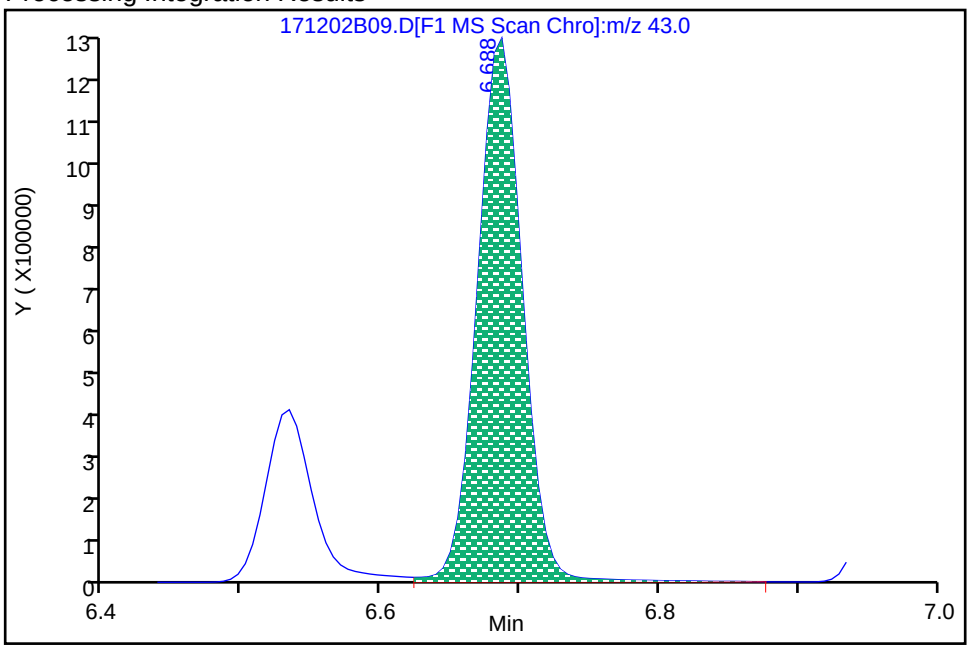
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B09.D		
Injection Date:	03-Dec-2019 02:56:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050BQ
Sample Info:	17120219B, VSTD050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

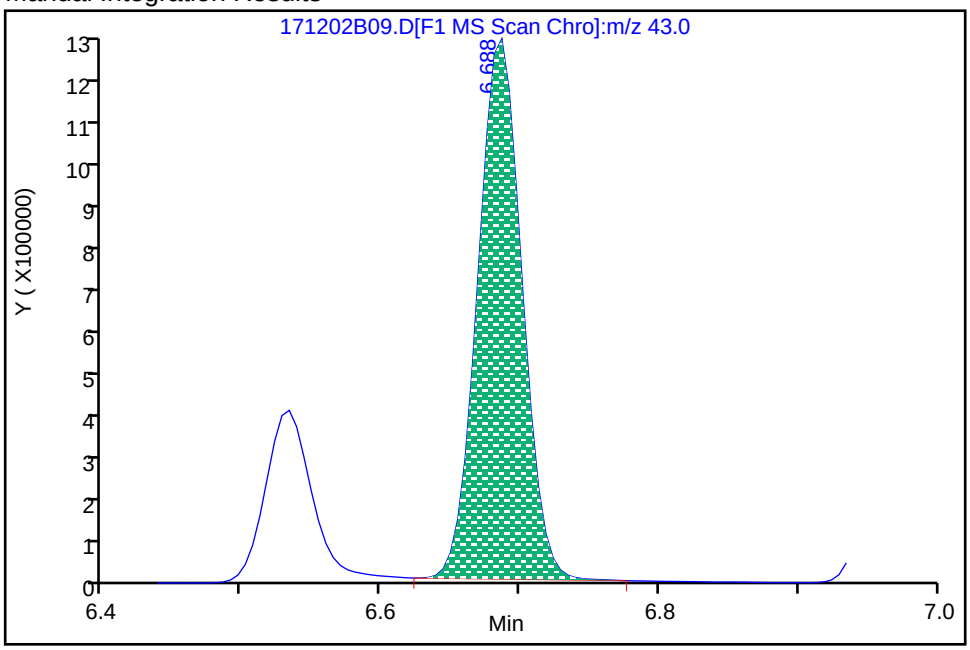
Processing Integration Results

RT:	6.688
Area:	2735831
Amount:	50.000
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	6.688
Area:	2656669
Amount:	49.677
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:52:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D
Lab Sample ID: VSTD100BQ Client Sample ID: 100uL/100mL15613/10
Injection Date: 03-Dec-2019 03:19:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD100BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 6 ALS Bottle: 10
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: pap Review Date: 04-Dec-2019 12:52:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	1200191	100.00	98.136	
2 Chloromethane	50.0	1.576	1.576	0.001	973353	100.00	94.548	
3 Vinyl chloride	62.0	1.691	1.697	-0.004	1162519	100.00	96.164	
4 Bromomethane	94.0	2.027	2.027	0.000	1098582	100.00	94.942	
5 Chloroethane	64.0	2.148	2.148	0.000	826117	100.00	96.283	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	2498925	100.00	96.072	
8 Ethyl ether	59.0	2.782	2.782	0.000	1693968	100.00	97.119	
9 Acrolein	56.0	2.955	2.955	0.000	4863689	1000.00	988.98	
10 Acetone	43.0	3.149	3.149	0.000	1947171	200.00	179.82	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	1416586	100.00	93.688	
12 Freon 113	101.0	3.102	3.107	-0.004	1462695	100.00	98.162	
13 Methyl iodide	142.0	3.243	3.243	0.000	2969813	100.00	93.347	
14 Carbon disulfide	76.0	3.312	3.311	0.000	4510096	100.00	95.391	
15 Acetonitrile	40.0	3.526	3.532	-0.004	1399697	1000.00	911.05	M
17 Allyl chloride	76.0	3.563	3.568	-0.004	973614	100.00	102.06	
16 Methyl Acetate	43.0	3.579	3.579	0.000	2700196	100.00	97.951	
18 Methylene chloride	84.0	3.747	3.747	0.000	1759509	100.00	89.892	
20 Acrylonitrile	53.0	4.077	4.077	0.001	2481118	200.00	192.33	
21 trans-1,2-Dichloroethene	96.0	4.098	4.103	-0.005	2146675	100.00	98.492	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	5092892	100.00	93.140	
23 Hexane	57.0	4.481	4.481	0.000	2855044	100.00	98.405	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	3592569	100.00	98.100	
25 Vinyl acetate	86.0	4.732	4.732	0.000	662069	100.00	105.61	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	1838425	100.00	98.737	
27 Chloroprene	53.0	4.780	4.780	0.000	2827502	100.00	99.812	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	2506589	100.00	97.400	
30 2-Butanone (MEK)	72.0	5.451	5.456	-0.004	1187640	200.00	194.16	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	2197186	100.00	91.957	
32 Propionitrile	54.0	5.540	5.540	0.000	5071890	1000.00	962.36	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	3953035	100.00	96.814	
34 Methacrylonitrile	67.0	5.734	5.729	0.005	7258189	500.00	483.64	
35 Bromochloromethane	128.0	5.750	5.744	0.005	1417181	100.00	98.326	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	1556386	100.00	92.599	
37 Chloroform	83.0	5.907	5.907	0.000	3928181	100.00	97.120	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	2505142	100.00	95.301	
40 1,1,1-Trichloroethane	97.0	6.075	6.080	-0.004	3455520	100.00	99.830	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3347696	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.001	1467605	100.00	94.766	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	2920412	100.00	99.168	
44 Carbon tetrachloride	119.0	6.263	6.269	-0.004	3303191	100.00	102.59	
45 Isobutyl alcohol	42.0	6.536	6.536	0.001	1127863	1000.00	995.97	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	2701958	100.00	93.345	
48 Benzene	78.0	6.536	6.536	0.001	8182557	100.00	99.336	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	5573467	100.00	102.53	M
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	3136651	100.00	97.980	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4520476	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	2762453	100.00	101.94	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	3425612	100.00	100.60	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	2024493	100.00	99.147	
56 Dibromomethane	93.0	7.863	7.862	0.000	1620995	100.00	99.646	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	2732904	100.00	102.80	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	256242	1000.00	926.22	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	2982954	100.00	103.19	
60 2-nitropropane	43.0	8.424	8.424	0.000	1419591	100.00	104.51	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	1893326	100.00	104.47	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	3485135	100.00	103.96	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	7170097	200.00	200.00	
$ 64 Toluene-d8	98.0	9.037	9.037	0.001	7918709	100.00	96.618	
65 Toluene	92.0	9.126	9.126	0.000	5434023	100.00	102.51	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	3334196	100.00	108.82	
67 Ethyl methacrylate	69.0	9.582	9.582	0.000	3651004	100.00	108.41	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	2179511	100.00	101.12	
69 Tetrachloroethene	164.0	9.808	9.802	0.005	2198863	100.00	101.87	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	3364444	100.00	99.496	
71 2-Hexanone	43.0	10.033	10.033	0.000	6285319	200.00	207.07	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	2592445	100.00	109.49	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	4746864	100.00	105.55	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	2426360	100.00	104.02	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3487938	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.893	0.005	5626810	100.00	100.26	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	2142123	100.00	105.89	
79 Ethylbenzene	106.0	11.019	11.019	0.000	3044974	100.00	102.48	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	3637433	100.00	102.59	
81 o-Xylene	106.0	11.575	11.575	0.000	3202850	100.00	101.85	
82 Styrene	104.0	11.601	11.596	0.005	5495314	100.00	103.36	
83 Bromoform	173.0	11.774	11.774	0.000	1739382	100.00	100.24	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	7542480	100.00	98.181	
85 Cyclohexanone	55.0	12.041	12.041	0.000	818976	1000.00	937.45	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.130	0.000	2276106	100.00	97.057	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	2209652	100.00	100.76	
87 Bromobenzene	156.0	12.256	12.256	0.000	2195832	100.00	102.01	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	880196	100.00	99.191	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	637787	100.00	99.926	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	8060671	100.00	96.797	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	4688484	100.00	98.423	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.555	0.000	5088772	100.00	99.528	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	1817013	100.00	101.78	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	4625803	100.00	96.195	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	4905815	100.00	100.58	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	6309490	100.00	96.934	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	3146586	100.00	102.05	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.006	5160062	100.00	100.29	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.231	0.000	1212249	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	3103850	100.00	101.96	
102 Benzyl chloride	91.0	13.357	13.357	0.000	3510634	100.00	111.98	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	4288725	100.00	103.71	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	2812636	100.00	102.42	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	496629	100.00	108.03	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	1827420	100.00	107.45	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	872938	100.00	105.65	
108 Naphthalene	128.0	15.166	15.166	0.000	5253059	100.00	108.77	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	1713911	100.00	108.14	
S 110 Xylenes (total)	106.0	16.000		0.000		200.00	204.44	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		200.00	195.89	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

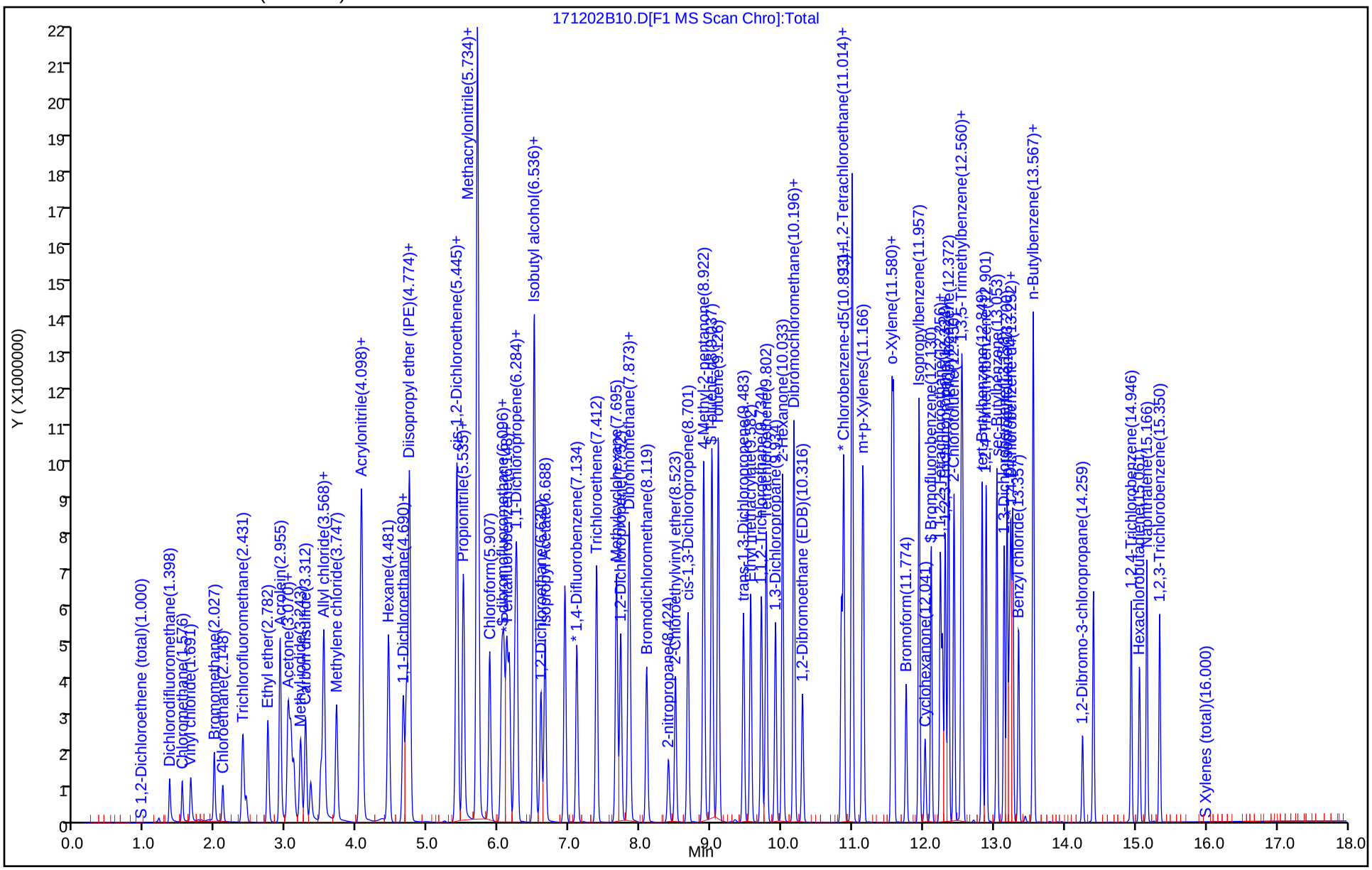
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D				
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ		
Sample Info:	17120219B, VSTD100BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

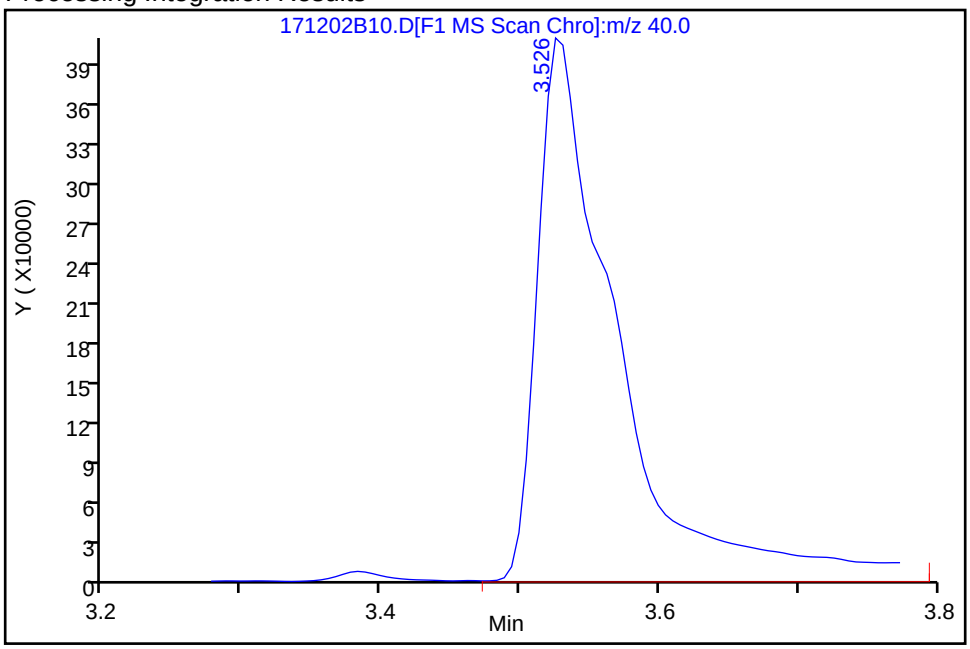
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

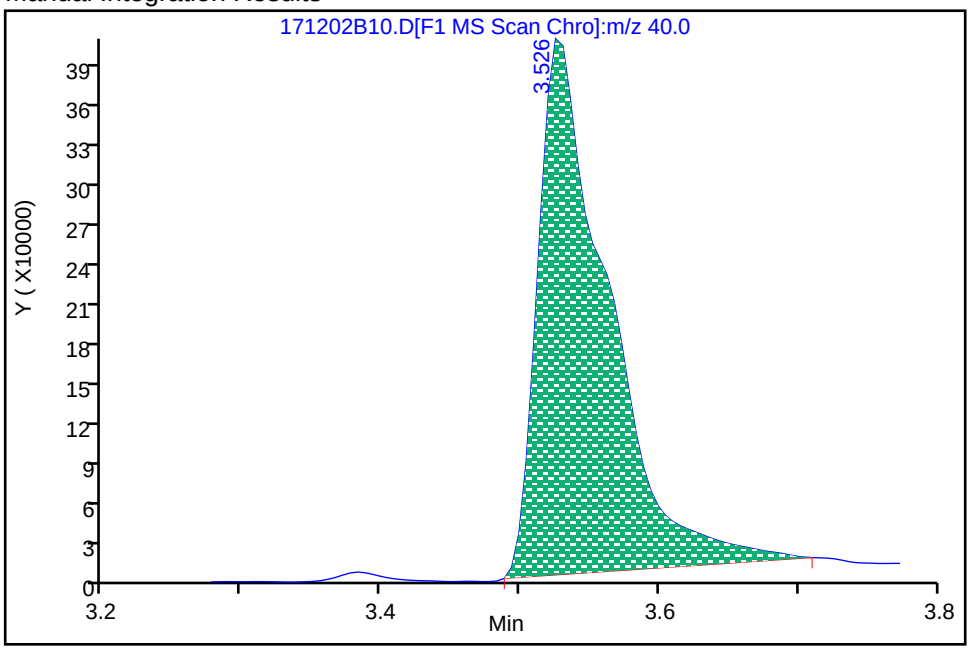
Processing Integration Results

RT: 3.526
Area: 1621008
Amount: 866.81
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.526
Area: 1399697
Amount: 911.05
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

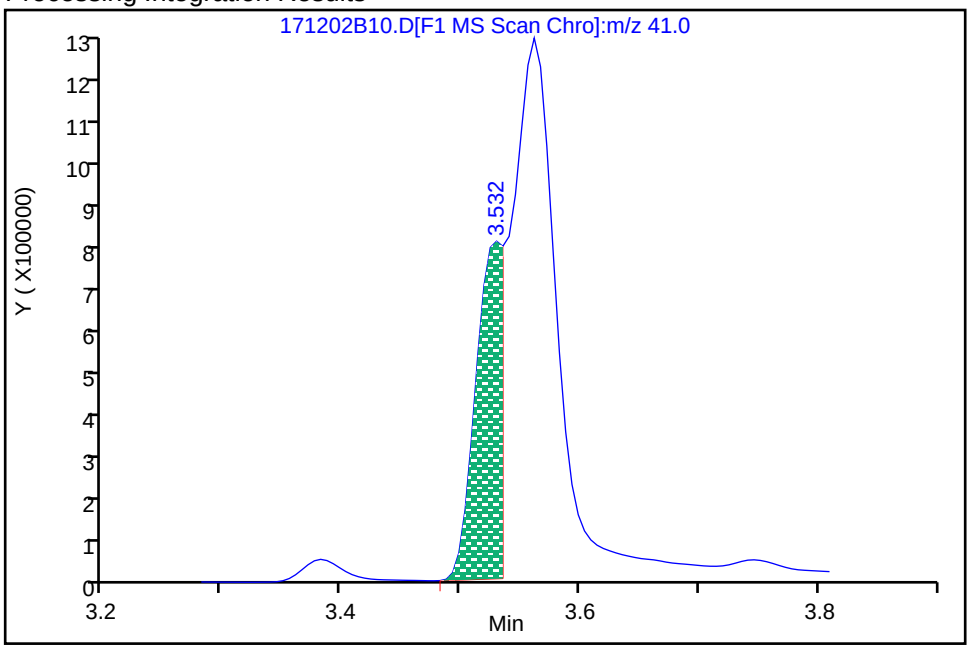
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

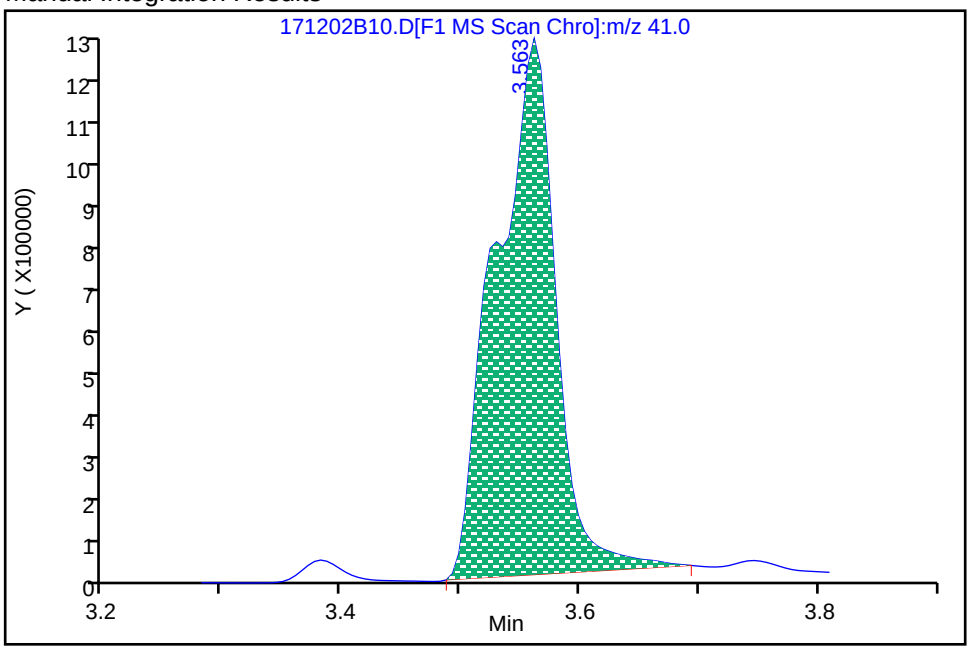
Processing Integration Results

RT: 3.532
Area: 1168362
Amount: 866.81
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 4339774
Amount: 911.05
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

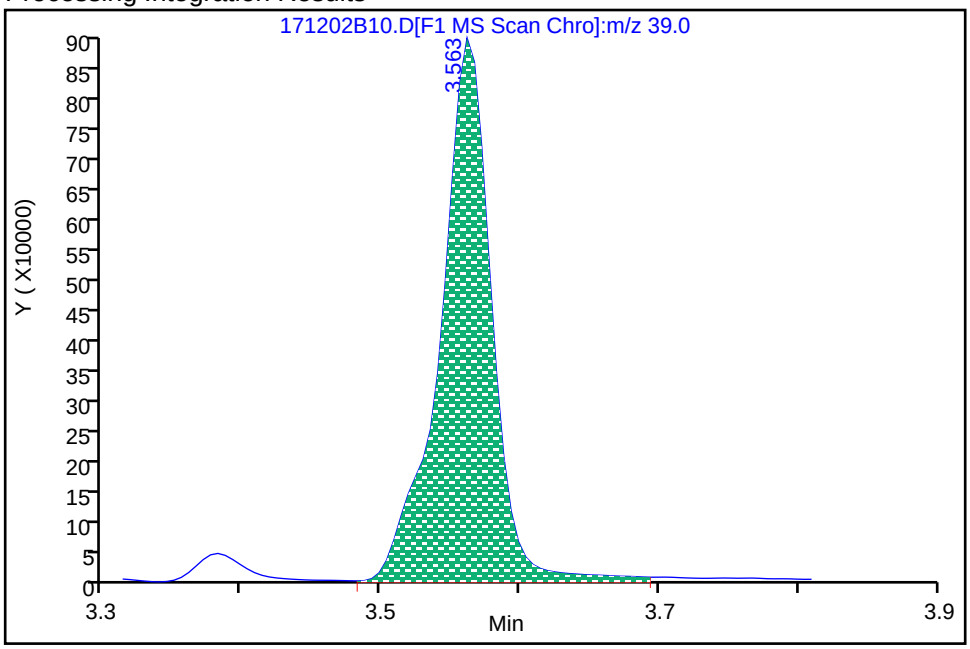
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

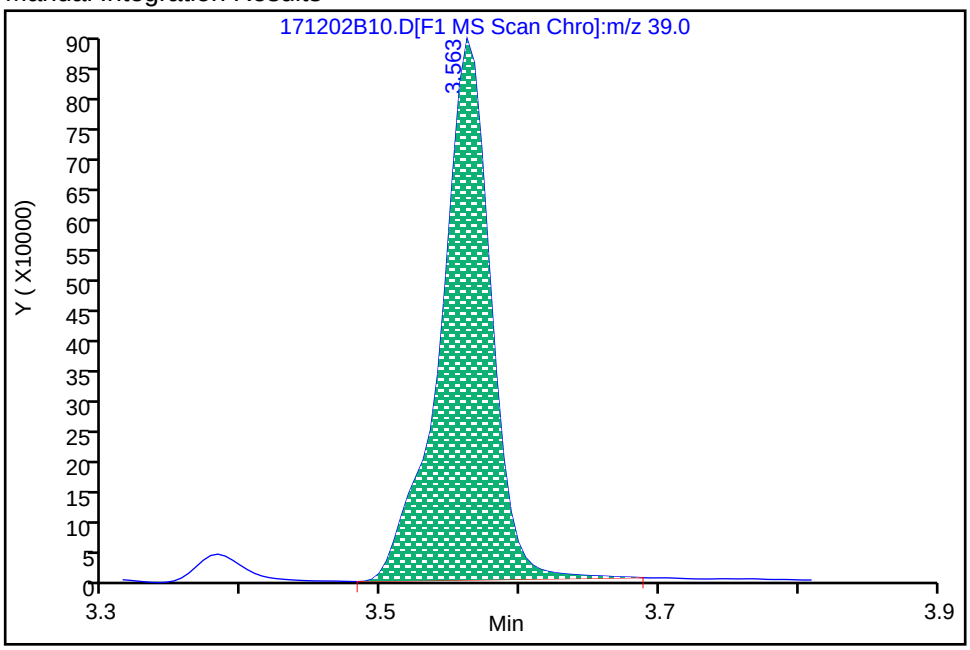
Processing Integration Results

RT: 3.563
Area: 2302163
Amount: 866.81
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 2234880
Amount: 911.05
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:47:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

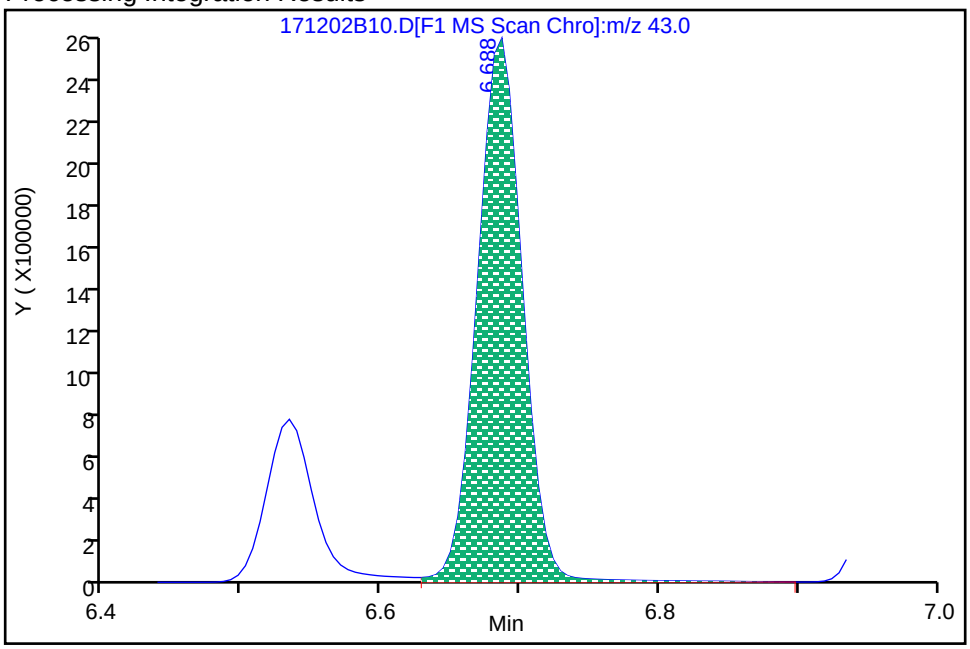
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B10.D		
Injection Date:	03-Dec-2019 03:19:30	Inst. ID:	msd17.i
Client ID:	100uL/100mL15613/10	Lab ID:	VSTD100BQ
Sample Info:	17120219B, VSTD100BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

49 Isopropyl Acetate, CAS: 108-21-4

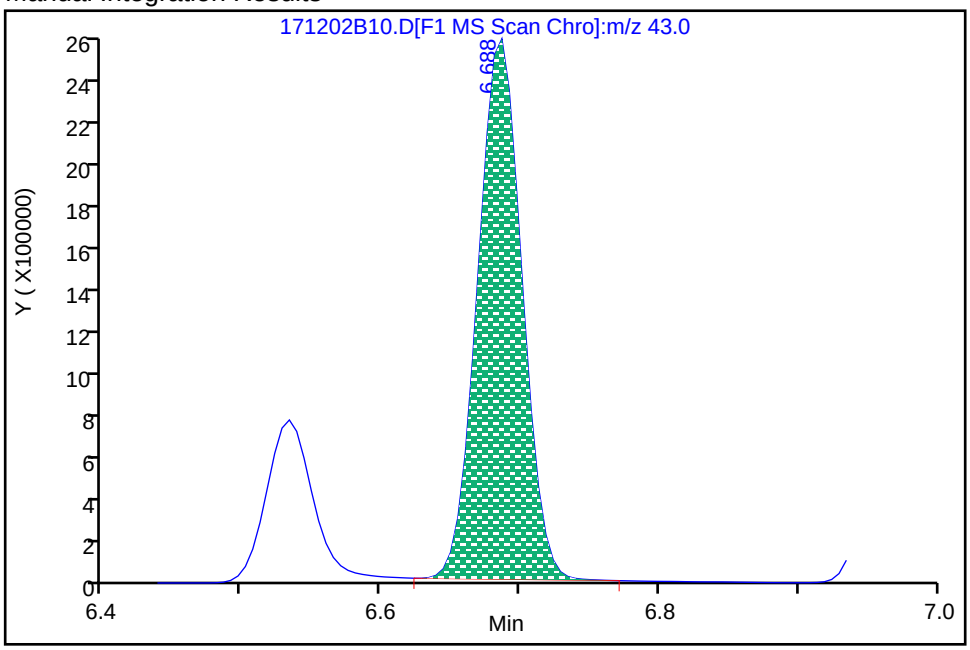
Processing Integration Results

RT:	6.688
Area:	5740653
Amount:	102.04
Amount Units:	ug/L
Conc:	



Manual Integration Results

RT:	6.688
Area:	5573467
Amount:	102.53
Amount Units:	ug/L



Data Editor: pap, 04-Dec-2019 12:52:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D
Lab Sample ID: VSTD200BQ Client Sample ID: 200uL/100mL15613/10
Injection Date: 03-Dec-2019 03:43:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VSTD200BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: Ical, Level: 7 ALS Bottle: 11
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:48:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	2373130	200.00	200.39	
2 Chloromethane	50.0	1.576	1.576	0.000	1916147	200.00	192.21	
3 Vinyl chloride	62.0	1.697	1.697	0.000	2308531	200.00	197.21	
4 Bromomethane	94.0	2.027	2.027	0.000	2111210	200.00	188.42	
5 Chloroethane	64.0	2.142	2.148	-0.004	1680776	200.00	202.30	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	4882006	200.00	193.83	
8 Ethyl ether	59.0	2.782	2.782	0.000	3315867	200.00	196.32	
9 Acrolein	56.0	2.955	2.955	0.000	8974564	2000.00	1884.56	
10 Acetone	43.0	3.149	3.149	0.000	3662213	400.00	349.25	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	2789313	200.00	190.51	
12 Freon 113	101.0	3.102	3.107	-0.004	3004976	200.00	208.26	
13 Methyl iodide	142.0	3.243	3.243	0.000	5828245	200.00	189.18	
14 Carbon disulfide	76.0	3.311	3.311	0.000	8766832	200.00	191.49	
15 Acetonitrile	40.0	3.532	3.532	0.000	2730452	2000.00	1835.34	M
17 Allyl chloride	76.0	3.568	3.568	0.000	1953420	200.00	211.47	
16 Methyl Acetate	43.0	3.579	3.579	0.000	5084019	200.00	190.46	
18 Methylene chloride	84.0	3.752	3.747	0.005	3451172	200.00	182.08	
20 Acrylonitrile	53.0	4.077	4.077	0.000	4744617	400.00	379.81	
21 trans-1,2-Dichloroethene	96.0	4.103	4.103	0.000	4218519	200.00	199.88	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	9606746	200.00	181.44	
23 Hexane	57.0	4.481	4.481	0.000	5582485	200.00	198.70	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	6886150	200.00	194.18	
25 Vinyl acetate	86.0	4.732	4.732	0.000	1293544	200.00	213.08	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	3528585	200.00	195.71	
27 Chloroprene	53.0	4.780	4.780	0.000	5463792	200.00	199.18	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	4899790	200.00	196.62	
30 2-Butanone (MEK)	72.0	5.456	5.456	0.000	2167918	400.00	366.00	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	4171986	200.00	180.32	
32 Propionitrile	54.0	5.545	5.540	0.006	8917854	2000.00	1747.44	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	7108255	200.00	179.78	
34 Methacrylonitrile	67.0	5.739	5.729	0.011	12939134	1000.00	890.37	
35 Bromochloromethane	128.0	5.750	5.744	0.005	2789185	200.00	199.85	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	2835436	200.00	174.21	
37 Chloroform	83.0	5.907	5.907	0.000	7526300	200.00	192.16	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	4853760	200.00	190.69	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	6584242	200.00	196.44	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3241688	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.000	2806655	200.00	187.16	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	5627550	200.00	197.34	
44 Carbon tetrachloride	119.0	6.269	6.269	0.000	6394619	200.00	205.10	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	1936545	2000.00	1766.01	
$ 46 1,2-Dichloroethane-d4	65.0	6.531	6.526	0.005	5084959	200.00	182.80	
48 Benzene	78.0	6.536	6.536	0.000	14817501	200.00	187.19	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	10160964	200.00	194.50	
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	5871343	200.00	190.85	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4344084	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	5278191	200.00	202.68	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	6566474	200.00	200.66	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	3762868	200.00	191.76	
56 Dibromomethane	93.0	7.862	7.862	0.000	3051384	200.00	195.19	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	4903710	200.00	191.94	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	442922	2000.00	1666.01	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	5634388	200.00	202.83	
60 2-nitropropane	43.0	8.424	8.424	0.000	2573594	200.00	197.17	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	3484357	200.00	200.07	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	6473979	200.00	200.96	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	11946522	400.00	346.77	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	14001260	200.00	180.69	
65 Toluene	92.0	9.131	9.126	0.005	9875154	200.00	197.03	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	6253270	200.00	215.86	
67 Ethyl methacrylate	69.0	9.587	9.582	0.005	6530022	200.00	205.08	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	4010238	200.00	196.80	
69 Tetrachloroethene	164.0	9.808	9.802	0.005	4155542	200.00	203.62	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	6095912	200.00	190.67	
71 2-Hexanone	43.0	10.033	10.033	0.000	10629568	400.00	370.39	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	4862252	200.00	217.20	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	8234321	200.00	193.66	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	4451082	200.00	201.83	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3297677	50.000	50.000	
77 Chlorobenzene	112.0	10.898	10.893	0.005	9971560	200.00	187.92	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	3808056	200.00	199.10	
79 Ethylbenzene	106.0	11.019	11.019	0.000	5522259	200.00	196.58	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	6572017	200.00	196.06	
81 o-Xylene	106.0	11.575	11.575	0.000	5674194	200.00	190.84	
82 Styrene	104.0	11.601	11.596	0.005	9699240	200.00	192.96	
83 Bromoform	173.0	11.774	11.774	0.000	3330795	200.00	202.74	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	12273854	200.00	168.99	
85 Cyclohexanone	55.0	12.041	12.041	0.000	1390034	2000.00	1682.92	

Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.130	12.130	0.000	4138495	200.00	186.65	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	4022030	200.00	190.63	M
87 Bromobenzene	156.0	12.256	12.256	0.000	3999693	200.00	193.14	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	1612099	200.00	188.84	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	1244251	200.00	202.36	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	13096785	200.00	163.48	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	8137584	200.00	177.57	
93 1,3,5-Trimethylbenzene	105.0	12.555	12.555	0.000	8611570	200.00	175.07	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	3338305	200.00	194.38	
95 tert-Butylbenzene	119.0	12.849	12.849	0.000	7777974	200.00	168.13	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	8402539	200.00	179.07	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	10430245	200.00	166.56	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	5739220	200.00	193.47	
99 p-Isopropyltoluene	119.0	13.200	13.195	0.005	8736378	200.00	176.49	
* 100 1,4-Dichlorobenzene-d4	152.0	13.231	13.231	0.000	1166250	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	5683162	200.00	194.05	
102 Benzyl chloride	91.0	13.363	13.357	0.005	6478505	200.00	214.80	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	7525593	200.00	189.15	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	5215905	200.00	197.43	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	970612	200.00	219.46	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	3462767	200.00	211.63	
107 Hexachlorobutadiene	225.0	15.067	15.067	0.000	1641302	200.00	206.48	
108 Naphthalene	128.0	15.166	15.166	0.000	9600692	200.00	206.63	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	3203845	200.00	210.12	
S 110 Xylenes (total)	106.0	16.000		0.000		400.00	386.90	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		400.00	396.50	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

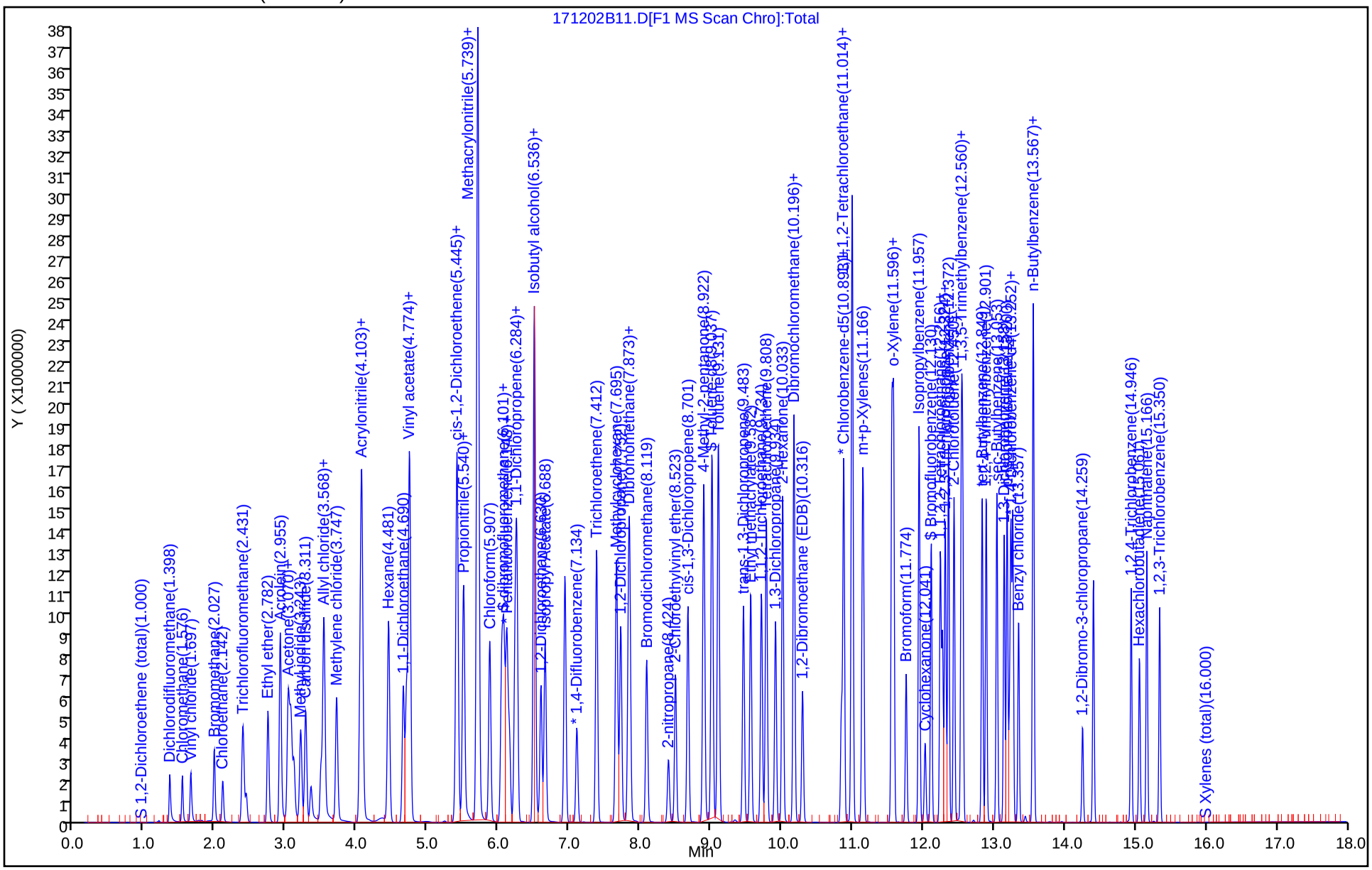
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D				
Injection Date:	03-Dec-2019 03:43:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	200uL/100mL15613/10	Lab ID:	VSTD200BQ		
Sample Info:	17120219B, VSTD200BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

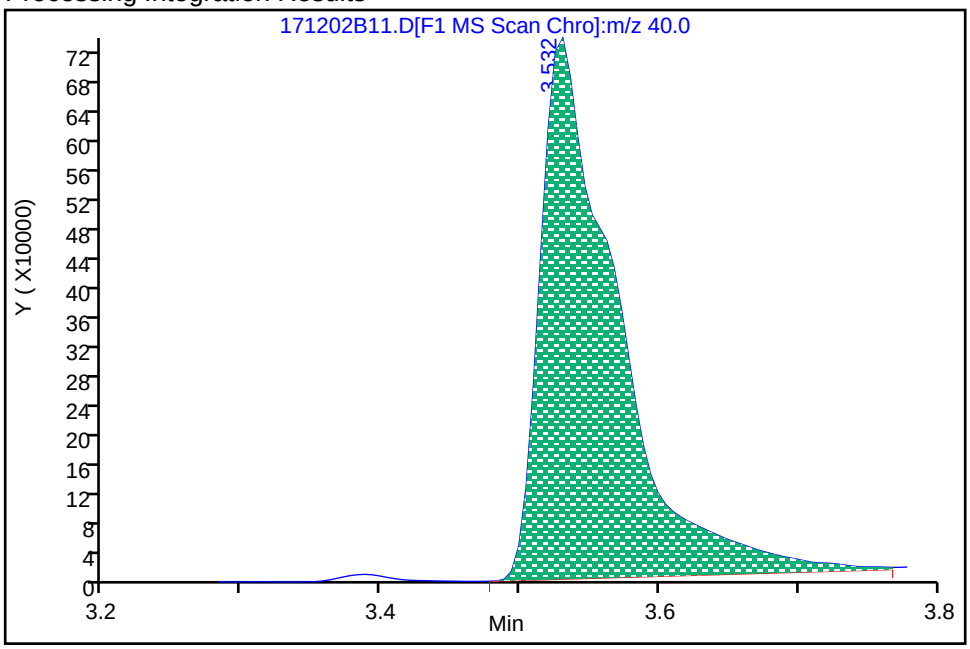
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D		
Injection Date:	03-Dec-2019 03:43:30	Inst. ID:	msd17.i
Client ID:	200uL/100mL15613/10	Lab ID:	VSTD200BQ
Sample Info:	17120219B, VSTD200BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

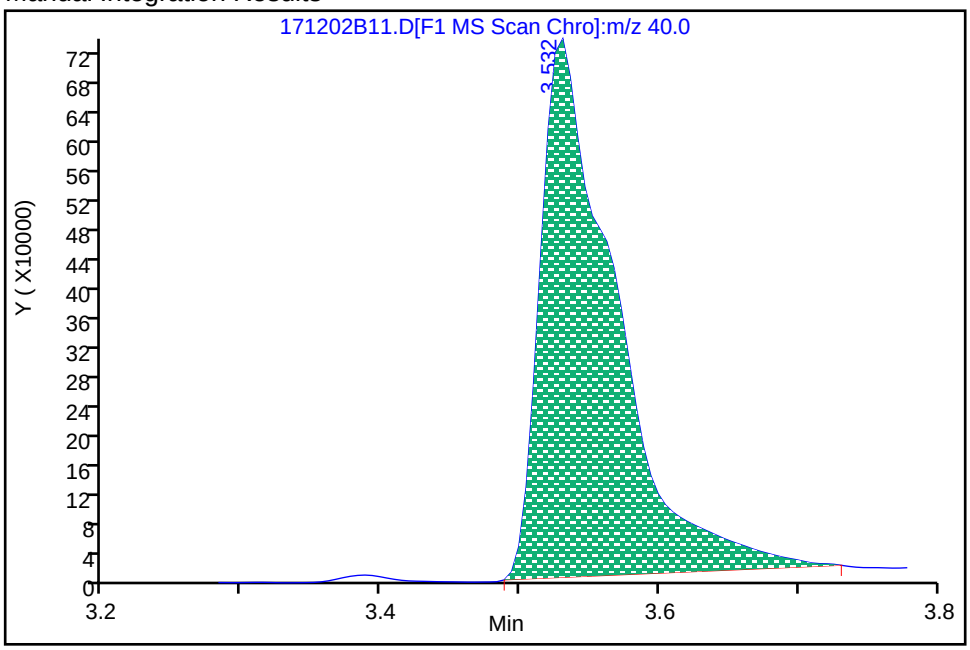
Processing Integration Results

RT: 3.532
Area: 2824803
Amount: 1610.55
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 2730452
Amount: 1835.34
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:48:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

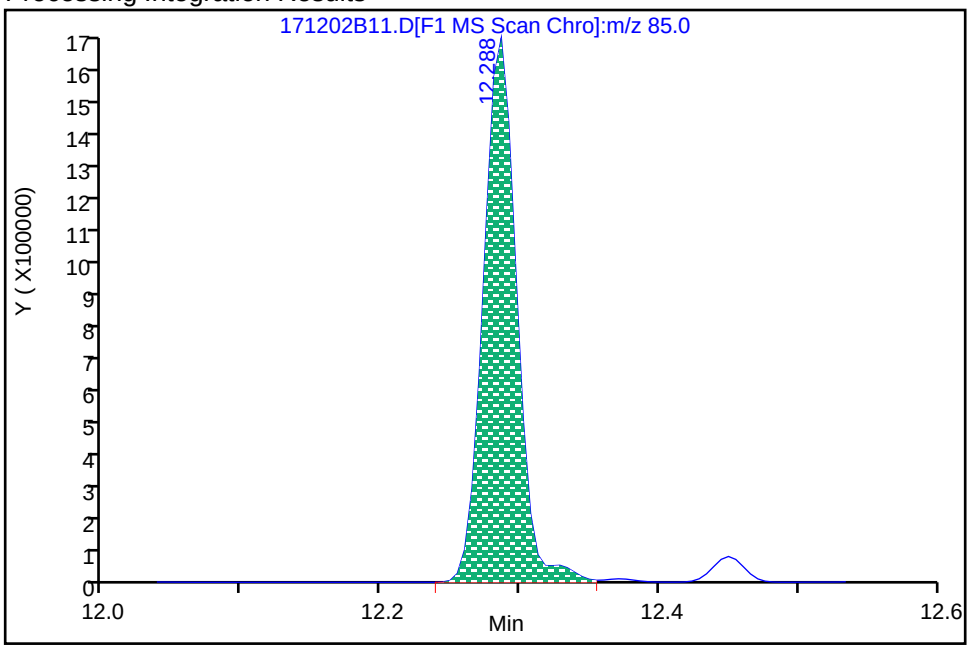
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B11.D		
Injection Date:	03-Dec-2019 03:43:30	Inst. ID:	msd17.i
Client ID:	200uL/100mL15613/10	Lab ID:	VSTD200BQ
Sample Info:	17120219B, VSTD200BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

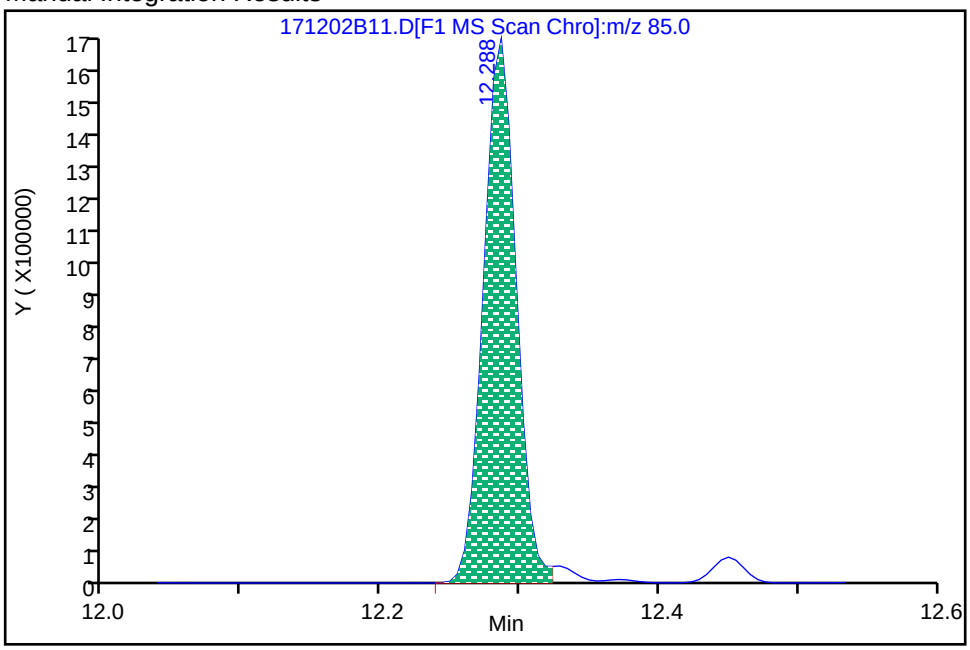
Processing Integration Results

RT: 12.288
Area: 2720690
Amount: 189.44
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 2671903
Amount: 190.63
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:48:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
ICV, Initial Calibration Verificaion Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D
Lab Sample ID: VICV050BQ Client Sample ID: 50uL/100mL 15608/11
Injection Date: 03-Dec-2019 04:30:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VICV050BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: ICV ALS Bottle: 13
Cpnd Sublist: std_5.0.sub Spike List File: DoDICV80-120.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	47.511	-5	95	80- 120
2 Chloromethane	50	45.943	-8.1	91.9	80- 120
3 Vinyl chloride	50	45.841	-8.3	91.7	80- 120
4 Bromomethane	50	49.924	-0.2	99.8	80- 120
5 Chloroethane	50	53.31	6.6	106	80- 120
6 Trichlorofluoromethane	50	52.162	4.3	104	80- 120
8 Ethyl ether	50	52.822	5.6	105	80- 120
9 Acrolein	500	507.68	1.5	101	80- 120
10 Acetone	100	89.95	-10	90	80- 120
11 1,1-Dichloroethene	50	60.771	21.5	* 121	80- 120
12 Freon 113	50	50.907	1.8	101	80- 120
13 Methyl iodide	50	52.225	4.4	104	80- 120
14 Carbon disulfide	50	52.616	5.2	105	80- 120
15 Acetonitrile	500	499.24	-0.2	99.8	80- 120
16 Methyl Acetate	50	50.167	0.3	100	80- 120
17 Allyl chloride	50	61.742	23.5	* 123	80- 120
18 Methylene chloride	50	50.123	0.2	100	80- 120
20 Acrylonitrile	100	99.401	-0.6	99.4	80- 120
21 trans-1,2-Dichloroethene	50	55.497	11	110	80- 120
22 tert-Butyl methyl ether(MTB	50	50.886	1.8	101	80- 120
23 Hexane	50	46.904	-6.2	93.8	80- 120
24 1,1-Dichloroethane	50	51.91	3.8	103	80- 120
25 Vinyl acetate	50	53.757	7.5	107	80- 120
26 Diisopropyl ether (IPE)	50	53.358	6.7	106	80- 120
27 Chloroprene	50	55.808	11.6	111	80- 120
29 cis-1,2-Dichloroethene	50	51.431	2.9	102	80- 120
30 2-Butanone (MEK)	100	91.175	-8.8	91.2	80- 120
31 2,2-Dichloropropane	50	49.754	-0.5	99.5	80- 120
32 Propionitrile	500	481.89	-3.6	96.4	80- 120
33 Ethyl Acetate	50	46.576	-6.8	93.2	80- 120
34 Methacrylonitrile	250	247.54	-1	99	80- 120
35 Bromochloromethane	50	49.881	-0.2	99.8	80- 120
36 Tetrahydrofuran	50	45.357	-9.3	90.7	80- 120
37 Chloroform	50	52.381	4.8	104	80- 120
40 1,1,1-Trichloroethane	50	51.504	3	103	80- 120

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
42 Cyclohexane	50	51.548	3.1	103	80- 120
43 1,1-Dichloropropene	50	51.692	3.4	103	80- 120
44 Carbon tetrachloride	50	51.716	3.4	103	80- 120
45 Isobutyl alcohol	500	488.01	-2.4	97.6	80- 120
48 Benzene	50	50.393	0.8	100	80- 120
49 Isopropyl Acetate	50	48.601	-2.8	97.2	80- 120
50 1,2-Dichloroethane	50	49.284	-1.4	98.6	80- 120
53 Trichloroethene	50	50.741	1.5	101	80- 120
54 Methylcyclohexane	50	51.369	2.7	102	80- 120
55 1,2-Dichloropropane	50	49.499	-1	99	80- 120
56 Dibromomethane	50	49.648	-0.7	99.3	80- 120
57 Methyl methacrylate	50	49.153	-1.7	98.3	80- 120
58 1,4-Dioxane	500	453.04	-9.4	90.6	80- 120
59 Bromodichloromethane	50	52.848	5.7	105	80- 120
60 2-nitropropane	50	48.131	-3.7	96.3	80- 120
61 2-Chloroethylvinyl ether	50	46.968	-6.1	93.9	80- 120
62 cis-1,3-Dichloropropene	50	55.401	10.8	110	80- 120
63 4-Methyl-2-pentanone	100	92.646	-7.4	92.6	80- 120
65 Toluene	50	48.111	-3.8	96.2	80- 120
66 trans-1,3-Dichloropropene	50	53.835	7.7	107	80- 120
67 Ethyl methacrylate	50	48.664	-2.7	97.3	80- 120
68 1,1,2-Trichloroethane	50	47.782	-4.4	95.6	80- 120
69 Tetrachloroethene	50	48.979	-2	98	80- 120
70 1,3-Dichloropropane	50	49.197	-1.6	98.4	80- 120
71 2-Hexanone	100	89.244	-10.8	89.2	80- 120
72 Dibromochloromethane	50	52.406	4.8	104	80- 120
73 n-Butyl acetate	50	47.845	-4.3	95.7	80- 120
75 1,2-Dibromoethane (EDB)	50	50.279	0.6	100	80- 120
77 Chlorobenzene	50	50.179	0.4	100	80- 120
78 1,1,1,2-Tetrachloroethane	50	49.528	-0.9	99.1	80- 120
79 Ethylbenzene	50	50.198	0.4	100	80- 120
80 m+p-Xylenes	50	51.036	2.1	102	80- 120
81 o-Xylene	50	50.74	1.5	101	80- 120
82 Styrene	50	52.672	5.3	105	80- 120
83 Bromoform	50	48.051	-3.9	96.1	80- 120
84 Isopropylbenzene	50	50.715	1.4	101	80- 120
85 Cyclohexanone	500	482.36	-3.5	96.5	80- 120
87 Bromobenzene	50	50.832	1.7	101	80- 120
88 1,1,2,2-Tetrachloroethane	50	47.827	-4.3	95.7	80- 120
89 1,2,3-Trichloropropane	50	50.876	1.8	101	80- 120
90 trans-1,4-Dichloro-2-butene	50	44.96	-10.1	89.9	80- 120
91 n-Propylbenzene	50	49.905	-0.2	99.8	80- 120
92 2-Chlorotoluene	50	49.499	-1	99	80- 120
93 1,3,5-Trimethylbenzene	50	51.12	2.2	102	80- 120
94 4-Chlorotoluene	50	51.584	3.2	103	80- 120
95 tert-Butylbenzene	50	48.265	-3.5	96.5	80- 120
96 1,2,4-Trimethylbenzene	50	50.614	1.2	101	80- 120

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
97 sec-Butylbenzene	50	48.593	-2.8	97.2	80- 120
98 1,3-Dichlorobenzene	50	49.372	-1.3	98.7	80- 120
99 p-Isopropyltoluene	50	50.968	1.9	101	80- 120
101 1,4-Dichlorobenzene	50	49.43	-1.1	98.9	80- 120
102 Benzyl chloride	50	49.842	-0.3	99.7	80- 120
103 n-Butylbenzene	50	51.362	2.7	102	80- 120
104 1,2-Dichlorobenzene	50	48.529	-2.9	97.1	80- 120
105 1,2-Dibromo-3-chloropropane	50	48.086	-3.8	96.2	80- 120
106 1,2,4-Trichlorobenzene	50	48.618	-2.8	97.2	80- 120
107 Hexachlorobutadiene	50	48.523	-3	97	80- 120
108 Naphthalene	50	50.699	1.4	101	80- 120
109 1,2,3-Trichlorobenzene	50	48.323	-3.4	96.6	80- 120
S 110 Xylenes (total)	100	101.78	1.8	101	80- 120

Report Date: 04-Dec-2019 13:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D
Lab Sample ID: VICV050BQ Client Sample ID: 50uL/100mL 15608/11
Injection Date: 03-Dec-2019 04:30:30 Dil. Factor: 1.0
Operator: JTH Inst. ID: msd17.i
Sample Info: 17120219B, VICV050BQ
Method: \\Organics\DD\chem\msd17.i\17120219B.b\8260B-17.m
Method Date: 04-Dec-2019 13:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: ICV ALS Bottle: 13
Cpnd Sublist: std_5.0.sub Spike List File: DoDICV80-120.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 03-Dec-2019 07:54:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.398	0.000	569696	47.511	47.511	
2 Chloromethane	50.0	1.576	1.576	0.000	463733	45.943	45.943	
3 Vinyl chloride	62.0	1.697	1.697	0.000	543338	45.841	45.841	
4 Bromomethane	94.0	2.027	2.027	0.000	566387	49.924	49.924	
5 Chloroethane	64.0	2.148	2.148	0.000	448464	53.310	53.310	
6 Trichlorofluoromethane	101.0	2.431	2.431	0.000	1330274	52.162	52.162	
8 Ethyl ether	59.0	2.782	2.782	0.000	903327	52.822	52.822	
9 Acrolein	56.0	2.955	2.955	0.000	2447901	507.68	507.68	
10 Acetone	43.0	3.149	3.149	0.000	955005	89.950	89.950	
11 1,1-Dichloroethene	96.0	3.065	3.065	0.000	900915	60.771	60.771	R
12 Freon 113	101.0	3.107	3.107	0.000	743722	50.907	50.907	
13 Methyl iodide	142.0	3.243	3.243	0.000	1629032	52.225	52.225	
14 Carbon disulfide	76.0	3.311	3.311	0.000	2439057	52.616	52.616	
15 Acetonitrile	40.0	3.532	3.532	0.000	752016	499.24	499.24	M
17 Allyl chloride	76.0	3.568	3.568	0.000	577462	61.742	61.742	R
16 Methyl Acetate	43.0	3.579	3.579	0.000	1355899	50.167	50.167	
18 Methylene chloride	84.0	3.747	3.747	0.000	961919	50.123	50.123	
20 Acrylonitrile	53.0	4.077	4.077	0.000	1257261	99.401	99.401	
21 trans-1,2-Dichloroethene	96.0	4.103	4.103	0.000	1185929	55.497	55.497	
22 tert-Butyl methyl ether(MTBE)	73.0	4.108	4.108	0.000	2728042	50.886	50.886	
23 Hexane	57.0	4.481	4.481	0.000	1334241	46.904	46.904	
24 1,1-Dichloroethane	63.0	4.690	4.690	0.000	1863877	51.910	51.910	
25 Vinyl acetate	86.0	4.732	4.732	0.000	330419	53.757	53.757	
26 Diisopropyl ether (IPE)	87.0	4.774	4.774	0.000	974076	53.358	53.358	
27 Chloroprene	53.0	4.780	4.780	0.000	1550050	55.808	55.808	
29 cis-1,2-Dichloroethene	96.0	5.445	5.445	0.000	1297716	51.431	51.431	
30 2-Butanone (MEK)	72.0	5.451	5.456	-0.004	546809	91.175	91.175	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.435	5.435	0.000	1165572	49.754	49.754	
32 Propionitrile	54.0	5.540	5.540	0.000	2490060	481.89	481.89	
33 Ethyl Acetate	43.0	5.529	5.529	0.000	1864575	46.576	46.576	
34 Methacrylonitrile	67.0	5.729	5.729	0.000	3642397	247.54	247.54	
35 Bromochloromethane	128.0	5.744	5.744	0.000	704886	49.881	49.881	
36 Tetrahydrofuran	42.0	5.750	5.750	0.000	747444	45.357	45.357	
37 Chloroform	83.0	5.907	5.907	0.000	2077208	52.381	52.381	
$ 39 dibromofluoromethane	111.0	6.106	6.106	0.000	1304342	50.609	50.609	
40 1,1,1-Trichloroethane	97.0	6.080	6.080	0.000	1747903	51.504	51.504	
* 41 Pentafluorobenzene	168.0	6.185	6.185	0.000	3282259	50.000	50.000	
42 Cyclohexane	41.0	6.148	6.148	0.000	782701	51.548	51.548	
43 1,1-Dichloropropene	75.0	6.290	6.290	0.000	1492545	51.692	51.692	
44 Carbon tetrachloride	119.0	6.263	6.269	-0.004	1632576	51.716	51.716	
45 Isobutyl alcohol	42.0	6.536	6.536	0.000	541828	488.01	488.01	
$ 46 1,2-Dichloroethane-d4	65.0	6.526	6.526	0.000	1403580	48.011	48.011	
48 Benzene	78.0	6.536	6.536	0.000	4192319	50.393	50.393	
49 Isopropyl Acetate	43.0	6.688	6.688	0.000	2668354	48.601	48.601	
50 1,2-Dichloroethane	62.0	6.630	6.630	0.000	1593453	49.284	49.284	
* 52 1,4-Difluorobenzene	114.0	7.134	7.134	0.000	4565509	50.000	50.000	
53 Trichloroethene	130.0	7.412	7.412	0.000	1388749	50.741	50.741	
54 Methylcyclohexane	83.0	7.695	7.695	0.000	1766692	51.369	51.369	
55 1,2-Dichloropropane	63.0	7.752	7.752	0.000	1020796	49.499	49.499	
56 Dibromomethane	93.0	7.862	7.862	0.000	815694	49.648	49.648	
57 Methyl methacrylate	41.0	7.878	7.878	0.000	1319760	49.153	49.153	
58 1,4-Dioxane	88.0	7.857	7.857	0.000	126583	453.04	453.04	
59 Bromodichloromethane	83.0	8.119	8.119	0.000	1542863	52.848	52.848	
60 2-nitropropane	43.0	8.424	8.424	0.000	660270	48.131	48.131	
61 2-Chloroethylvinyl ether	63.0	8.523	8.523	0.000	859689	46.968	46.968	
62 cis-1,3-Dichloropropene	75.0	8.701	8.701	0.000	1875751	55.401	55.401	
63 4-Methyl-2-pentanone	43.0	8.922	8.922	0.000	3354447	92.646	92.646	
$ 64 Toluene-d8	98.0	9.037	9.037	0.000	4280864	48.031	48.031	
65 Toluene	92.0	9.126	9.126	0.000	2773543	48.111	48.111	
66 trans-1,3-Dichloropropene	75.0	9.483	9.483	0.000	1793753	53.835	53.835	
67 Ethyl methacrylate	69.0	9.582	9.582	0.000	1782233	48.664	48.664	
68 1,1,2-Trichloroethane	97.0	9.734	9.734	0.000	1119922	47.782	47.782	
69 Tetrachloroethene	164.0	9.802	9.802	0.000	1149700	48.979	48.979	
70 1,3-Dichloropropane	76.0	9.934	9.934	0.000	1809091	49.197	49.197	
71 2-Hexanone	43.0	10.033	10.033	0.000	2945866	89.244	89.244	
72 Dibromochloromethane	129.0	10.190	10.190	0.000	1349359	52.406	52.406	
73 n-Butyl acetate	43.0	10.196	10.196	0.000	2339903	47.845	47.845	
75 1,2-Dibromoethane (EDB)	107.0	10.316	10.316	0.000	1275379	50.279	50.279	
* 76 Chlorobenzene-d5	117.0	10.862	10.862	0.000	3793008	50.000	50.000	
77 Chlorobenzene	112.0	10.893	10.893	0.000	3062536	50.179	50.179	
78 1,1,1,2-Tetrachloroethane	131.0	11.008	11.008	0.000	1089595	49.528	49.528	
79 Ethylbenzene	106.0	11.019	11.019	0.000	1621955	50.198	50.198	
80 m+p-Xylenes	106.0	11.166	11.166	0.000	1967718	51.036	51.036	
81 o-Xylene	106.0	11.575	11.575	0.000	1735254	50.740	50.740	
82 Styrene	104.0	11.596	11.596	0.000	3045331	52.672	52.672	
83 Bromoform	173.0	11.774	11.774	0.000	904038	48.051	48.051	
84 Isopropylbenzene	105.0	11.957	11.957	0.000	4236765	50.715	50.715	
85 Cyclohexanone	55.0	12.041	12.041	0.000	458260	482.36	482.36	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.125	12.130	-0.004	1326390	52.011	52.011	
88 1,1,2,2-Tetrachloroethane	83.0	12.288	12.288	0.000	1152119	47.827	47.827	M
87 Bromobenzene	156.0	12.256	12.256	0.000	1201880	50.832	50.832	
89 1,2,3-Trichloropropane	110.0	12.330	12.330	0.000	495889	50.876	50.876	
90 trans-1,4-Dichloro-2-butene	53.0	12.319	12.319	0.000	314184	44.960	44.960	
91 n-Propylbenzene	91.0	12.372	12.372	0.000	4564748	49.905	49.905	
92 2-Chlorotoluene	91.0	12.450	12.450	0.000	2589976	49.499	49.499	
93 1,3,5-Trimethylbenzene	105.0	12.550	12.555	-0.005	2870907	51.120	51.120	
94 4-Chlorotoluene	126.0	12.571	12.571	0.000	1011471	51.584	51.584	
95 tert-Butylbenzene	119.0	12.843	12.849	-0.004	2549381	48.265	48.265	
96 1,2,4-Trimethylbenzene	105.0	12.901	12.901	0.000	2711527	50.614	50.614	
97 sec-Butylbenzene	105.0	13.053	13.053	0.000	3474184	48.593	48.593	
98 1,3-Dichlorobenzene	146.0	13.158	13.158	0.000	1672164	49.372	49.372	
99 p-Isopropyltoluene	119.0	13.195	13.195	0.000	2880556	50.968	50.968	
* 100 1,4-Dichlorobenzene-d4	152.0	13.226	13.231	-0.004	1331546	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.252	13.252	0.000	1652838	49.430	49.430	
102 Benzyl chloride	91.0	13.357	13.357	0.000	1716319	49.842	49.842	
103 n-Butylbenzene	91.0	13.562	13.562	0.000	2333093	51.362	51.362	
104 1,2-Dichlorobenzene	146.0	13.572	13.572	0.000	1463800	48.529	48.529	
105 1,2-Dibromo-3-chloropropane	75.0	14.259	14.259	0.000	242818	48.086	48.086	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	908261	48.618	48.618	
107 Hexachlorobutadiene	225.0	15.061	15.067	-0.004	440374	48.523	48.523	
108 Naphthalene	128.0	15.166	15.166	0.000	2689563	50.699	50.699	
109 1,2,3-Trichlorobenzene	180.0	15.350	15.350	0.000	841265	48.323	48.323	
S 110 Xylenes (total)	106.0	16.000		0.000		101.78	101.78	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		106.93	106.93	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

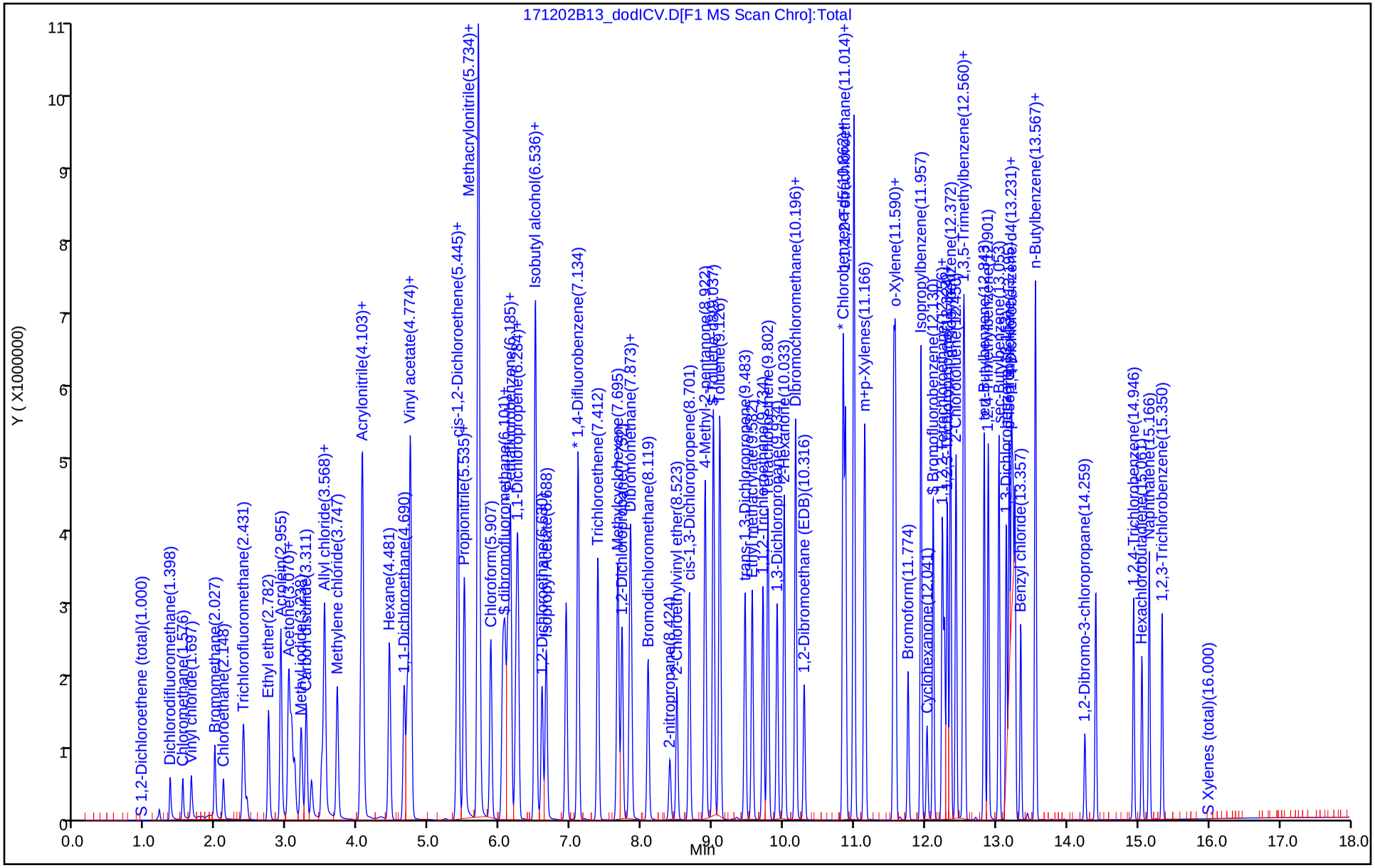
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
R - Spike/Surrogte Fails %Recovery Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 04-Dec-2019 13:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D				
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ		
Sample Info:	17120219B, VICV050BQ				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 04-Dec-2019 13:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

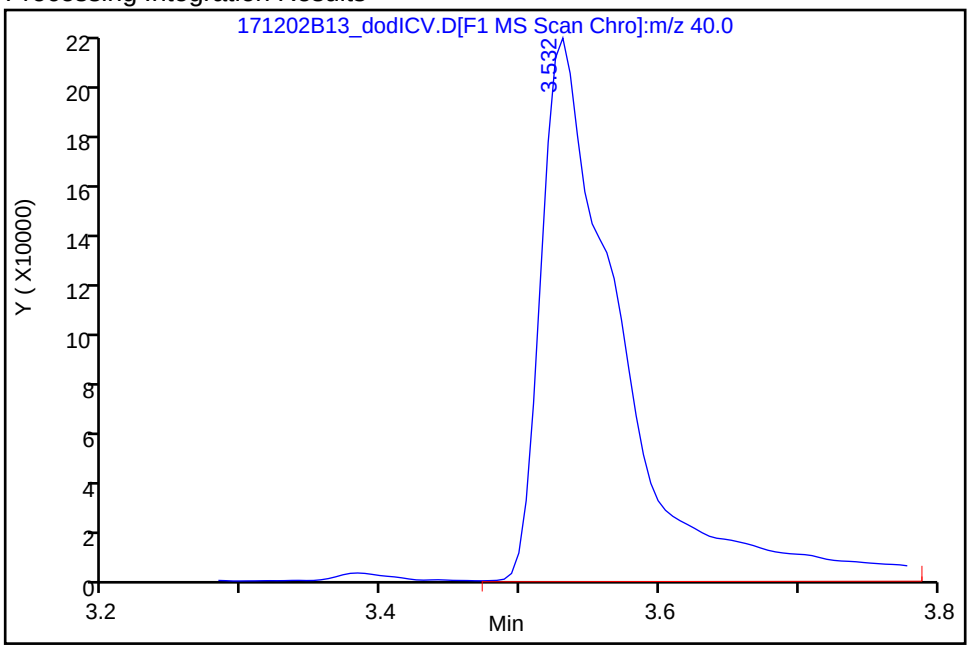
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

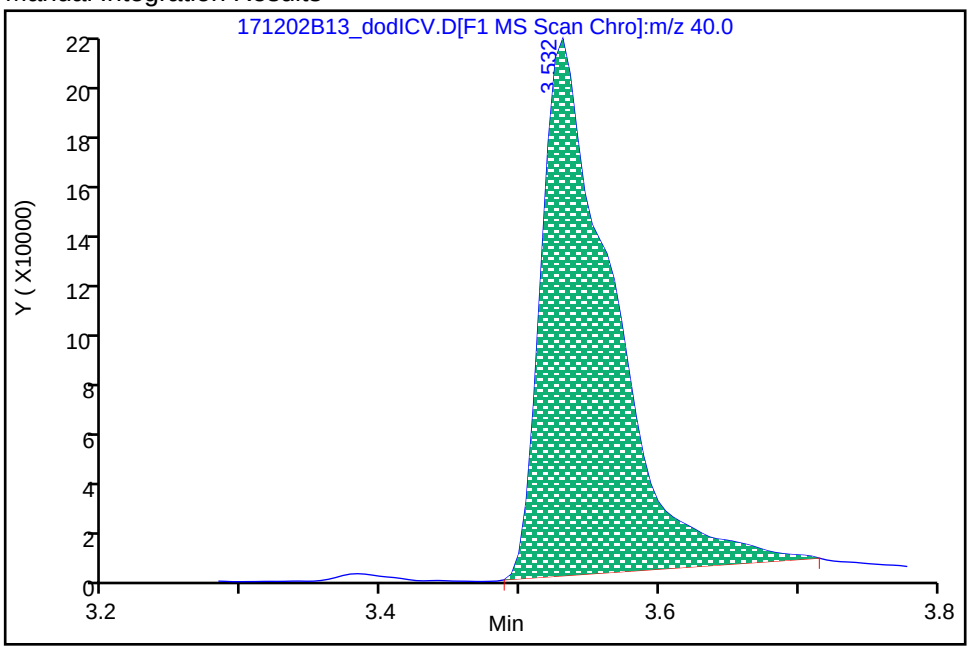
Processing Integration Results

RT: 3.532
Area: 854845
Amount: 567.50
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.532
Area: 752016
Amount: 499.24
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

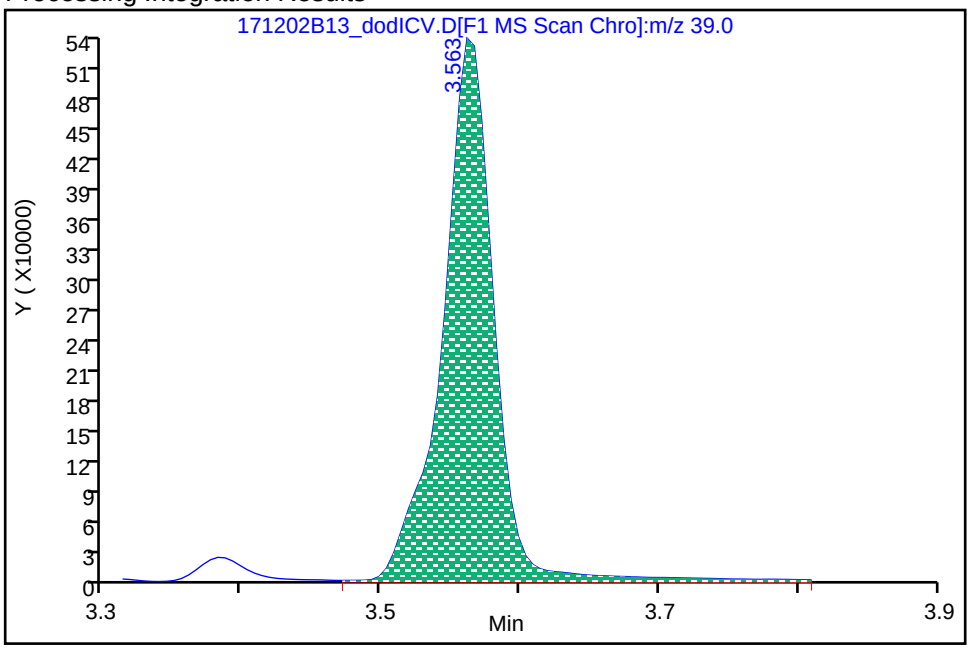
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

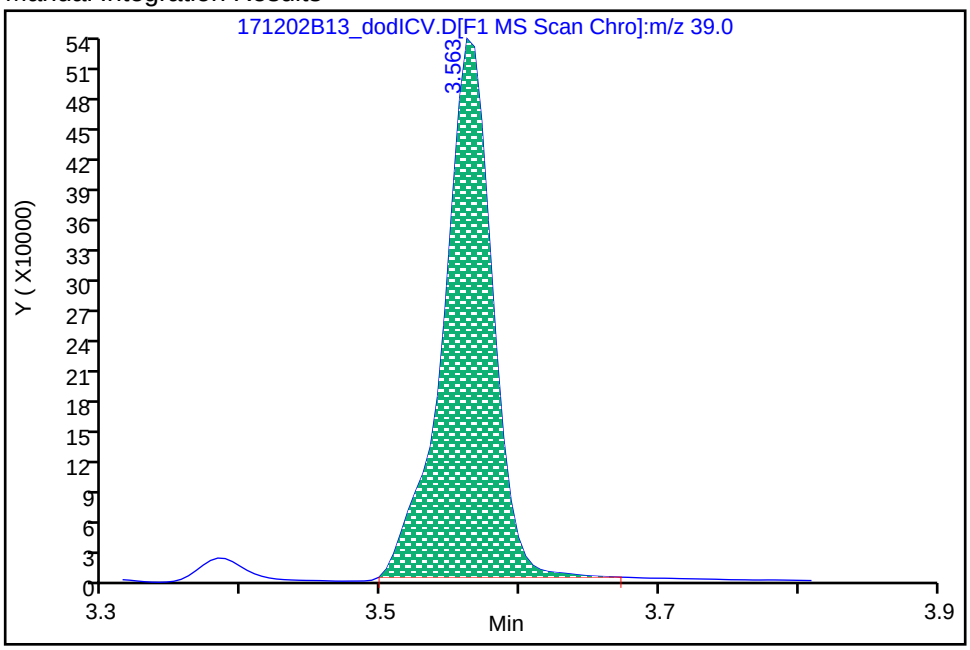
Processing Integration Results

RT: 3.563
Area: 1374540
Amount: 567.50
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 1284792
Amount: 499.24
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

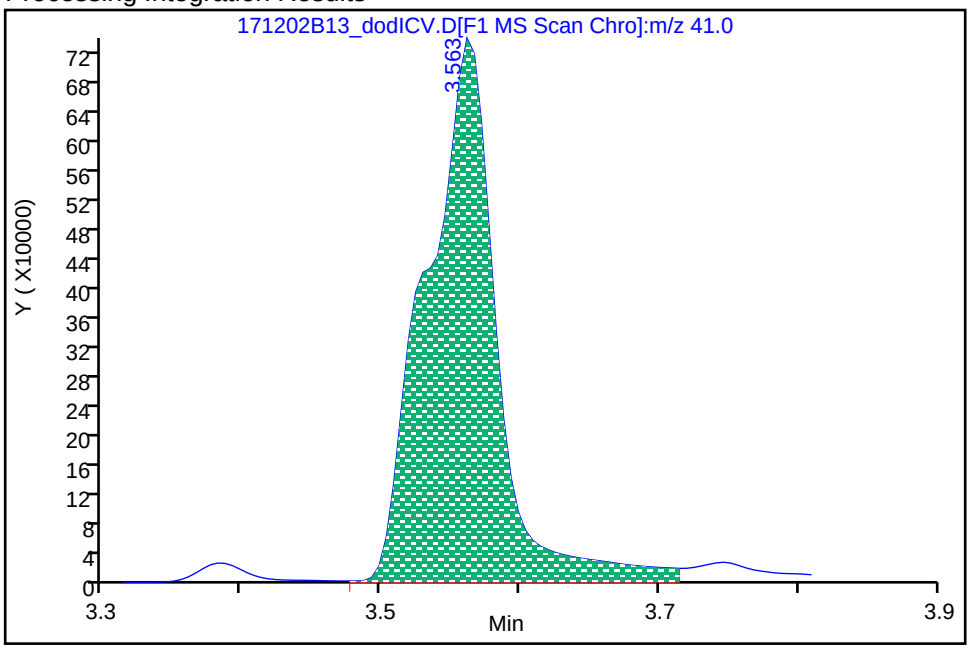
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

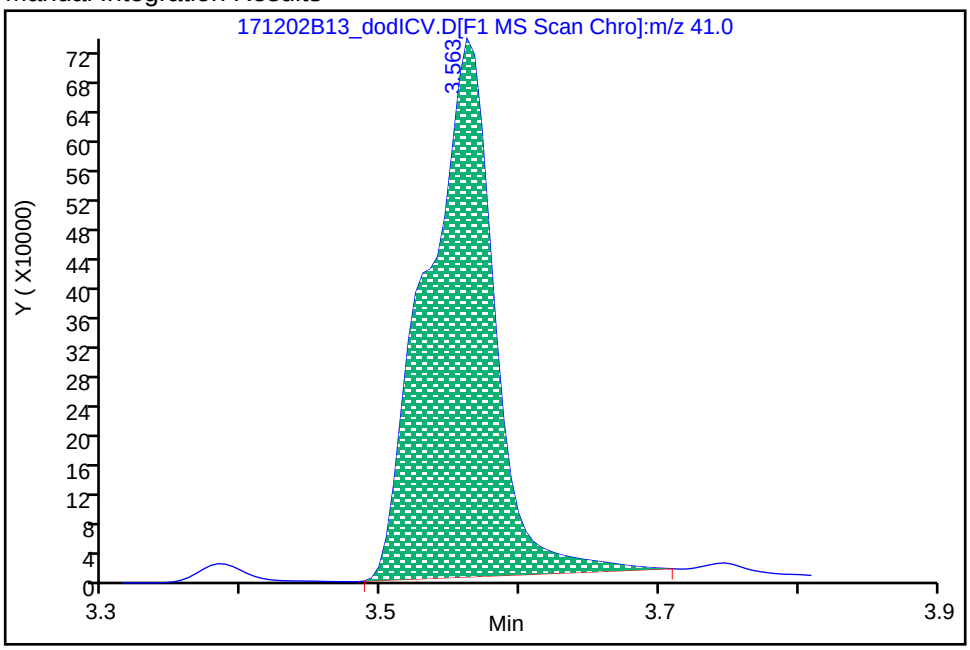
Processing Integration Results

RT: 3.563
Area: 2610072
Amount: 567.50
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 2459663
Amount: 499.24
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 04-Dec-2019 13:04:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

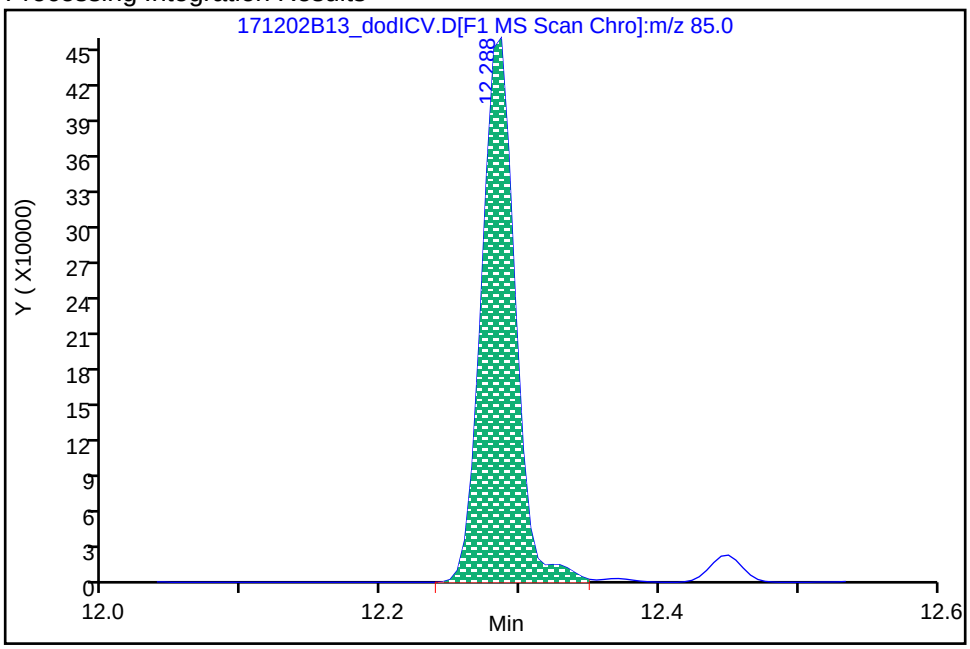
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B13_dodICV.D		
Injection Date:	03-Dec-2019 04:30:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VICV050BQ
Sample Info:	17120219B, VICV050BQ		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

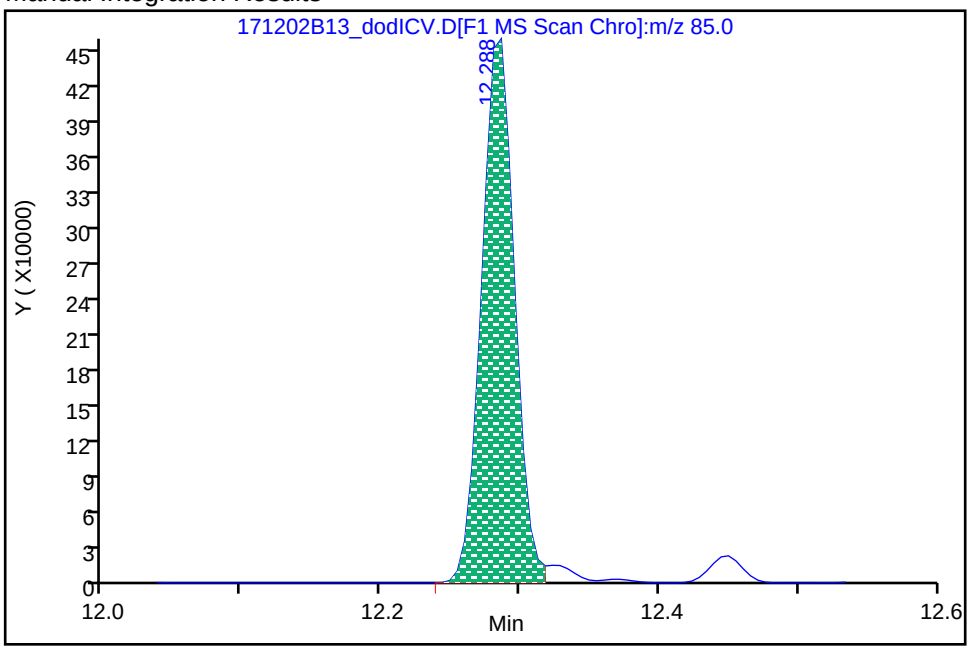
Processing Integration Results

RT: 12.288
Area: 769785
Amount: 47.827
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 12.288
Area: 752207
Amount: 47.827
Amount Units: ug/L



Data Editor: tml, 03-Dec-2019 07:54:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Form 6

Batch: \\Organics\dd\chem\msd18.i\18110419.b
Method: 8260B-18.M Instrument: msd18
Cal Start Date: 04-Nov-2019 15:40:30 Cal End Date: 04-Nov-2019 18:09:30
Last Modified: 07-Nov-2019 09:09:30
No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
S 111 1,2-Dichloroethene (to	0.434106	0.429093	0.450313	0.424544	0.414523	0.454235	0.412796		0.431373	Avg	3.7		
	0.6	-0.5	4.4	-1.6	-3.9	5.3	-4.3						
1 Dichlorodifluoromethan	0.305333	0.245054	0.281626	0.297836	0.296337	0.325870	0.299262		0.293045	Avg	8.5		
	4.2	-16.4	-3.9	1.6	1.1	11.2	2.1						
2 Chloromethane	0.409064	0.347408	0.357755	0.325122	0.326713	0.368116	0.364351		0.356933	Avg	8.0		
	14.6	-2.7	0.2	-8.9	-8.5	3.1	2.1						
3 Vinyl chloride	0.508863	0.474139	0.519351	0.502071	0.486622	0.525982	0.476356		0.499055	Avg	4.1		
	2	-5	4.1	0.6	-2.5	5.4	-4.5						
4 Bromomethane	0.325218	0.276076	0.318442	0.305952	0.288034	0.248026	0.223993		0.283677	Avg	13.1		
	14.6	-2.7	12.3	7.9	1.5	-12.6	-21						
5 Chloroethane	0.251463	0.230113	0.250615	0.242661	0.247539	0.272325	0.248490		0.249029	Avg	5.1		
	1	-7.6	0.6	-2.6	-0.6	9.4	-0.2						
6 Trichlorofluoromethane	0.195591	0.164030	0.256304	0.267862	0.280617	0.310822	0.294331	0.006220	0.296571	WLn	15.1	0.998	
	28.2	-13.6	-7.4	-8.1	-4.8	5.1	-0.6						
8 Ethyl ether	0.334048	0.348803	0.339549	0.335995	0.330436	0.365435	0.328428		0.340385	Avg	3.8		
	-1.9	2.5	-0.2	-1.3	-2.9	7.4	-3.5						
9 Acrolein	0.162898	0.159320	0.180579	0.172026	0.172203	0.189738	0.171586		0.172622	Avg	5.9		
	-5.6	-7.7	4.6	-0.3	-0.2	9.9	-0.6						
11 1,1-Dichloroethene	0.394372	0.361653	0.353325	0.352402	0.350474	0.384557	0.356681		0.364781	Avg	4.8		
	8.1	-0.9	-3.1	-3.4	-3.9	5.4	-2.2						
12 Freon 113	0.423088	0.334302	0.389018	0.390426	0.383788	0.407963	0.370177		0.385537	Avg	7.3		
	9.7	-13.3	0.9	1.3	-0.5	5.8	-4						
10 Acetone	0.478701	0.407470	0.412119	0.372934	0.369645	0.402168	0.359353		0.400341	Avg	10.0		
	19.6	1.8	2.9	-6.8	-7.7	0.5	-10.2						
13 Methyl iodide	0.755355	0.721139	0.761000	0.742017	0.745100	0.801151	0.734093		0.751408	Avg	3.4		
	0.5	-4	1.3	-1.2	-0.8	6.6	-2.3						
14 Carbon disulfide	1.327288	1.123506	1.187865	1.194923	1.185090	1.294541	1.201314		1.216361	Avg	5.8		
	9.1	-7.6	-2.3	-1.8	-2.6	6.4	-1.2						
15 Acetonitrile	0.094879	0.083840	0.098541	0.092708	0.091922	0.099095	0.088424		0.092773	Avg	5.9		
	2.3	-9.6	6.2	-0.1	-0.9	6.8	-4.7						
17 Allyl chloride	0.257696	0.173980	0.189820	0.180749	0.179968	0.196106	0.174164	-0.002431	0.181335	WLn	11.6	0.997	
	17.8	-16.2	2.2	-0.9	-1	8	-4						

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
16 Methyl Acetate	1.015277	0.963440	0.812936	0.781900	0.759633	0.822150	0.745153		0.842927	Avg	12.4		
	20.4	14.3	-3.6	-7.2	-9.9	-2.5	-11.6						
18 Methylene chloride	0.644945	0.501710	0.457923	0.422142	0.411265	0.447569	0.403440	-0.005455	0.417025	WLn	5.1	0.998	
	0.1	-7	4.4	-0.1	-1.9	7.1	-3.4						
20 Acrylonitrile	0.372261	0.406937	0.423104	0.393491	0.390112	0.425150	0.381197		0.398893	Avg	5.1		
	-6.7	2	6.1	-1.4	-2.2	6.6	-4.4						
21 trans-1,2-Dichloroethe	0.420417	0.416060	0.402482	0.384404	0.378420	0.410992	0.371071		0.397692	Avg	4.9		
	5.7	4.6	1.2	-3.3	-4.8	3.3	-6.7						
22 tert-Butyl methyl ethe	0.736285	0.661629	0.695494	0.615475	0.624629	0.663614	0.562767		0.651413	Avg	8.7		
	13	1.6	6.8	-5.5	-4.1	1.9	-13.6						
23 Hexane	0.506117	0.527739	0.550255	0.544912	0.521187	0.555690	0.497269		0.529024	Avg	4.2		
	-4.3	-0.2	4	3	-1.5	5	-6						
24 1,1-Dichloroethane	0.743631	0.697644	0.748636	0.686666	0.710228	0.768001	0.694618		0.721346	Avg	4.4		
	3.1	-3.3	3.8	-4.8	-1.5	6.5	-3.7						
25 Vinyl acetate	0.098612	0.100408	0.119710	0.109921	0.111912	0.127753	0.115027		0.111906	Avg	9.2		
	-11.9	-10.3	7	-1.8	0	14.2	2.8						
26 Diisopropyl ether (IPE	0.350743	0.298838	0.317243	0.314540	0.317612	0.338576	0.303964		0.320217	Avg	5.8		
	9.5	-6.7	-0.9	-1.8	-0.8	5.7	-5.1						
27 Chloroprene	0.588405	0.491541	0.535624	0.525729	0.524313	0.571988	0.514830		0.536061	Avg	6.2		
	9.8	-8.3	-0.1	-1.9	-2.2	6.7	-4						
31 2,2-Dichloropropane	0.436741	0.358459	0.362802	0.341705	0.338370	0.355158	0.292799		0.355148	Avg	12.1		
	23	0.9	2.2	-3.8	-4.7	0	-17.6						
29 cis-1,2-Dichloroethene	0.447796	0.442126	0.498144	0.464685	0.450625	0.497478	0.454522		0.465054	Avg	5.0		
	-3.7	-4.9	7.1	-0.1	-3.1	7	-2.3						
30 2-Butanone (MEK)	0.162312	0.172988	0.168098	0.152145	0.157403	0.169564	0.158166		0.162954	Avg	4.6		
	-0.4	6.2	3.2	-6.6	-3.4	4.1	-2.9						
32 Propionitrile	0.201319	0.192126	0.215712	0.197674	0.194472	0.208438	0.183595		0.199048	Avg	5.4		
	1.1	-3.5	8.4	-0.7	-2.3	4.7	-7.8						
33 Ethyl Acetate	2.151648	1.773791	1.135287	1.021181	0.973874	1.050312		-0.011878	1.015952	WLn	9	0.998	
	-7	15.2	-0.1	-2.5	-5.3	2.8							
34 Methacrylonitrile	0.374220	0.344706	0.388099	0.354719	0.350661	0.381315	0.341650		0.362196	Avg	5.2		
	3.3	-4.8	7.2	-2.1	-3.2	5.3	-5.7						
35 Bromochloromethane	0.294203	0.252067	0.280511	0.254646	0.249560	0.273648	0.251042		0.265097	Avg	6.7		
	11	-4.9	5.8	-3.9	-5.9	3.2	-5.3						
36 Tetrahydrofuran	0.611333	0.575171	0.547201	0.486307	0.473703	0.522633	0.462201		0.525507	Avg	10.6		
	16.3	9.5	4.1	-7.5	-9.9	-0.5	-12						
37 Chloroform	0.748306	0.722057	0.793669	0.713131	0.709246	0.781330	0.703460		0.738743	Avg	4.9		
	1.3	-2.3	7.4	-3.5	-4	5.8	-4.8						
40 1,1,1-Trichloroethane	0.569633	0.544663	0.573142	0.558195	0.545970	0.590533	0.512874		0.556430	Avg	4.5		
	2.4	-2.1	3	0.3	-1.9	6.1	-7.8						
$ 39 dibromofluoromethane	0.585363	0.504133	0.479213	0.448121	0.447975	0.485110	0.442743		0.484665	Avg	10.3		
	20.8	4	-1.1	-7.5	-7.6	0.1	-8.6						

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
42 Cyclohexane	0.349259	0.365838	0.394547	0.398880	0.348247	0.375625	0.325294		0.365384	Avg	7.3		
	-4.4	0.1	8	9.2	-4.7	2.8	-11						
44 Carbon tetrachloride	0.556054	0.479132	0.548087	0.551669	0.547977	0.603174	0.543978		0.547153	Avg	6.6		
	1.6	-12.4	0.2	0.8	0.2	10.2	-0.6						
43 1,1-Dichloropropene	0.629660	0.552520	0.565567	0.558370	0.545841	0.591335	0.532457		0.567964	Avg	5.8		
	10.9	-2.7	-0.4	-1.7	-3.9	4.1	-6.3						
$ 46 1,2-Dichloroethane-d4	0.382018	0.359189	0.354762	0.325656	0.327520	0.354140	0.327512		0.347257	Avg	6.1		
	10	3.4	2.2	-6.2	-5.7	2	-5.7						
45 Isobutyl alcohol	0.051064	0.052612	0.061712	0.056304	0.055576	0.059304	0.054948		0.055932	Avg	6.6		
	-8.7	-5.9	10.3	0.7	-0.6	6	-1.8						
48 Benzene	0.994827	0.994437	1.153698	1.097373	1.095666	1.175042	1.068747		1.082827	Avg	6.5		
	-8.1	-8.2	6.5	1.3	1.2	8.5	-1.3						
50 1,2-Dichloroethane	0.430354	0.379823	0.433771	0.381636	0.389730	0.421974	0.383026		0.402902	Avg	6.1		
	6.8	-5.7	7.7	-5.3	-3.3	4.7	-4.9						
49 Isopropyl Acetate	0.844894	0.796559	0.918768	0.842463	0.825823	0.898502	0.830099		0.851015	Avg	5.0		
	-0.7	-6.4	8	-1	-3	5.6	-2.5						
53 Trichloroethene	0.389029	0.294392	0.340803	0.322759	0.325902	0.354155	0.319658		0.335243	Avg	9.0		
	16	-12.2	1.7	-3.7	-2.8	5.6	-4.6						
54 Methylcyclohexane	0.401014	0.389002	0.440967	0.424907	0.447210	0.478607	0.436395		0.431157	Avg	6.9		
	-7	-9.8	2.3	-1.4	3.7	11	1.2						
55 1,2-Dichloropropane	0.302252	0.272101	0.312404	0.282448	0.287219	0.310896	0.283895		0.293031	Avg	5.3		
	3.1	-7.1	6.6	-3.6	-2	6.1	-3.1						
56 Dibromomethane	0.235516	0.197927	0.233019	0.208329	0.211807	0.231378	0.214073		0.218864	Avg	6.6		
	7.6	-9.6	6.5	-4.8	-3.2	5.7	-2.2						
58 1,4-Dioxane	0.012015	0.011183	0.012572	0.011041	0.011287	0.012257	0.011703		0.011722	Avg	5.0		
	2.5	-4.6	7.2	-5.8	-3.7	4.6	-0.2						
57 Methyl methacrylate	0.399721	0.382297	0.427874	0.377376	0.394645	0.429576	0.390751		0.400320	Avg	5.2		
	-0.1	-4.5	6.9	-5.7	-1.4	7.3	-2.4						
59 Bromodichloromethane	0.341240	0.332642	0.397539	0.363010	0.373297	0.410675	0.385016		0.371917	Avg	7.7		
	-8.2	-10.6	6.9	-2.4	0.4	10.4	3.5						
60 2-nitropropane	0.252673	0.204904	0.215853	0.192891	0.206542	0.222240	0.207228		0.214619	Avg	8.9		
	17.7	-4.5	0.6	-10.1	-3.8	3.6	-3.4						
61 2-Chloroethylvinyl eth	0.238749	0.230066	0.264603	0.239885	0.251811	0.276399	0.252965		0.250640	Avg	6.4		
	-4.7	-8.2	5.6	-4.3	0.5	10.3	0.9						
62 cis-1,3-Dichloropropen	0.499527	0.413000	0.483412	0.431942	0.456791	0.500132	0.463830		0.464091	Avg	7.2		
	7.6	-11	4.2	-6.9	-1.6	7.8	-0.1						
63 4-Methyl-2-pentanone	0.573524	0.594821	0.703837	0.621621	0.627751	0.667183	0.602098		0.627262	Avg	7.1		
	-8.6	-5.2	12.2	-0.9	0.1	6.4	-4						
$ 64 Toluene-d8		1.277980	1.171658	1.067139	1.060151	1.147983	1.040970		1.127647	Avg	8.0		
		13.3	3.9	-5.4	-6	1.8	-7.7						
65 Toluene	0.775586	0.709839	0.751020	0.716417	0.721595	0.784053	0.705776		0.737755	Avg	4.4		
	5.1	-3.8	1.8	-2.9	-2.2	6.3	-4.3						

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
66 trans-1,3-Dichloroprop	0.420517	0.427977	0.477205	0.437739	0.451617	0.492539	0.457771		0.452195	Avg	5.8		
	-7	-5.4	5.5	-3.2	-0.1	8.9	1.2						
67 Ethyl methacrylate	0.491281	0.453180	0.541811	0.492608	0.505471	0.554500	0.508010		0.506694	Avg	6.7		
	-3	-10.6	6.9	-2.8	-0.2	9.4	0.3						
68 1,1,2-Trichloroethane	0.310412	0.308414	0.339891	0.308901	0.314331	0.342465	0.307088		0.318786	Avg	4.9		
	-2.6	-3.3	6.6	-3.1	-1.4	7.4	-3.7						
69 Tetrachloroethene	0.291757	0.272474	0.281550	0.283078	0.282322	0.297893	0.274906		0.283426	Avg	3.1		
	2.9	-3.9	-0.7	-0.1	-0.4	5.1	-3						
70 1,3-Dichloropropane	0.535521	0.515037	0.568300	0.496997	0.499950	0.536817	0.489564		0.520312	Avg	5.4		
	2.9	-1	9.2	-4.5	-3.9	3.2	-5.9						
71 2-Hexanone	0.511317	0.525629	0.582114	0.527408	0.565177	0.597820	0.537133		0.549514	Avg	5.9		
	-7	-4.3	5.9	-4	2.9	8.8	-2.3						
72 Dibromochloromethane	0.375495	0.329068	0.378611	0.347724	0.365976	0.395824	0.371112		0.366259	Avg	6.0		
	2.5	-10.2	3.4	-5.1	-0.1	8.1	1.3						
73 n-Butyl acetate	0.759849	0.802400	0.831857	0.757443	0.774948	0.822451	0.743079		0.784575	Avg	4.4		
	-3.2	2.3	6	-3.5	-1.2	4.8	-5.3						
75 1,2-Dibromoethane (EDB	0.408741	0.342635	0.398599	0.355433	0.356378	0.389566	0.361347		0.373243	Avg	6.8		
	9.5	-8.2	6.8	-4.8	-4.5	4.4	-3.2						
77 Chlorobenzene	0.941396	0.884039	0.928887	0.839356	0.856313	0.919975	0.841174		0.887306	Avg	4.9		
	6.1	-0.4	4.7	-5.4	-3.5	3.7	-5.2						
78 1,1,1,2-Tetrachloroeth	0.328233	0.272130	0.334554	0.304395	0.310640	0.338442	0.316499		0.314985	Avg	7.2		
	4.2	-13.6	6.2	-3.4	-1.4	7.4	0.5						
79 Ethylbenzene	0.423435	0.429881	0.474686	0.438683	0.444778	0.480408	0.442146		0.447717	Avg	4.8		
	-5.4	-4	6	-2	-0.7	7.3	-1.2						
80 m+p-Xylenes	0.611287	0.527626	0.557842	0.529372	0.545861	0.588773	0.542380		0.557592	Avg	5.6		
	9.6	-5.4	0	-5.1	-2.1	5.6	-2.7						
81 o-Xylene	0.535104	0.517973	0.573637	0.520934	0.525317	0.566658	0.523559		0.537597	Avg	4.3		
	-0.5	-3.7	6.7	-3.1	-2.3	5.4	-2.6						
82 Styrene	0.834990	0.789785	0.927674	0.884847	0.913613	0.989316	0.906096		0.892332	Avg	7.3		
	-6.4	-11.5	4	-0.8	2.4	10.9	1.5						
83 Bromoform	0.279667	0.276071	0.301611	0.295534	0.314288	0.344892	0.324547		0.305230	Avg	8.1		
	-8.4	-9.6	-1.2	-3.2	3	13	6.3						
84 Isopropylbenzene	1.288284	1.236407	1.343406	1.291709	1.273166	1.375351	1.260304		1.295518	Avg	3.7		
	-0.6	-4.6	3.7	-0.3	-1.7	6.2	-2.7						
85 Cyclohexanone	0.034532	0.038500	0.040832	0.041757	0.039347	0.043142	0.041097		0.039887	Avg	7.0		
	-13.4	-3.5	2.4	4.7	-1.4	8.2	3						
$ 86 Bromofluorobenzene		0.533973	0.448077	0.409542	0.406542	0.433972	0.399429		0.438589	Avg	11.5		
		21.7	2.2	-6.6	-7.3	-1.1	-8.9						
87 Bromobenzene	0.679456	0.711329	0.794154	0.710704	0.723858	0.789522	0.719238		0.732609	Avg	5.9		
	-7.3	-2.9	8.4	-3	-1.2	7.8	-1.8						
88 1,1,2,2-Tetrachloroeth	1.002269	0.996347	1.126039	0.985233	1.005202	1.063725	0.971781		1.021514	Avg	5.3		
	-1.9	-2.5	10.2	-3.6	-1.6	4.1	-4.9						

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	Level 6 / %Drift	Level 7 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
90 trans-1,4-Dichloro-2-b	0.295065	0.270937	0.276639	0.244681	0.254040	0.269928	0.244062		0.265050	Avg	7.0		
	11.3	2.2	4.4	-7.7	-4.2	1.8	-7.9						
89 1,2,3-Trichloropropane	0.364626	0.361822	0.358330	0.323442	0.328337	0.351348	0.318627		0.343790	Avg	5.7		
	6.1	5.2	4.2	-5.9	-4.5	2.2	-7.3						
91 n-Propylbenzene	2.824828	2.713045	2.905053	2.838564	2.857551	3.091055	2.707889		2.848284	Avg	4.6		
	-0.8	-4.7	2	-0.3	0.3	8.5	-4.9						
92 2-Chlorotoluene	1.751192	1.596934	1.792274	1.689810	1.705079	1.838732	1.665474		1.719928	Avg	4.7		
	1.8	-7.2	4.2	-1.8	-0.9	6.9	-3.2						
93 1,3,5-Trimethylbenzene	1.825409	1.663427	1.869031	1.801525	1.792363	1.937371	1.789926		1.811293	Avg	4.6		
	0.8	-8.2	3.2	-0.5	-1	7	-1.2						
94 4-Chlorotoluene	0.763557	0.637389	0.673936	0.626893	0.644031	0.685819	0.623901		0.665075	Avg	7.4		
	14.8	-4.2	1.3	-5.7	-3.2	3.1	-6.2						
95 tert-Butylbenzene	1.663765	1.608533	1.672952	1.605062	1.577899	1.718137	1.555126		1.628782	Avg	3.6		
	2.1	-1.2	2.7	-1.5	-3.1	5.5	-4.5						
96 1,2,4-Trimethylbenzene	1.646945	1.671112	1.945564	1.884747	1.860084	2.006589	1.825724		1.834395	Avg	7.3		
	-10.2	-8.9	6.1	2.7	1.4	9.4	-0.5						
97 sec-Butylbenzene	2.221870	2.063198	2.254927	2.245579	2.206356	2.392636	2.197057		2.225946	Avg	4.4		
	-0.2	-7.3	1.3	0.9	-0.9	7.5	-1.3						
98 1,3-Dichlorobenzene	1.422392	1.296259	1.444569	1.314242	1.314190	1.409899	1.274473		1.353718	Avg	5.1		
	5.1	-4.2	6.7	-2.9	-2.9	4.2	-5.9						
99 p-Isopropyltoluene	1.918442	1.733309	1.899242	1.870264	1.807688	1.951641	1.810822		1.855916	Avg	4.1		
	3.4	-6.6	2.3	0.8	-2.6	5.2	-2.4						
101 1,4-Dichlorobenzene	1.489767	1.367907	1.479201	1.334080	1.320170	1.415753	1.286755		1.384805	Avg	5.7		
	7.6	-1.2	6.8	-3.7	-4.7	2.2	-7.1						
102 Benzyl chloride	1.393408	1.310293	1.572152	1.522526	1.592989	1.720409	1.560351		1.524590	Avg	8.9		
	-8.6	-14.1	3.1	-0.1	4.5	12.8	2.3						
103 n-Butylbenzene	1.735037	1.546288	1.780771	1.771256	1.765716	1.879897	1.691380		1.738621	Avg	5.9		
	-0.2	-11.1	2.4	1.9	1.6	8.1	-2.7						
104 1,2-Dichlorobenzene	1.211238	1.281700	1.423516	1.252321	1.267310	1.358995	1.228594		1.289096	Avg	5.9		
	-6	-0.6	10.4	-2.9	-1.7	5.4	-4.7						
105 1,2-Dibromo-3-chloropr	0.273778	0.258765	0.290319	0.275707	0.270126	0.295571	0.269812		0.276297	Avg	4.6		
	-0.9	-6.3	5.1	-0.2	-2.2	7	-2.3						
106 1,2,4-Trichlorobenzene	0.918359	0.853958	0.940248	0.904251	0.879139	0.946998	0.853512		0.899495	Avg	4.3		
	2.1	-5.1	4.5	0.5	-2.3	5.3	-5.1						
107 Hexachlorobutadiene	0.534917	0.456431	0.434264	0.390633	0.369317	0.372214	0.334661	-0.007838	0.351911	WLn	15.4	0.997	
	-26.4	-9.5	15.6	9	4.2	5.4	-5.1						
108 Naphthalene	2.254179	1.960427	2.594773	2.644488	2.530698	2.712202	2.377120		2.439127	Avg	10.8		
	-7.6	-19.6	6.4	8.4	3.8	11.2	-2.5						
109 1,2,3-Trichlorobenzene	0.793206	0.716341	0.871435	0.813465	0.750645	0.806044	0.721364		0.781786	Avg	7.1		
	1.5	-8.4	11.5	4.1	-4	3.1	-7.7						
S 110 Xylenes (total)	0.573196	0.522799	0.565739	0.525153	0.535589	0.577716	0.532969		0.547594	Avg	4.3		
	4.7	-4.5	3.3	-4.1	-2.2	5.5	-2.7						

Shealy Environmental Services
Initial Calibration RT Report

Batch: \\Organics\dd\chem\msd18.i\18110419.b
Method: 8260B-18.M Instrument: msd18
Cal Start Date: 04-Nov-2019 15:40:30 Cal End Date: 04-Nov-2019 18:09:30
Last Modified: 07-Nov-2019 09:09:30
No.Compounds: 112 Integrator: falcon

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
S 111 1,2-Dichloroethene (to	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	
1 Dichlorodifluoromethan	1.403	1.403	1.403	1.403	1.403	1.403	1.398	1.402	0.137	
2 Chloromethane	1.566	1.566	1.565	1.566	1.566	1.566	1.566	1.566	0.011	
3 Vinyl chloride	1.681	1.681	1.686	1.686	1.686	1.686	1.686	1.685	0.148	
4 Bromomethane	2.017	2.017	2.016	2.011	2.006	2.006	2.001	2.010	0.314	
5 Chloroethane	2.142	2.142	2.142	2.137	2.137	2.132	2.121	2.136	0.356	
6 Trichlorofluoromethane	2.420	2.415	2.420	2.420	2.415	2.415	2.410	2.416	0.161	
8 Ethyl ether	2.777	2.772	2.771	2.772	2.771	2.771	2.772	2.772	0.072	
9 Acrolein	2.939	2.939	2.939	2.934	2.934	2.934	2.939	2.937	0.095	
11 1,1-Dichloroethene	3.049	3.050	3.049	3.050	3.049	3.049	3.050	3.049	0.005	
12 Freon 113	3.086	3.091	3.086	3.086	3.086	3.086	3.081	3.086	0.098	
10 Acetone	3.133	3.139	3.133	3.128	3.128	3.128	3.128	3.131	0.131	
13 Methyl iodide	3.217	3.223	3.222	3.223	3.222	3.222	3.217	3.221	0.077	
14 Carbon disulfide	3.296	3.291	3.295	3.291	3.290	3.291	3.291	3.292	0.074	
15 Acetonitrile	3.500	3.500	3.495	3.495	3.495	3.495	3.500	3.497	0.082	
17 Allyl chloride	3.542	3.532	3.542	3.542	3.542	3.542	3.537	3.540	0.114	
16 Methyl Acetate	3.563	3.558	3.552	3.553	3.553	3.553	3.553	3.555	0.117	
18 Methylene chloride	3.715	3.721	3.720	3.721	3.720	3.720	3.721	3.720	0.053	
20 Acrylonitrile	4.046	4.046	4.040	4.040	4.035	4.040	4.040	4.041	0.090	
21 trans-1,2-Dichloroethe	4.072	4.072	4.071	4.072	4.072	4.072	4.072	4.072	0.004	
22 tert-Butyl methyl ethe	4.077	4.077	4.082	4.077	4.077	4.077	4.082	4.079	0.060	
23 Hexane	4.455	4.449	4.454	4.455	4.454	4.455	4.449	4.453	0.055	
24 1,1-Dichloroethane	4.649	4.654	4.653	4.649	4.648	4.649	4.649	4.650	0.053	
25 Vinyl acetate	4.701	4.701	4.701	4.696	4.696	4.696	4.696	4.698	0.058	
27 Chloroprene	4.738	4.738	4.743	4.743	4.738	4.743	4.738	4.740	0.057	
26 Diisopropyl ether (IPE	4.738	4.733	4.737	4.738	4.738	4.738	4.738	4.737	0.040	
31 2,2-Dichloropropane	5.388	5.388	5.387	5.388	5.388	5.388	5.388	5.388	0.003	
29 cis-1,2-Dichloroethene	5.393	5.393	5.398	5.398	5.398	5.398	5.393	5.396	0.050	
30 2-Butanone (MEK)	5.419	5.409	5.408	5.404	5.403	5.404	5.409	5.408	0.103	
33 Ethyl Acetate	5.487	5.482	5.482	5.482	5.482	5.482		5.483	0.039	
32 Propionitrile	5.487	5.488	5.482	5.482	5.482	5.482	5.488	5.484	0.052	
34 Methacrylonitrile	5.676	5.676	5.671	5.671	5.671	5.676	5.676	5.674	0.050	
35 Bromochloromethane	5.697	5.692	5.692	5.692	5.692	5.697	5.697	5.694	0.050	
36 Tetrahydrofuran	5.713	5.713	5.707	5.703	5.702	5.702	5.703	5.706	0.087	
37 Chloroform	5.854	5.860	5.854	5.855	5.854	5.854	5.855	5.855	0.034	
40 1,1,1-Trichloroethane	6.028	6.022	6.027	6.028	6.027	6.027	6.028	6.027	0.031	
$ 39 dibromofluoromethane	6.048	6.054	6.053	6.054	6.054	6.054	6.054	6.053	0.032	
42 Cyclohexane	6.101	6.091	6.106	6.101	6.101	6.101	6.101	6.100	0.075	
44 Carbon tetrachloride	6.216	6.216	6.216	6.216	6.216	6.216	6.216	6.216	0.002	
43 1,1-Dichloropropene	6.237	6.237	6.237	6.237	6.237	6.237	6.237	6.237	0.002	
$ 46 1,2-Dichloroethane-d4	6.468	6.468	6.468	6.468	6.468	6.468	6.468	6.468	0.002	
48 Benzene	6.478	6.479	6.478	6.479	6.478	6.478	6.479	6.478	0.002	
45 Isobutyl alcohol	6.489	6.484	6.478	6.479	6.478	6.484	6.489	6.483	0.074	
50 1,2-Dichloroethane	6.562	6.568	6.567	6.568	6.567	6.567	6.568	6.567	0.030	
49 Isopropyl Acetate	6.630	6.631	6.630	6.631	6.630	6.630	6.631	6.630	0.002	
53 Trichloroethene	7.349	7.354	7.354	7.354	7.354	7.354	7.349	7.352	0.034	
54 Methylcyclohexane	7.637	7.632	7.637	7.637	7.637	7.637	7.632	7.636	0.032	
55 1,2-Dichloropropane	7.684	7.684	7.684	7.684	7.684	7.684	7.684	7.684	0.002	

Report Date: 07-Nov-2019 09:17:24 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Avg. RRT	%Rsd RT	Flags
56 Dibromomethane	7.794	7.789	7.789	7.789	7.789	7.789	7.789	7.790	0.025	
58 1,4-Dioxane	7.805	7.805	7.799	7.800	7.800	7.800	7.800	7.801	0.033	
57 Methyl methacrylate	7.810	7.816	7.815	7.810	7.810	7.810	7.810	7.812	0.031	
59 Bromodichloromethane	8.046	8.046	8.046	8.046	8.046	8.046	8.046	8.046	0.002	
60 2-nitropropane	8.345	8.345	8.345	8.345	8.345	8.345	8.345	8.345	0.002	
61 2-Chloroethylvinyl eth	8.455	8.450	8.449	8.450	8.450	8.450	8.450	8.451	0.023	
62 cis-1,3-Dichloropropen	8.623	8.623	8.628	8.623	8.623	8.623	8.623	8.624	0.021	
63 4-Methyl-2-pentanone	8.843	8.843	8.843	8.843	8.843	8.843	8.843	8.843	0.001	
$ 64 Toluene-d8		8.959	8.963	8.964	8.964	8.964	8.964	8.963	0.023	
65 Toluene	9.053	9.048	9.052	9.053	9.053	9.053	9.053	9.052	0.021	
66 trans-1,3-Dichloroprop	9.404	9.399	9.404	9.404	9.399	9.404	9.399	9.402	0.029	
67 Ethyl methacrylate	9.509	9.509	9.503	9.504	9.504	9.504	9.504	9.505	0.027	
68 1,1,2-Trichloroethane	9.656	9.656	9.655	9.656	9.656	9.656	9.656	9.656	0.001	
69 Tetrachloroethene	9.729	9.729	9.734	9.729	9.729	9.734	9.729	9.731	0.025	
70 1,3-Dichloropropane	9.855	9.855	9.855	9.855	9.855	9.855	9.855	9.855	0.001	
71 2-Hexanone	9.955	9.955	9.954	9.955	9.954	9.955	9.955	9.955	0.001	
72 Dibromochloromethane	10.112	10.117	10.117	10.112	10.112	10.117	10.117	10.115	0.027	
73 n-Butyl acetate	10.122	10.122	10.122	10.122	10.122	10.122	10.122	10.122	0.001	
75 1,2-Dibromoethane (EDB	10.238	10.238	10.237	10.238	10.238	10.238	10.238	10.238	0.001	
77 Chlorobenzene	10.820	10.820	10.819	10.820	10.820	10.820	10.820	10.820	0.001	
78 1,1,1,2-Tetrachloroeth	10.935	10.935	10.935	10.935	10.935	10.935	10.935	10.935	0.001	
79 Ethylbenzene	10.946	10.946	10.945	10.946	10.945	10.945	10.946	10.946	0.001	
80 m+p-Xylenes	11.092	11.092	11.092	11.092	11.092	11.092	11.092	11.092	0.001	
81 o-Xylene	11.501	11.501	11.501	11.501	11.501	11.501	11.501	11.501	0.001	
82 Styrene	11.522	11.522	11.522	11.522	11.522	11.522	11.522	11.522	0.001	
83 Bromoform	11.701	11.695	11.700	11.701	11.700	11.700	11.701	11.700	0.016	
84 Isopropylbenzene	11.884	11.884	11.884	11.884	11.884	11.884	11.884	11.884	0.001	
85 Cyclohexanone	11.963	11.963	11.962	11.963	11.963	11.963	11.963	11.963	0.001	
$ 86 Bromofluorobenzene		12.052	12.051	12.052	12.052	12.052	12.052	12.052	0.001	
87 Bromobenzene	12.178	12.183	12.183	12.183	12.183	12.183	12.183	12.182	0.016	
88 1,1,2,2-Tetrachloroeth	12.204	12.204	12.209	12.209	12.209	12.209	12.209	12.208	0.020	
90 trans-1,4-Dichloro-2-b	12.241	12.241	12.240	12.241	12.240	12.241	12.241	12.241	0.001	
89 1,2,3-Trichloropropane	12.251	12.246	12.251	12.251	12.251	12.251	12.251	12.250	0.015	
91 n-Propylbenzene	12.298	12.293	12.298	12.298	12.298	12.298	12.298	12.297	0.015	
92 2-Chlorotoluene	12.372	12.372	12.371	12.372	12.372	12.372	12.372	12.372	0.001	
93 1,3,5-Trimethylbenzene	12.477	12.477	12.476	12.477	12.476	12.476	12.477	12.476	0.001	
94 4-Chlorotoluene	12.492	12.492	12.492	12.492	12.492	12.492	12.492	12.492	0.001	
95 tert-Butylbenzene	12.770	12.770	12.770	12.770	12.770	12.770	12.770	12.770	0.001	
96 1,2,4-Trimethylbenzene	12.828	12.823	12.827	12.828	12.828	12.828	12.828	12.827	0.015	
97 sec-Butylbenzene	12.975	12.975	12.974	12.975	12.975	12.975	12.975	12.975	0.001	
98 1,3-Dichlorobenzene	13.079	13.074	13.079	13.074	13.074	13.079	13.080	13.077	0.020	
99 p-Isopropyltoluene	13.121	13.122	13.121	13.122	13.121	13.121	13.122	13.121	0.001	
101 1,4-Dichlorobenzene	13.174	13.169	13.173	13.174	13.174	13.174	13.174	13.173	0.014	
102 Benzyl chloride	13.279	13.279	13.278	13.279	13.279	13.279	13.279	13.279	0.001	
103 n-Butylbenzene	13.483	13.483	13.483	13.483	13.483	13.483	13.483	13.483	0.001	
104 1,2-Dichlorobenzene	13.488	13.489	13.488	13.489	13.488	13.488	13.489	13.488	0.001	
105 1,2-Dibromo-3-chloropr	14.175	14.175	14.175	14.175	14.175	14.175	14.175	14.175	0.001	
106 1,2,4-Trichlorobenzene	14.862	14.862	14.862	14.862	14.862	14.862	14.862	14.862	0.001	
107 Hexachlorobutadiene	14.983	14.983	14.982	14.983	14.983	14.983	14.983	14.983	0.001	
108 Naphthalene	15.082	15.082	15.082	15.082	15.077	15.082	15.077	15.081	0.016	
109 1,2,3-Trichlorobenzene	15.261	15.261	15.260	15.261	15.261	15.261	15.261	15.261	0.001	
S 110 Xylenes (total)	16.000	16.000	16.000	16.000	16.000	16.000	16.000	16.000	0.000	

Shealy Environmental Services
Form 6 Response

Batch: \\Organics\dd\chem\msd18.i\18110419.b
Method: 8260B-18.M Instrument: msd18
Cal Start Date: 04-Nov-2019 15:40:30 Cal End Date: 04-Nov-2019 18:09:30
Last Modified: 07-Nov-2019 09:09:30
No.Compounds: 112 Integrator: falcon

Internal Standards

* 41 Pentafluorobenzene
* 52 1,4-Difluorobenzene
* 76 Chlorobenzene-d5
* 100 1,4-Dichlorobenzene-d4

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
S 111 1,2-Dichloroethene (to	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	11701	23376	117937	441820	1093206	2185723	4289791	
1 Dichlorodifluoromethan	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4115	6675	36879	154978	390759	784022	1554968	
2 Chloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5513	9463	46848	169176	430814	885665	1893172	
3 Vinyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6858	12915	68009	261251	641676	1265480	2475154	
4 Bromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4383	7520	41700	159201	379811	596736	1163872	
5 Chloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	3389	6268	32818	126268	326413	655198	1291155	
6 Trichlorofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	2636	4468	33563	139381	370030	747819	1529346	
8 Ethyl ether	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4502	9501	44464	174834	435723	879215	1706518	
9 Acrolein	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	21954	43397	236468	895130	2270726	4564979	8915651	
11 1,1-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5315	9851	46268	183371	462146	925221	1853317	
12 Freon 113	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5702	9106	50942	203157	506075	981533	1923445	
10 Acetone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	12903	22198	107934	388110	974852	1935182	3734401	
13 Methyl iodide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10180	19643	99653	386106	982513	1927519	3814358	
14 Carbon disulfide	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	17888	30603	155551	621774	1562697	3114586	6242042	
15 Acetonitrile	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	12787	22837	129040	482405	1212112	2384159	4594514	
17 Allyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	3473	4739	24857	94052	237312	471818	904956	
16 Methyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	13683	26243	106454	406859	1001676	1978042	3871823	
18 Methylene chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8692	13666	59965	219660	542307	1076823	2096280	
20 Acrylonitrile	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	10034	22169	110811	409503	1028829	2045769	3961413	
21 trans-1,2-Dichloroethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5666	11333	52705	200023	498997	988822	1928088	

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
22 tert-Butyl methyl ethe	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	9923	18022	91075	320260	823656	1596614	2924143	
23 Hexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6821	14375	72056	283543	687254	1336955	2583815	
24 1,1-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10022	19003	98034	357304	936529	1847762	3609245	
25 Vinyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	1329	2735	15676	57197	147571	307365	597681	
27 Chloroprene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7930	13389	70140	273561	691376	1376168	2675063	
26 Diisopropyl ether (IPE	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4727	8140	41543	163670	418814	814594	1579398	
31 2,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	5886	9764	47509	177805	446186	854487	1521386	
29 cis-1,2-Dichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	6035	12043	65232	241797	594209	1196901	2361703	
30 2-Butanone (MEK)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#41
	4375	9424	44025	158336	415112	815920	1643664	
33 Ethyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00		#41
	28998	48316	148666	531368	1284182	2526985		
32 Propionitrile	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	27132	52333	282475	1028592	2564371	5014895	9539636	
34 Methacrylonitrile	2.5000	5.0000	25.000	100.00	250.00	500.00	1000.00	#41
	25217	46947	254108	922885	2311965	4587096	8876076	
35 Bromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	3965	6866	36733	132504	329078	658381	1304419	
36 Tetrahydrofuran	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8239	15667	71656	253048	624640	1257422	2401604	
37 Chloroform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	10085	19668	103931	371075	935234	1879831	3655187	
40 1,1,1-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7677	14836	75053	290455	719933	1420785	2664902	
$ 39 dibromofluoromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7889	13732	62753	233178	590714	1167144	2300500	
42 Cyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	4707	9965	51666	207556	459209	903730	1690232	
44 Carbon tetrachloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	7494	13051	71772	287059	722580	1451200	2826515	
43 1,1-Dichloropropene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#41
	8486	15050	74061	290546	719763	1422716	2766655	
$ 46 1,2-Dichloroethane-d4	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	7682	14518	69607	253024	636238	1264821	2510294	
48 Benzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	20005	40194	226364	852623	2128435	4196694	8191667	
45 Isobutyl alcohol	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#41
	6882	14331	80812	292978	732849	1426813	2855106	
50 1,2-Dichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8654	15352	85109	296519	757087	1507091	2935795	
49 Isopropyl Acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	16990	32196	180269	654566	1604240	3209024	6362493	
53 Trichloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	7823	11899	66868	250773	633095	1264874	2450096	
54 Methylcyclohexane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8064	15723	86521	330139	868748	1709357	3344854	
55 1,2-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	6078	10998	61296	219453	557950	1110374	2175980	

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
56 Dibromomethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	4736	8000	45720	161865	411456	826372	1640813	
58 1,4-Dioxane	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#52
	2416	4520	24667	85785	219259	437776	896987	
57 Methyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	8038	15452	83952	293209	766636	1534243	2995004	
59 Bromodichloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	6862	13445	78000	282047	725165	1466736	2951045	
60 2-nitropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	5081	8282	42352	149870	401227	793735	1588348	
61 2-Chloroethylvinyl eth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	4801	9299	51917	186383	489166	987168	1938914	
62 cis-1,3-Dichloropropen	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#52
	10045	16693	94849	335605	887360	1786234	3555139	
63 4-Methyl-2-pentanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#52
	23066	48084	276196	965958	2438931	4765726	9229845	
$ 64 Toluene-d8		1.0000	5.0000	20.000	50.000	100.00	200.00	#76
		48324	223283	800812	2003277	4007348	7829512	
65 Toluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	14884	26841	143122	537620	1363537	2736952	5308394	
66 trans-1,3-Dichloroprop	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	8070	16183	90941	328492	853383	1719342	3443057	
67 Ethyl methacrylate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	9428	17136	103253	369667	955145	1935632	3820928	
68 1,1,2-Trichloroethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5957	11662	64773	231808	593964	1195466	2309722	
69 Tetrachloroethene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5599	10303	53655	212430	533479	1039875	2067667	
70 1,3-Dichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	10277	19475	108301	372961	944713	1873906	3682190	
71 2-Hexanone	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	19625	39751	221867	791564	2135933	4173709	8079939	
72 Dibromochloromethane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	7206	12443	72152	260942	691554	1381732	2791269	
73 n-Butyl acetate	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	14582	30341	158527	568407	1464353	2870989	5588967	
75 1,2-Dibromoethane (EDB	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	7844	12956	75961	266727	673418	1359885	2717824	
77 Chlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	18066	33428	177018	629877	1618102	3211424	6326776	
78 1,1,1,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	6299	10290	63756	228427	586990	1181423	2380506	
79 Ethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	8126	16255	90461	329200	840460	1676994	3325539	
80 m+p-Xylenes	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	11731	19951	106308	397256	1031467	2055274	4079437	
81 o-Xylene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	10269	19586	109318	390924	992646	1978073	3937872	
82 Styrene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	16024	29864	176787	664015	1726376	3453475	6815074	
83 Bromoform	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	5367	10439	57478	221777	593884	1203939	2441035	
84 Isopropylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#76
	24723	46752	256013	969336	2405793	4801038	9479198	
85 Cyclohexanone	5.0000	10.000	50.000	200.00	500.00	1000.00	2000.00	#76
	6627	14558	77813	313355	743499	1505972	3091041	

Report Date: 07-Nov-2019 09:17:23 AIM Revision: 1.0 11-Sep-2019 14:31:36
Method Path: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp	Level 6 Conc/Rsp	Level 7 Conc/Rsp	Istd #
$ 86 Bromofluorobenzene		1.0000	5.0000	20.000	50.000	100.00	200.00	#76
		20191	85390	307332	768208	1514899	3004247	
87 Bromobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	7150	14902	84985	297488	760974	1516721	2987684	
88 1,1,2,2-Tetrachloroeth	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	10547	20873	120501	412401	1056744	2043482	4036737	
90 trans-1,4-Dichloro-2-b	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	3105	5676	29604	102419	267066	518549	1013822	
89 1,2,3-Trichloropropane	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	3837	7580	38346	135387	345172	674962	1323563	
91 n-Propylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	29726	56837	310879	1188172	3004072	5938108	11248451	
92 2-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	18428	33455	191797	707324	1792507	3532319	6918307	
93 1,3,5-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	19209	34848	200011	754086	1884266	3721809	7435275	
94 4-Chlorotoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	8035	13353	72120	262406	677054	1317500	2591659	
95 tert-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	17508	33698	179028	671850	1658806	3300647	6459926	
96 1,2,4-Trimethylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	17331	35009	208201	788921	1955460	3854782	7583977	
97 sec-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23381	43223	241307	939959	2319487	4596403	9126479	
98 1,3-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	14968	27156	154588	550118	1381575	2708504	5294104	
99 p-Isopropyltoluene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	20188	36312	203244	782859	1900377	3749223	7522076	
101 1,4-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	15677	28657	158294	558422	1387862	2719749	5345123	
102 Benzyl chloride	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	14663	27450	168241	637302	1674670	3305012	6481631	
103 n-Butylbenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	18258	32394	190566	741416	1856253	3611398	7025918	
104 1,2-Dichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	12746	26851	152335	524199	1332291	2610713	5103526	
105 1,2-Dibromo-3-chloropr	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	2881	5421	31068	115406	283977	567810	1120789	
106 1,2,4-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	9664	17890	100619	378503	924217	1819242	3545452	
107 Hexachlorobutadiene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	5629	9562	46472	163512	388254	715046	1390165	
108 Naphthalene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	23721	41070	277675	1106935	2660460	5210308	9874453	
109 1,2,3-Trichlorobenzene	0.50000	1.0000	5.0000	20.000	50.000	100.00	200.00	#100
	8347	15007	93255	340502	789134	1548461	2996513	
S 110 Xylenes (total)	1.0000	2.0000	10.000	40.000	100.00	200.00	400.00	#76
	22000	39537	215626	788180	2024113	4033347	8017309	

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\dd\chem\msd18.i\18110419.b		
Method:	8260B-18.M	Instrument:	msd18
Cal Start Date:	04-Nov-2019 15:40:30	Cal End Date:	04-Nov-2019 18:09:30
Last Modified:	07-Nov-2019 09:09:30		
No.Compounds:	112	Integrator:	falcon
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

No. Cal Levels: 7 No. Cal Levels: 7

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	VSTD0.5IK	04-Nov-2019 15:40:30	18110419.b	181104A06.D	std.sub	47833893	35693446
2	2	VSTD001IK	04-Nov-2019 16:05:30	18110419.b	181104A07.D	std.sub	47833893	35693447
3	3	VSTD005IK	04-Nov-2019 16:30:30	18110419.b	181104A08.D	std.sub	47833893	35693448
4	4	VSTD020IK	04-Nov-2019 16:55:30	18110419.b	181104A09.D	std.sub	47833893	35693449
5	5	VSTD050IK	04-Nov-2019 17:20:30	18110419.b	181104A10.D	std.sub	47833893	35693438
6	6	VSTD100IK	04-Nov-2019 17:45:30	18110419.b	181104A11.D	std.sub	47833893	35693439
7	7	VSTD200IK	04-Nov-2019 18:09:30	18110419.b	181104A12.D	std.sub	47833893	35693442

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A06.D
Lab Sample ID: VSTD0.5IK Client Sample ID: 1ml/100ml VSTD050IK
Injection Date: 04-Nov-2019 15:40:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VSTD0.5IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: Ical, Level: 1 ALS Bottle: 6
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: ecb Review Date: 07-Nov-2019 09:07:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	4115	0.50000	0.52096	QM
2 Chloromethane	50.0	1.566	1.566	0.000	5513	0.50000	0.57303	
3 Vinyl chloride	62.0	1.681	1.686	-0.005	6858	0.50000	0.50983	
4 Bromomethane	94.0	2.017	2.006	0.011	4383	0.50000	0.57322	QM
5 Chloroethane	64.0	2.142	2.137	0.005	3389	0.50000	0.50489	Q
6 Trichlorofluoromethane	101.0	2.420	2.415	0.006	2636	0.50000	0.64077	
8 Ethyl ether	59.0	2.777	2.771	0.005	4502	0.50000	0.49069	QM
9 Acrolein	56.0	2.939	2.934	0.006	21954	5.0000	4.7184	
10 Acetone	43.0	3.133	3.128	0.006	12903	1.0000	1.1957	QM
11 1,1-Dichloroethene	96.0	3.049	3.049	0.000	5315	0.50000	0.54056	M
12 Freon 113	101.0	3.086	3.086	0.000	5702	0.50000	0.54870	
13 Methyl iodide	142.0	3.217	3.222	-0.004	10180	0.50000	0.50263	
14 Carbon disulfide	76.0	3.296	3.290	0.005	17888	0.50000	0.54560	Q
15 Acetonitrile	40.0	3.500	3.495	0.006	12787	5.0000	5.1135	M
17 Allyl chloride	76.0	3.542	3.542	0.000	3473	0.50000	0.58901	QM
16 Methyl Acetate	43.0	3.563	3.553	0.011	13683	0.50000	0.60223	M
18 Methylene chloride	84.0	3.715	3.720	-0.004	8692	0.50000	0.50052	
20 Acrylonitrile	53.0	4.046	4.035	0.010	10034	1.0000	0.93323	Q
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	5666	0.50000	0.52857	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.077	0.001	9923	0.50000	0.56514	
23 Hexane	57.0	4.455	4.454	0.000	6821	0.50000	0.47835	Q
24 1,1-Dichloroethane	63.0	4.649	4.648	0.000	10022	0.50000	0.51545	
25 Vinyl acetate	86.0	4.701	4.696	0.006	1329	0.50000	0.44060	Q
26 Diisopropyl ether (IPE)	87.0	4.738	4.738	0.000	4727	0.50000	0.54766	QM
27 Chloroprene	53.0	4.738	4.738	0.000	7930	0.50000	0.54882	
29 cis-1,2-Dichloroethene	96.0	5.393	5.398	-0.004	6035	0.50000	0.48145	
30 2-Butanone (MEK)	72.0	5.419	5.403	0.016	4375	1.0000	0.9961	Q

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	5886	0.50000	0.61487	M
32 Propionitrile	54.0	5.487	5.482	0.005	27132	5.0000	5.0570	
33 Ethyl Acetate	43.0	5.487	5.483	0.005	28998	0.50000	0.46502	QM
34 Methacrylonitrile	67.0	5.676	5.671	0.006	25217	2.5000	2.5830	
35 Bromochloromethane	128.0	5.697	5.692	0.006	3965	0.50000	0.55490	
36 Tetrahydrofuran	42.0	5.713	5.702	0.010	8239	0.50000	0.58166	
37 Chloroform	83.0	5.854	5.854	0.000	10085	0.50000	0.50647	
$ 39 dibromofluoromethane	111.0	6.048	6.054	-0.004	7889	0.50000	0.60388	
40 1,1,1-Trichloroethane	97.0	6.028	6.027	0.000	7677	0.50000	0.51186	M
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1347711	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.101	0.000	4707	0.50000	0.47793	Q
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	8486	0.50000	0.55431	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	7494	0.50000	0.50813	
45 Isobutyl alcohol	42.0	6.489	6.478	0.010	6882	5.0000	4.5649	M
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.000	7682	0.50000	0.55005	
48 Benzene	78.0	6.478	6.478	0.000	20005	0.50000	0.45937	
49 Isopropyl Acetate	43.0	6.630	6.630	0.000	16990	0.50000	0.49640	Q
50 1,2-Dichloroethane	62.0	6.562	6.567	-0.004	8654	0.50000	0.53407	
* 52 1,4-Difluorobenzene	114.0	7.076	7.076	0.000	2010902	50.000	50.000	
53 Trichloroethene	130.0	7.349	7.354	-0.004	7823	0.50000	0.58022	
54 Methylcyclohexane	83.0	7.637	7.637	0.000	8064	0.50000	0.46504	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	6078	0.50000	0.51573	
56 Dibromomethane	93.0	7.794	7.789	0.005	4736	0.50000	0.53804	
57 Methyl methacrylate	41.0	7.810	7.810	0.000	8038	0.50000	0.49925	
58 1,4-Dioxane	88.0	7.805	7.800	0.005	2416	5.0000	5.1246	Q
59 Bromodichloromethane	83.0	8.046	8.046	0.001	6862	0.50000	0.45876	
60 2-nitropropane	43.0	8.345	8.345	0.000	5081	0.50000	0.58865	
61 2-Chloroethylvinyl ether	63.0	8.455	8.450	0.006	4801	0.50000	0.47628	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	10045	0.50000	0.53818	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.001	23066	1.0000	0.91433	
$ 64 Toluene-d8	98.0	8.964	8.964	0.000	33586	0.50000	0.77601	
65 Toluene	92.0	9.053	9.053	0.000	14884	0.50000	0.52564	
66 trans-1,3-Dichloropropene	75.0	9.404	9.399	0.006	8070	0.50000	0.46497	Q
67 Ethyl methacrylate	69.0	9.509	9.504	0.005	9428	0.50000	0.48479	
68 1,1,2-Trichloroethane	97.0	9.656	9.656	0.000	5957	0.50000	0.48687	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	5599	0.50000	0.51470	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.000	10277	0.50000	0.51462	
71 2-Hexanone	43.0	9.955	9.954	0.000	19625	1.0000	0.93049	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	7206	0.50000	0.51261	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	14582	0.50000	0.48424	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.238	0.000	7844	0.50000	0.54755	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1919065	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	18066	0.50000	0.53048	QM
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.001	6299	0.50000	0.52103	
79 Ethylbenzene	106.0	10.946	10.945	0.000	8126	0.50000	0.47288	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	11731	0.50000	0.54815	
81 o-Xylene	106.0	11.501	11.501	0.000	10269	0.50000	0.49768	
82 Styrene	104.0	11.522	11.522	0.000	16024	0.50000	0.46787	
83 Bromoform	173.0	11.701	11.700	0.000	5367	0.50000	0.45813	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	24723	0.50000	0.49721	
85 Cyclohexanone	55.0	11.963	11.963	0.000	6627	5.0000	4.3288	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	12806	0.50000	0.76074	
88 1,1,2,2-Tetrachloroethane	83.0	12.204	12.209	-0.005	10547	0.50000	0.49058	
87 Bromobenzene	156.0	12.178	12.183	-0.004	7150	0.50000	0.46372	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	3837	0.50000	0.53030	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	3105	0.50000	0.55662	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	29726	0.50000	0.49588	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	18428	0.50000	0.50909	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	19209	0.50000	0.50390	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	8035	0.50000	0.57404	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	17508	0.50000	0.51074	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.828	0.000	17331	0.50000	0.44891	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	23381	0.50000	0.49908	
98 1,3-Dichlorobenzene	146.0	13.079	13.074	0.005	14968	0.50000	0.52537	
99 p-Isopropyltoluene	119.0	13.121	13.121	0.000	20188	0.50000	0.51685	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	1052312	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.174	0.000	15677	0.50000	0.53790	Q
102 Benzyl chloride	91.0	13.279	13.279	0.000	14663	0.50000	0.45698	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	18258	0.50000	0.49897	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	12746	0.50000	0.46980	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	2881	0.50000	0.49544	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	9664	0.50000	0.51049	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	5629	0.50000	0.36812	
108 Naphthalene	128.0	15.082	15.077	0.005	23721	0.50000	0.46209	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	8347	0.50000	0.50730	
S 110 Xylenes (total)	106.0	16.000		0.000		1.0000	1.0458	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		1.0000	1.0100	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

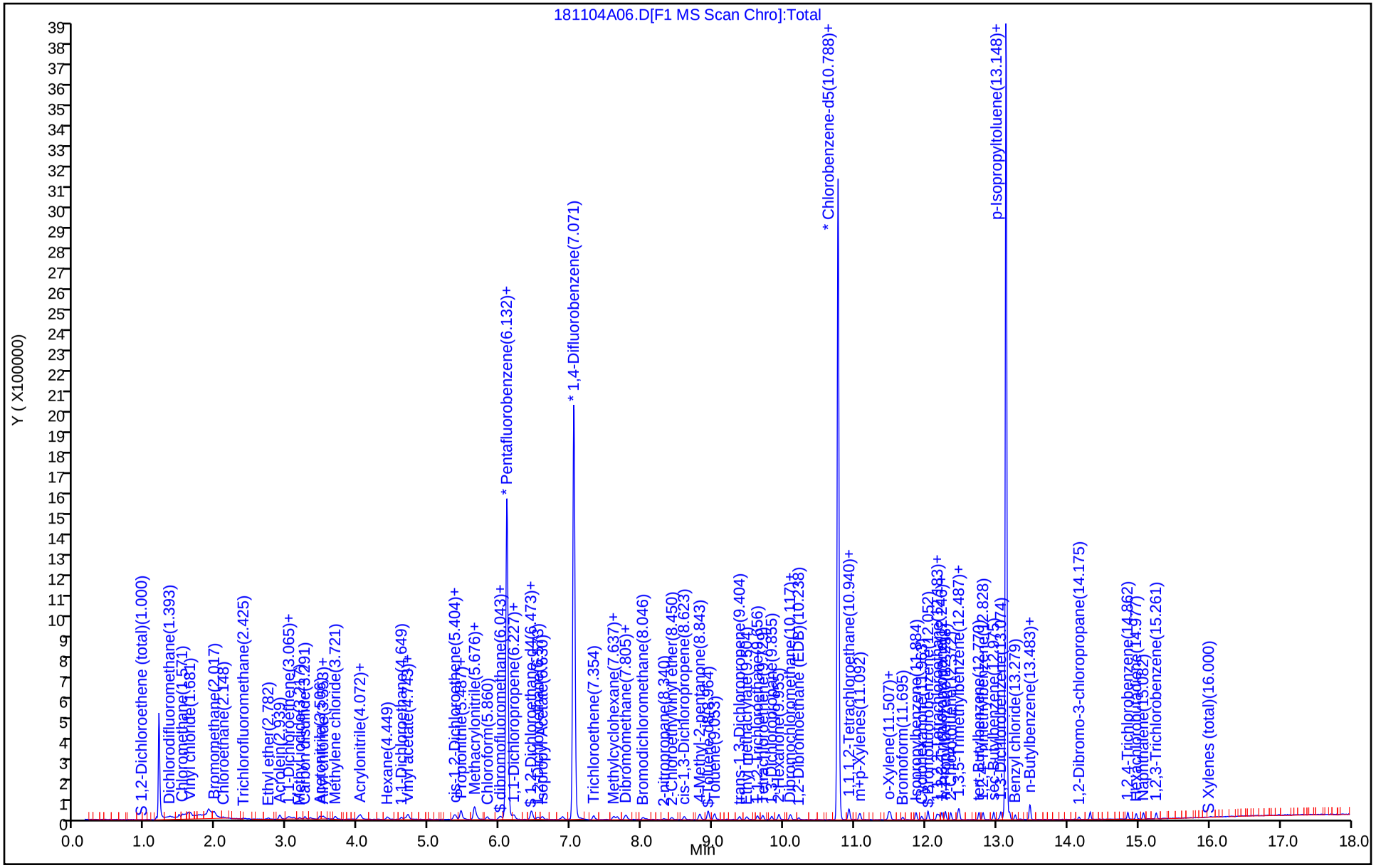
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D				
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK		
Sample Info:	18110419, VSTD0.5IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

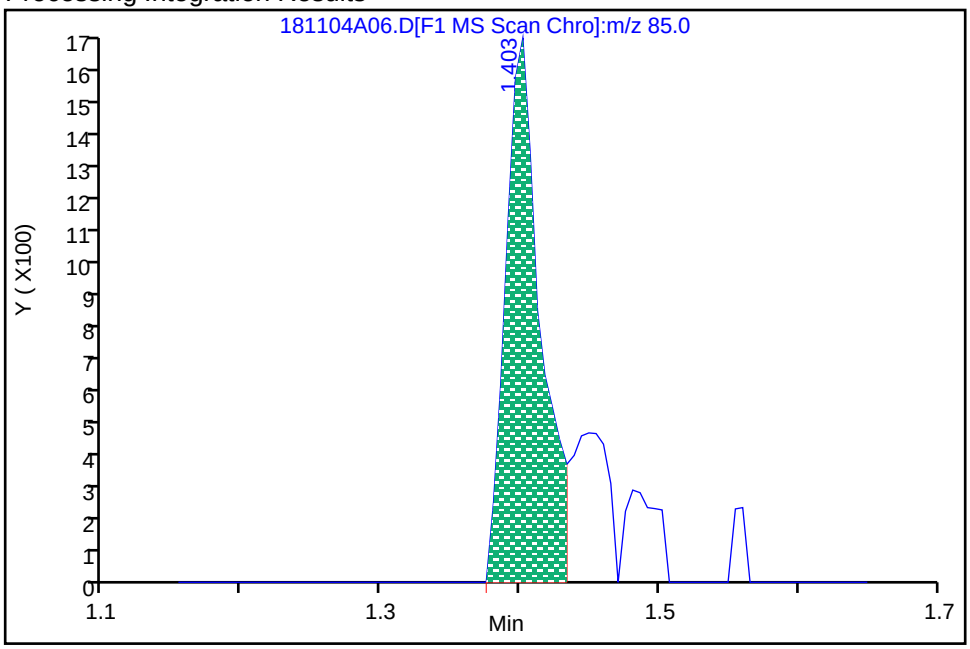
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

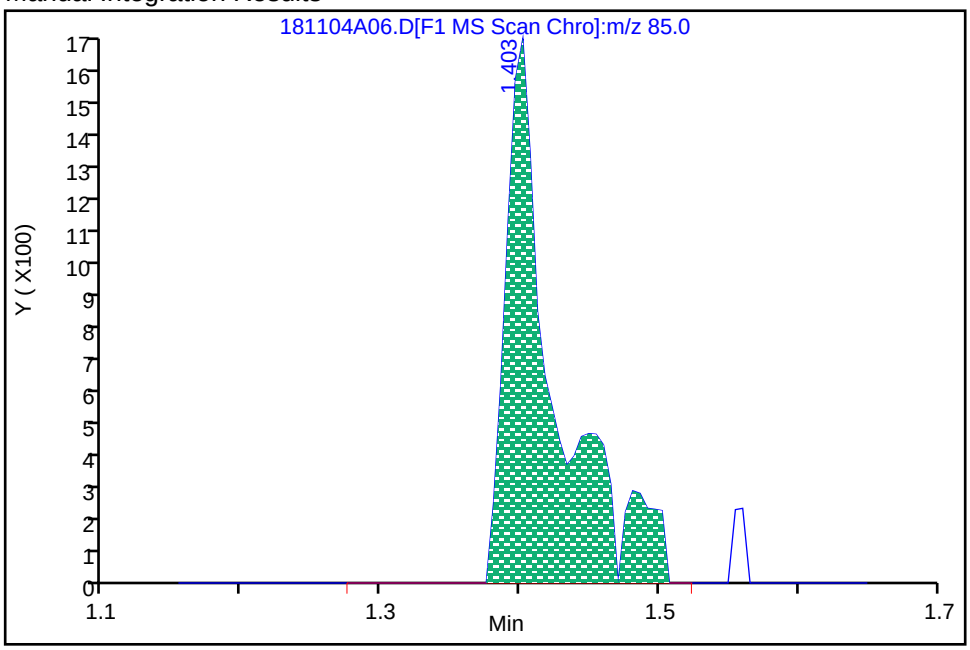
Processing Integration Results

RT: 1.403
Area: 2836
Amount: 0.37182
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 4115
Amount: 0.52096
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:04:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

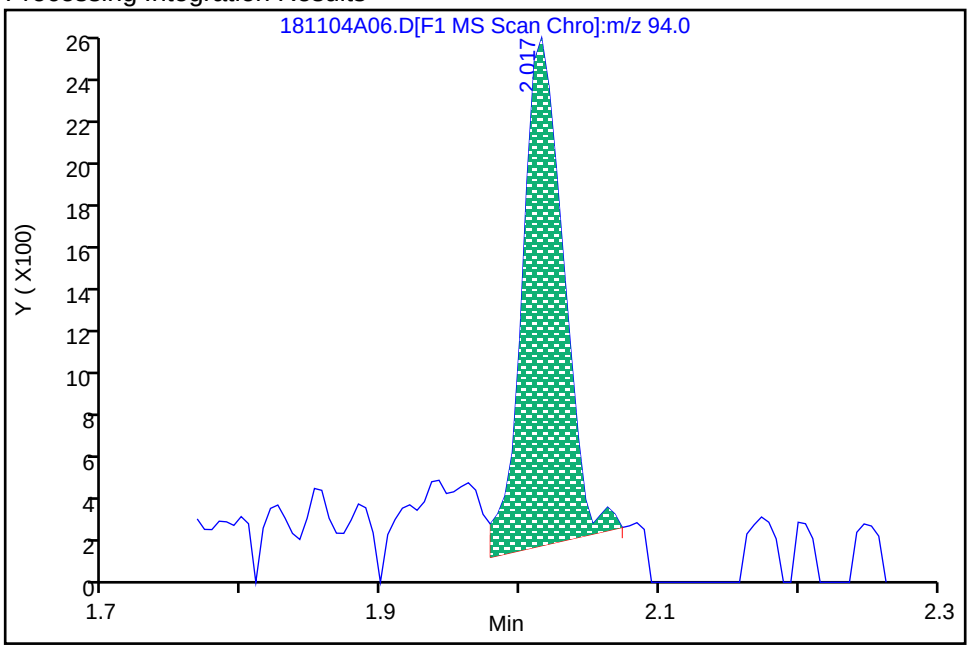
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

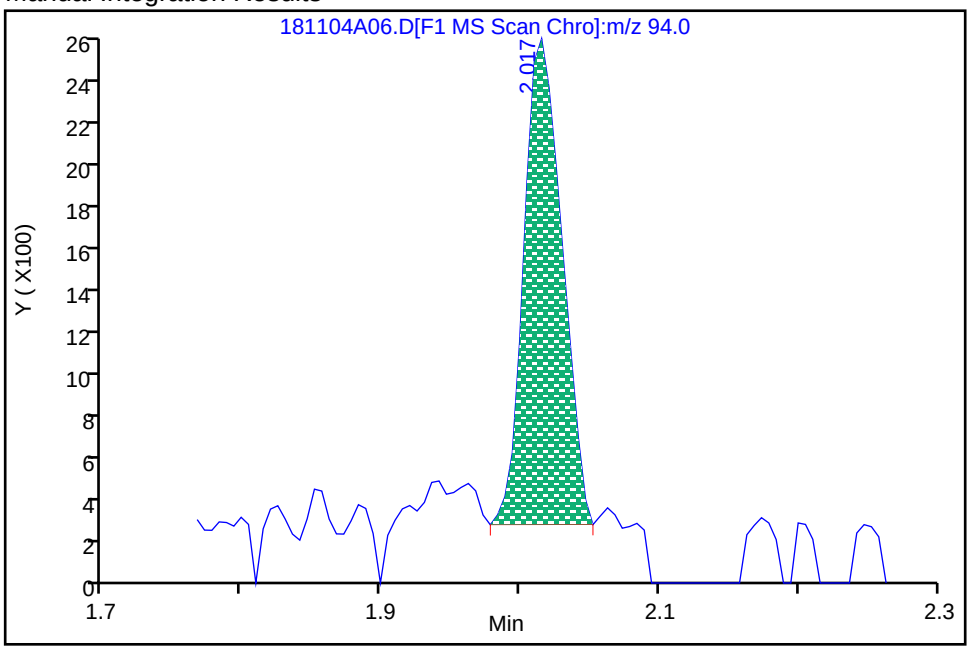
Processing Integration Results

RT: 2.017
Area: 4937
Amount: 0.65045
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.017
Area: 4383
Amount: 0.57322
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:04:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

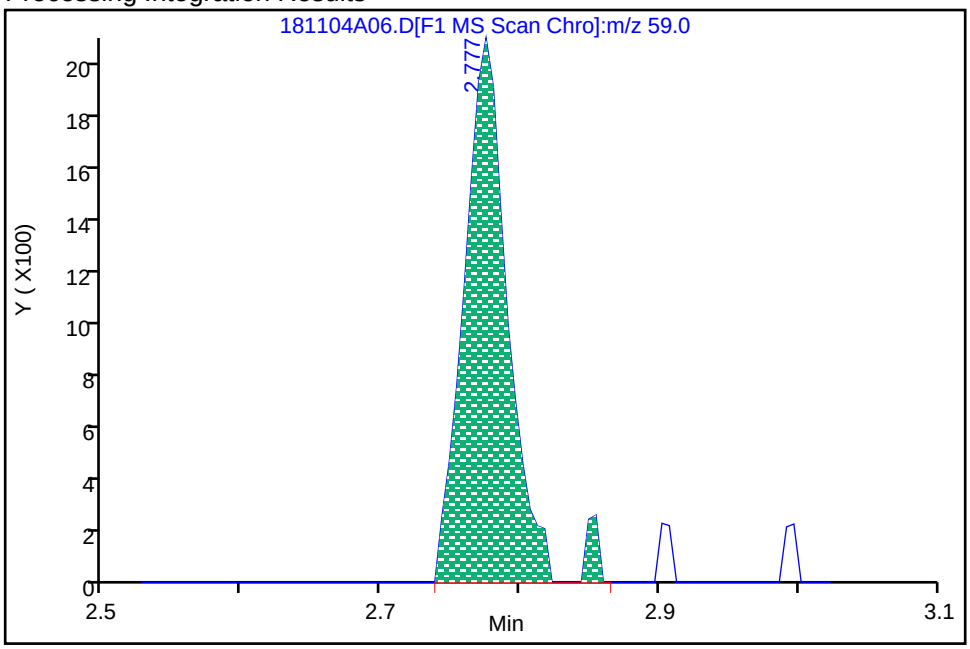
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

8 Ethyl ether, CAS: 60-29-7

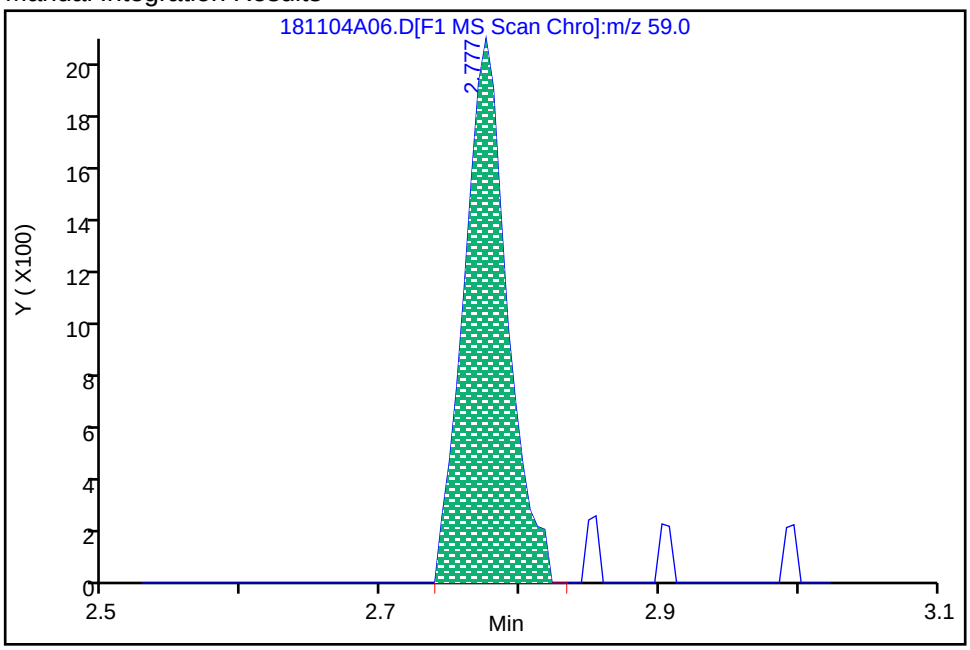
Processing Integration Results

RT: 2.777
Area: 4659
Amount: 0.50467
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.777
Area: 4502
Amount: 0.49069
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:04:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

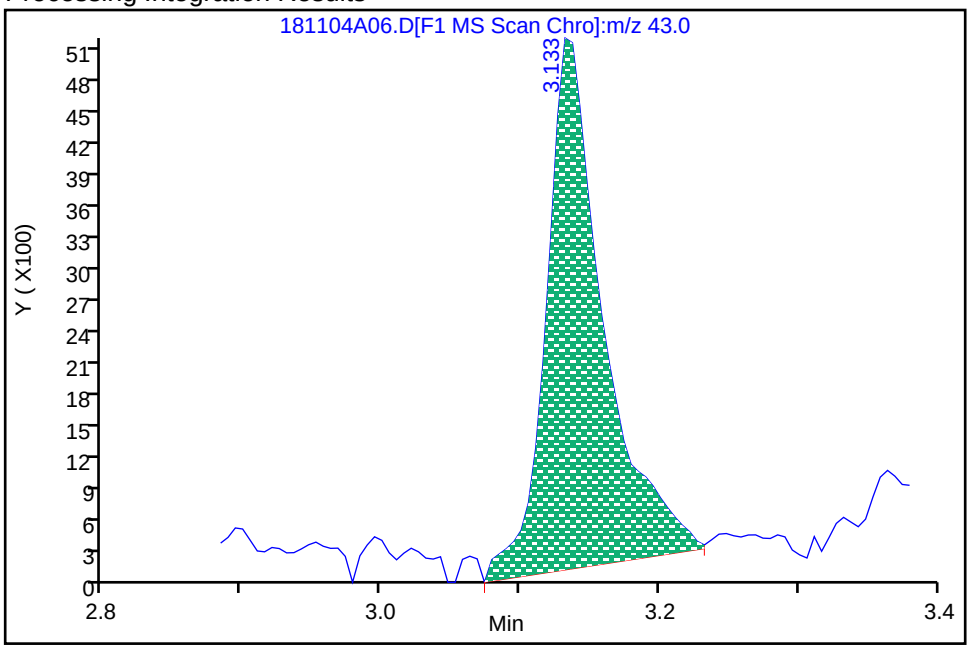
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

10 Acetone, CAS: 67-64-1

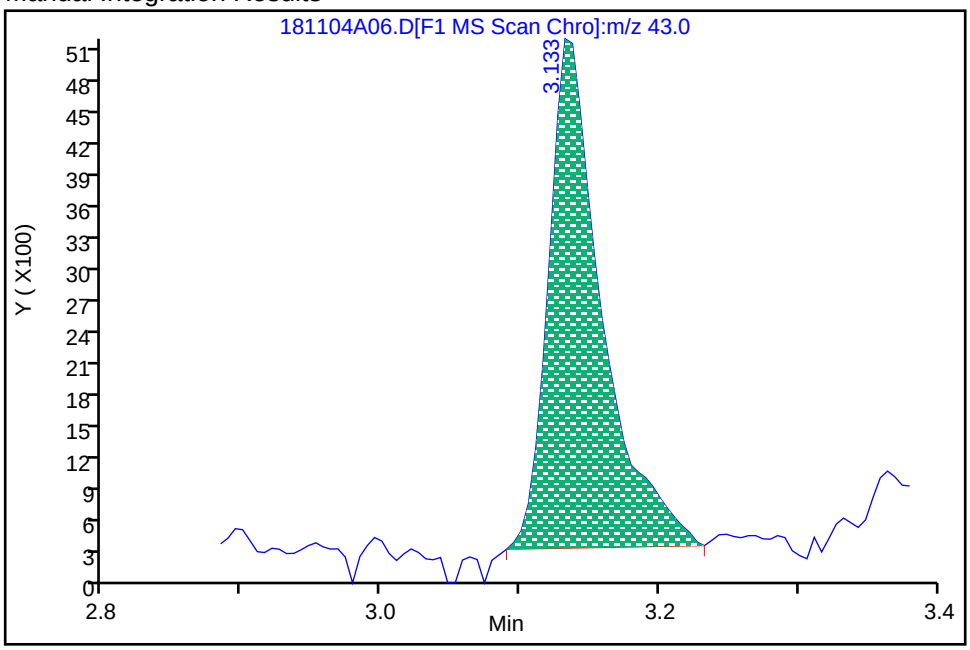
Processing Integration Results

RT: 3.133
Area: 14462
Amount: 1.2869
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.133
Area: 12903
Amount: 1.1957
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:04:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

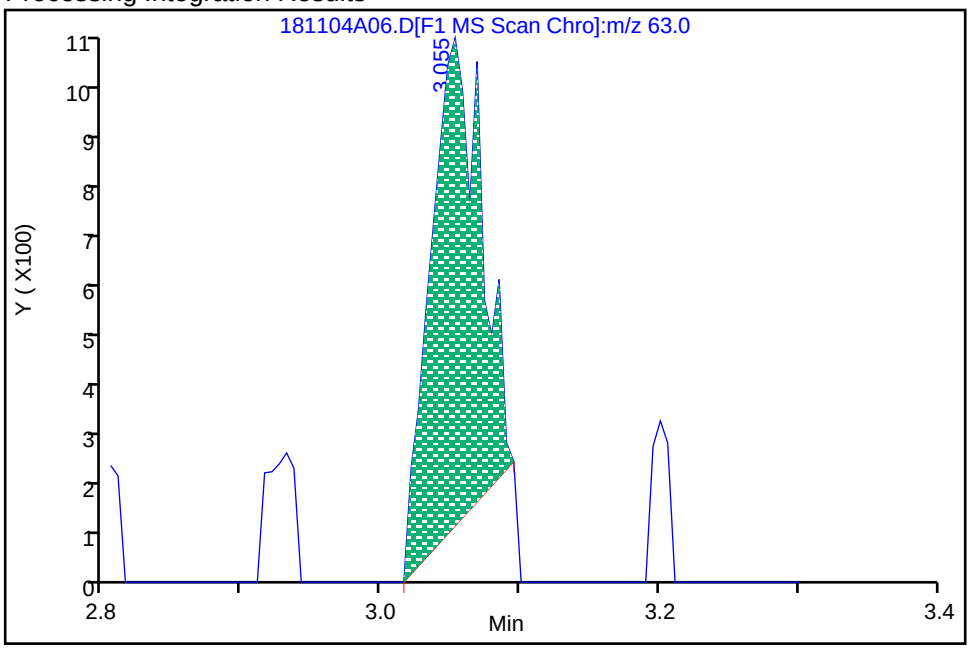
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

11 1,1-Dichloroethene, CAS: 75-35-4

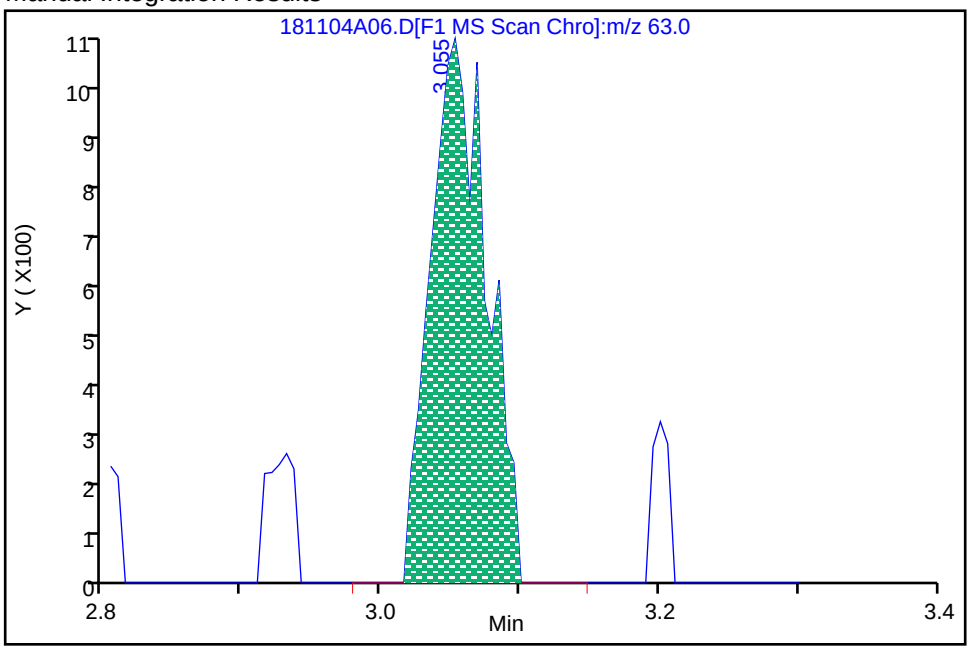
Processing Integration Results

RT: 3.055
Area: 2361
Amount: 0.53075
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.055
Area: 2940
Amount: 0.54056
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

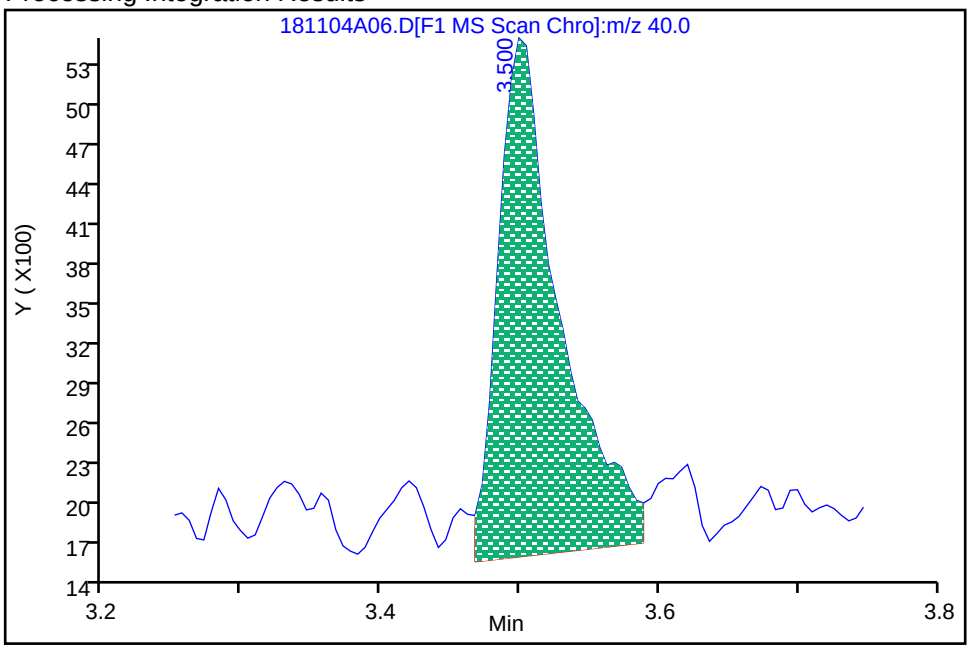
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

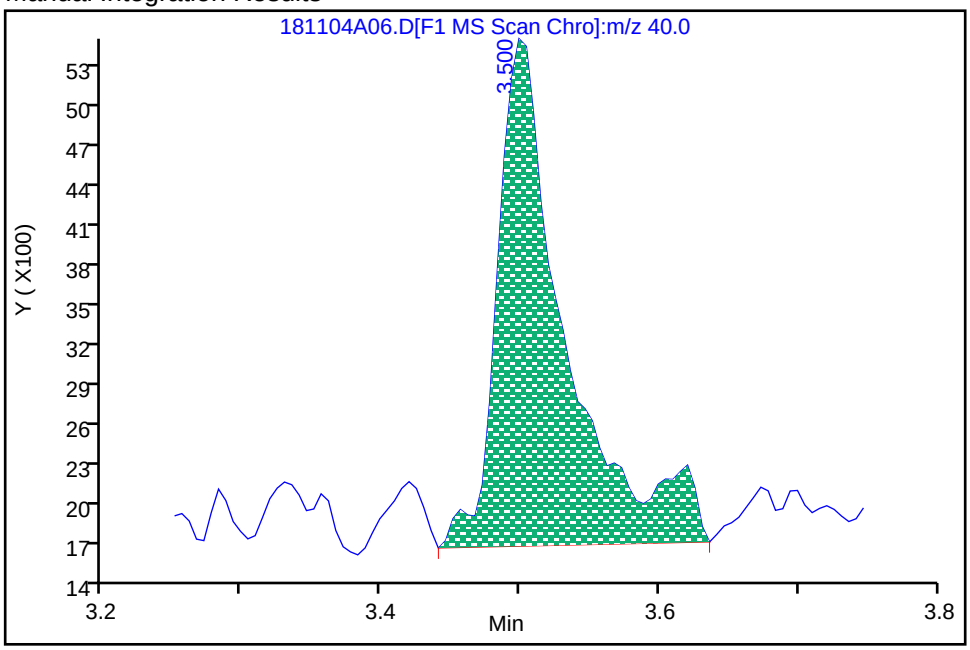
Processing Integration Results

RT: 3.500
Area: 11830
Amount: 4.7807
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.500
Area: 12787
Amount: 5.1135
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

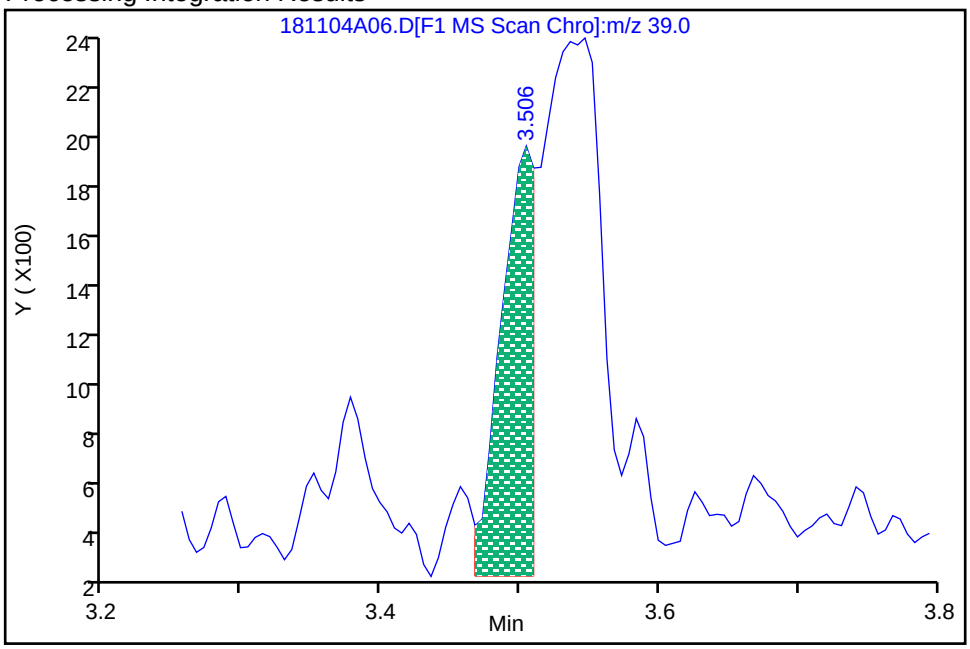
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

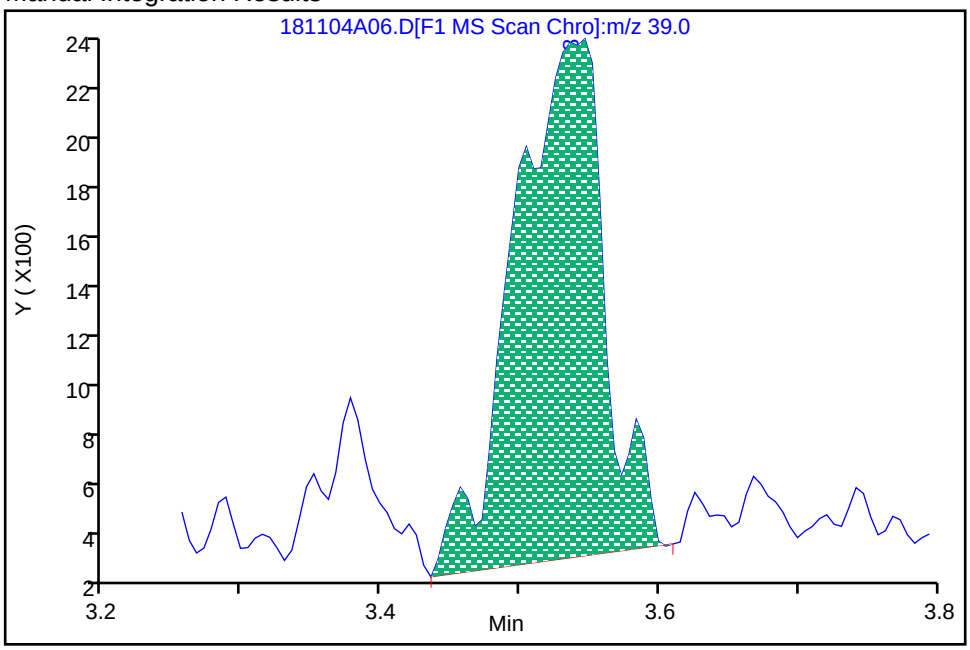
Processing Integration Results

RT: 3.506
Area: 2581
Amount: 4.7807
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.548
Area: 9211
Amount: 5.1135
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

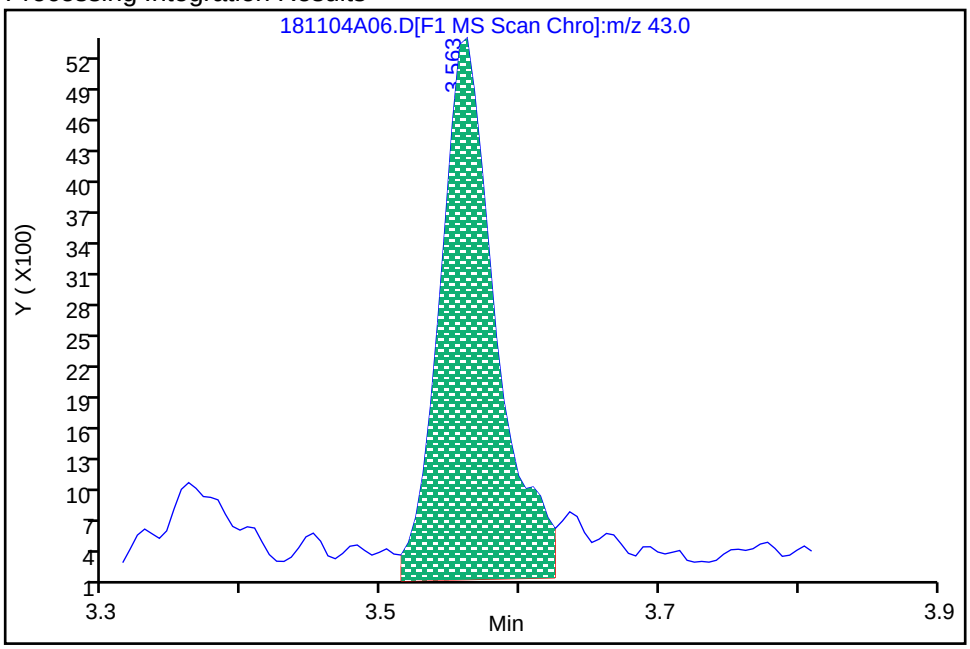
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

16 Methyl Acetate, CAS: 79-20-9

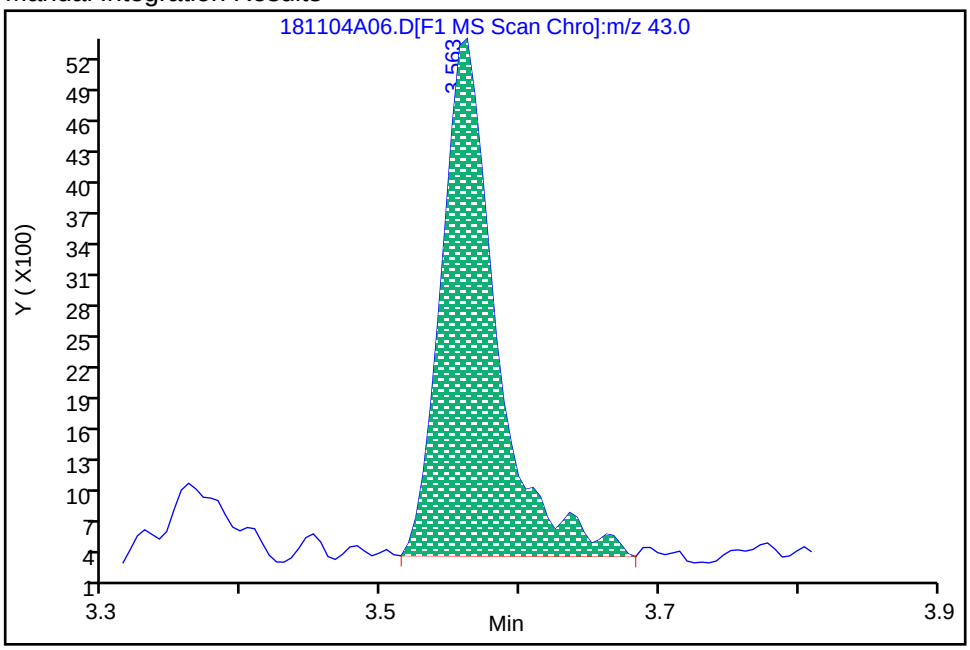
Processing Integration Results

RT: 3.563
Area: 14483
Amount: 0.63185
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.563
Area: 13683
Amount: 0.60223
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

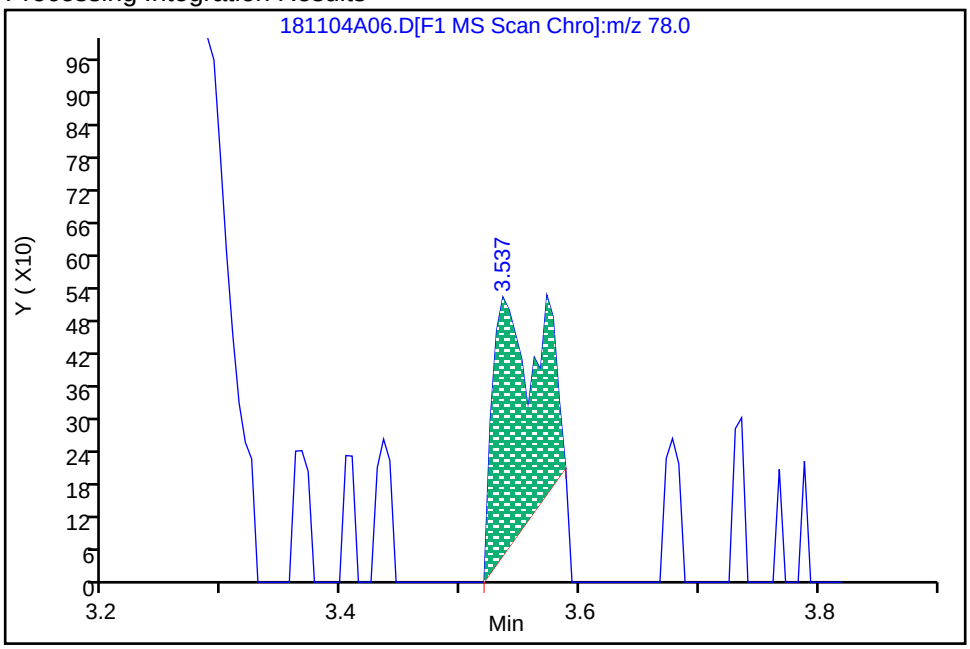
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

17 Allyl chloride, CAS: 107-05-1

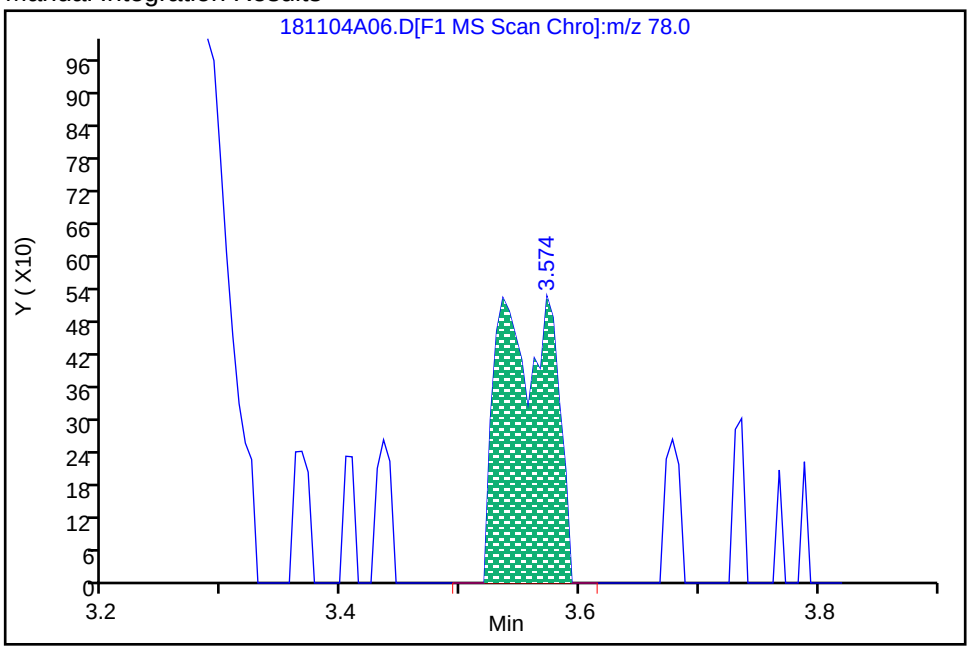
Processing Integration Results

RT: 3.537
Area: 1208
Amount: 0.63791
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.574
Area: 1666
Amount: 0.58901
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:05:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services

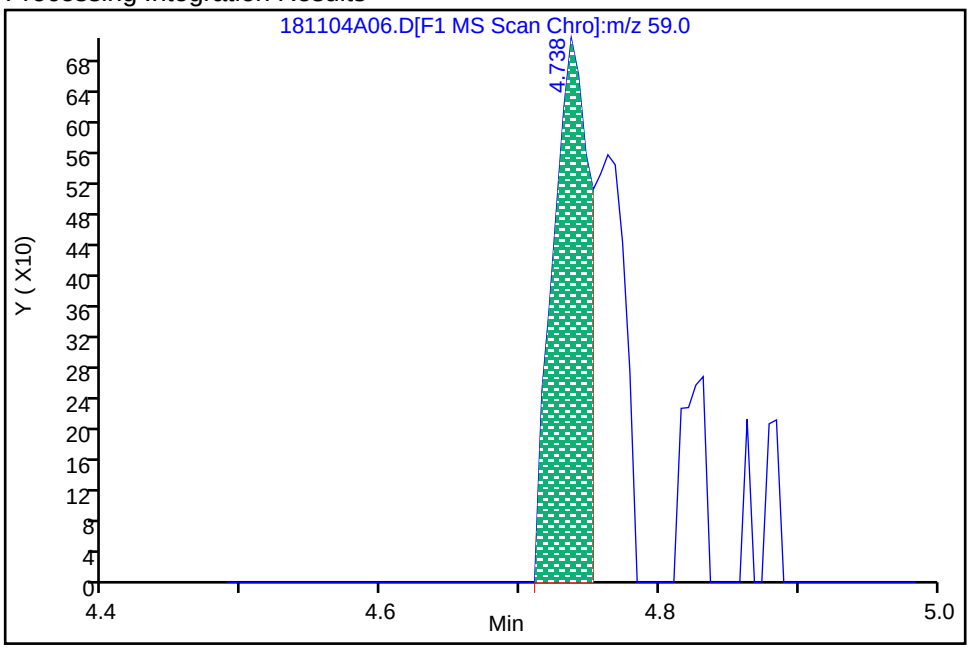
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

26 Diisopropyl ether (IPE), CAS: 108-20-3

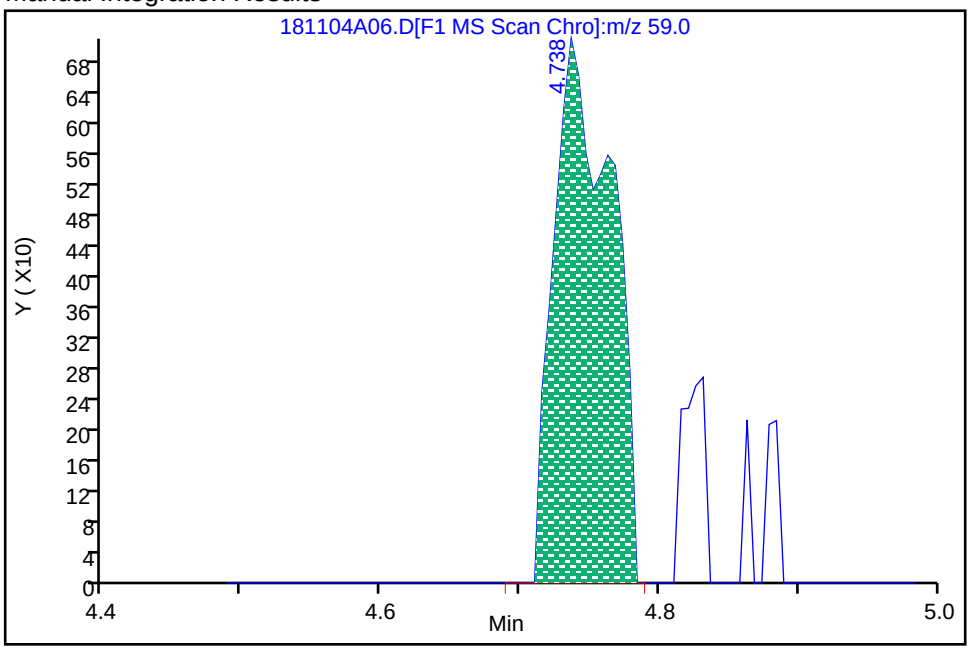
Processing Integration Results

RT: 4.738
Area: 1217
Amount: 0.53512
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.738
Area: 2033
Amount: 0.54766
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

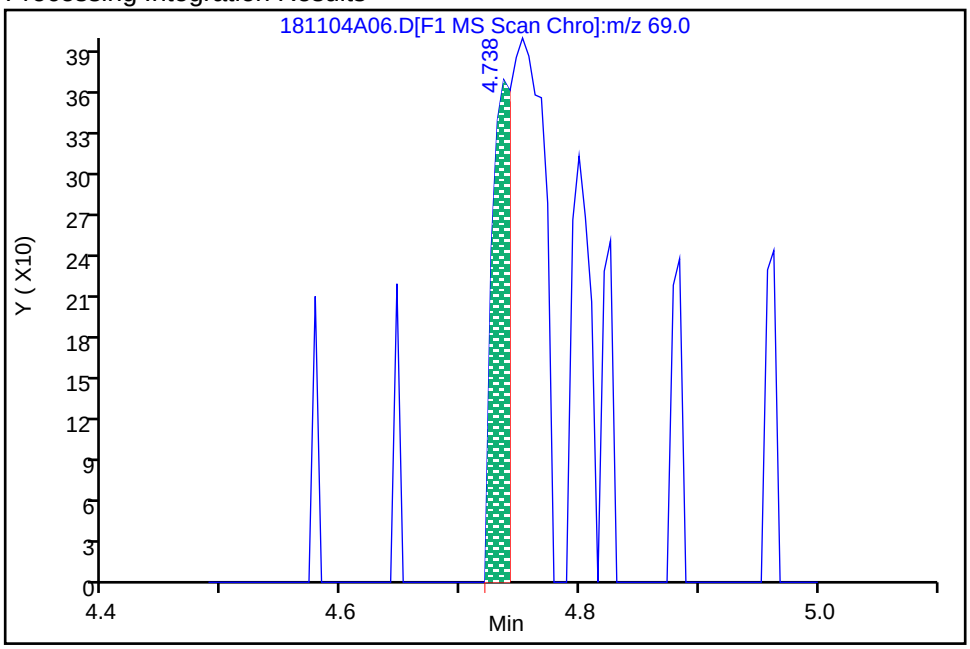
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

26 Diisopropyl ether (IPE), CAS: 108-20-3

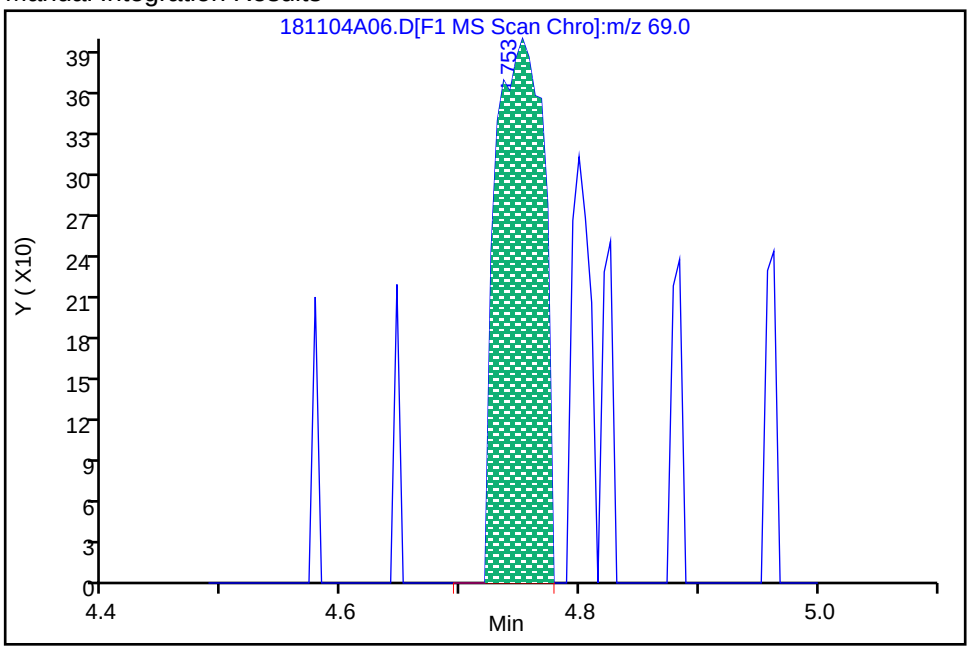
Processing Integration Results

RT: 4.738
Area: 350
Amount: 0.53512
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.753
Area: 1074
Amount: 0.54766
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

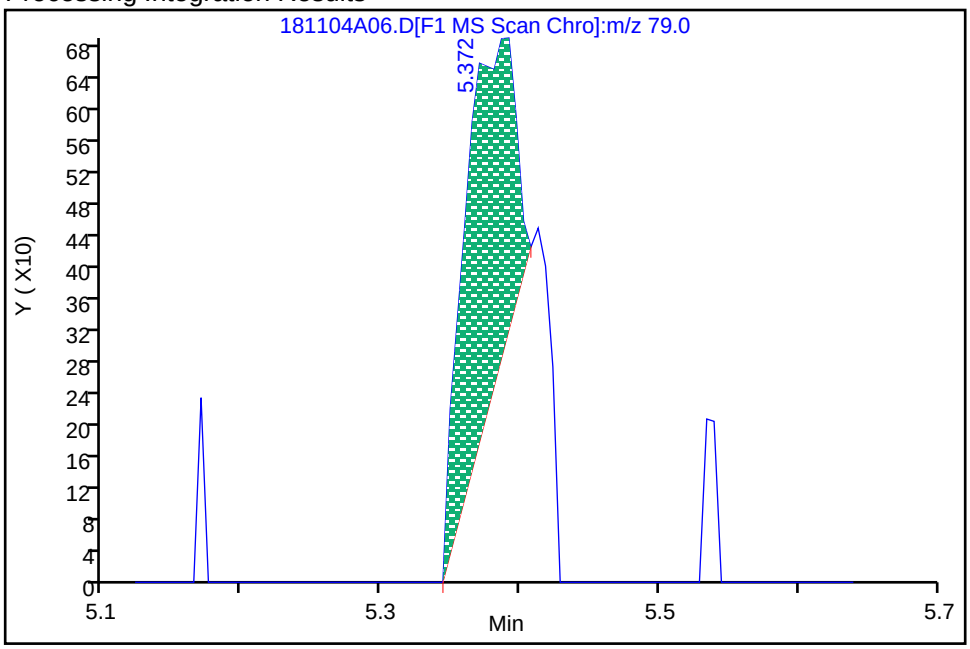
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

31 2,2-Dichloropropane, CAS: 594-20-7

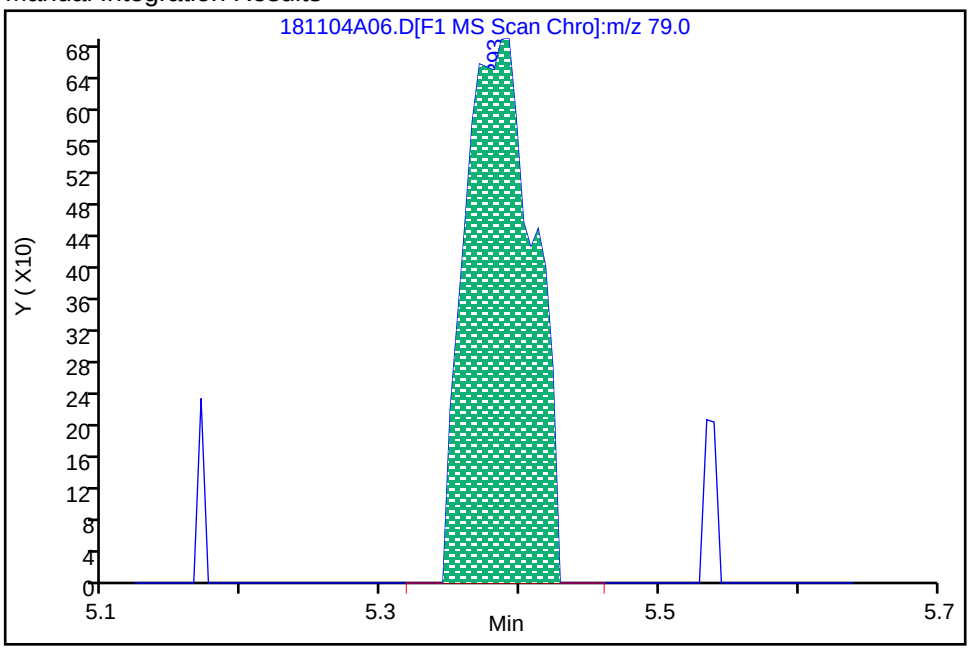
Processing Integration Results

RT: 5.372
Area: 1146
Amount: 0.61380
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.393
Area: 2370
Amount: 0.61487
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

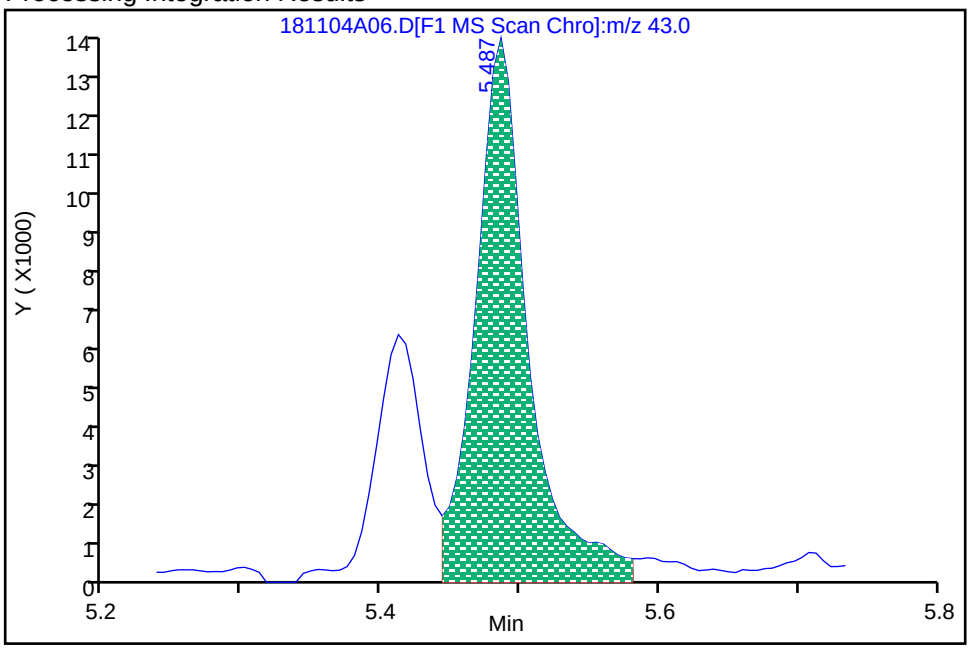
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

33 Ethyl Acetate, CAS: 141-78-6

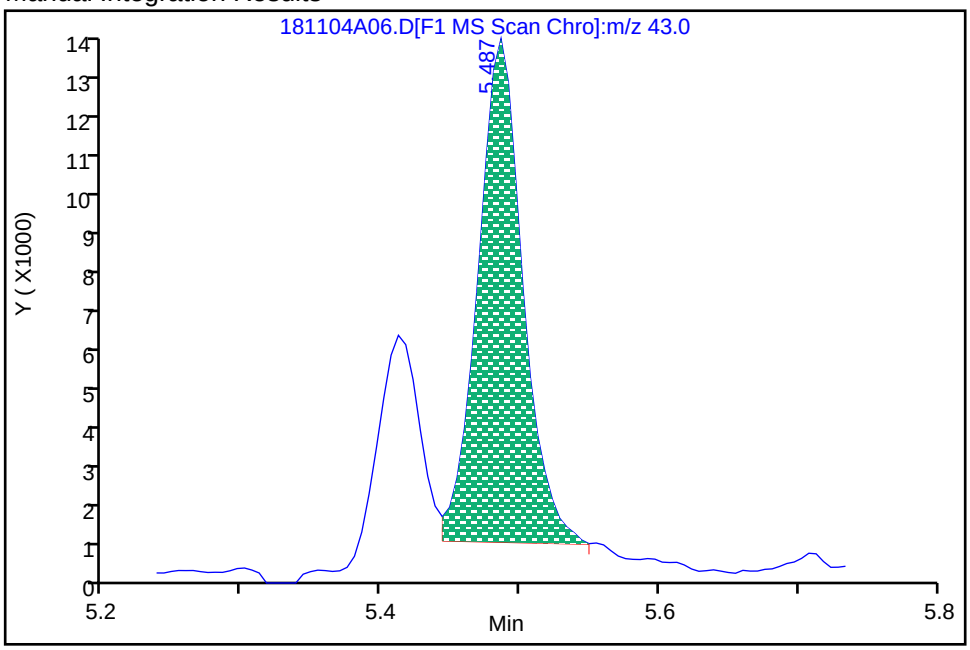
Processing Integration Results

RT: 5.487
Area: 36974
Amount: 0.47674
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.487
Area: 28998
Amount: 0.46502
Amount Units: ug/L



Data Editor: ecb, 07-Nov-2019 09:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

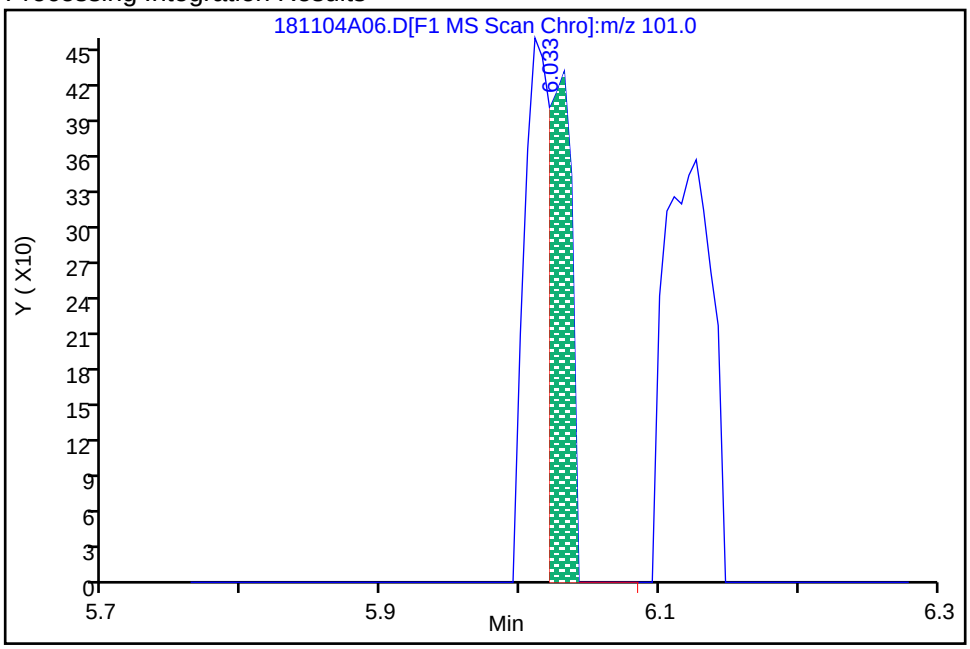
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

40 1,1,1-Trichloroethane, CAS: 71-55-6

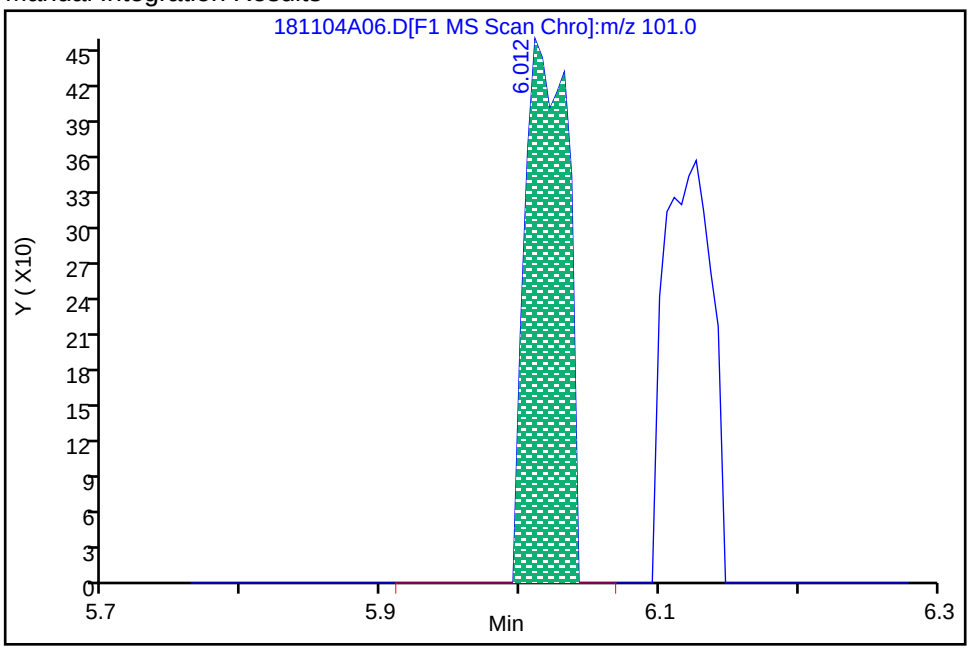
Processing Integration Results

RT: 6.033
Area: 434
Amount: 0.51341
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.012
Area: 959
Amount: 0.51186
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

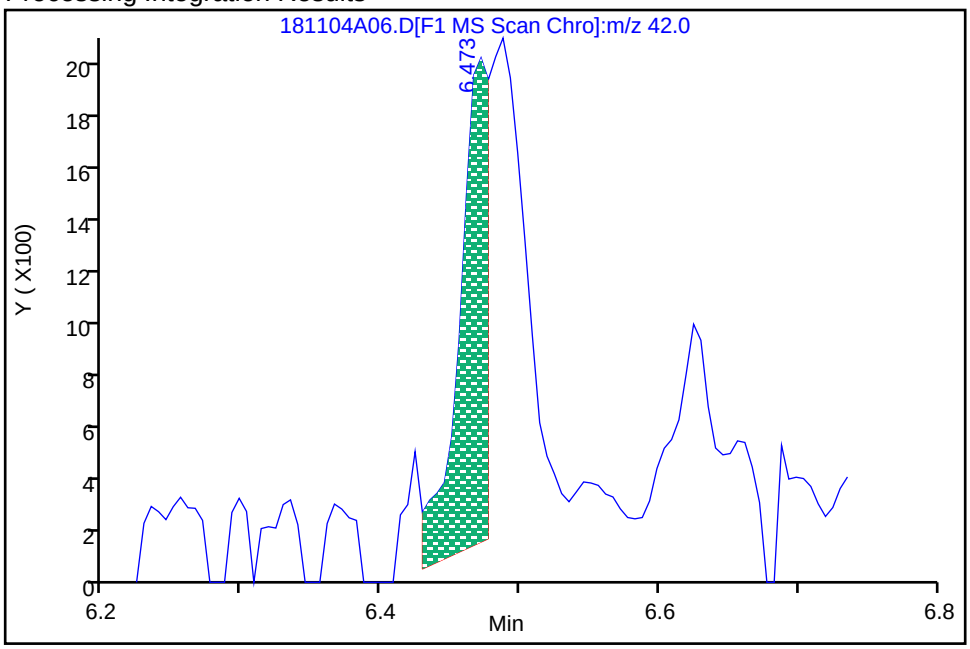
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

45 Isobutyl alcohol, CAS: 78-83-1

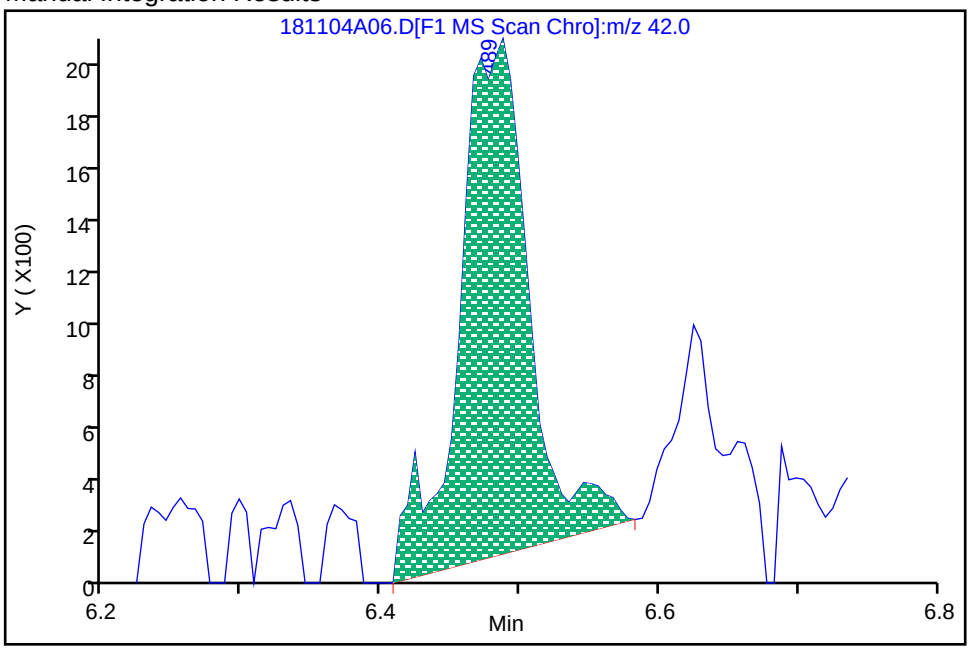
Processing Integration Results

RT: 6.473
Area: 2519
Amount: 1.9829
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.489
Area: 6882
Amount: 4.5649
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

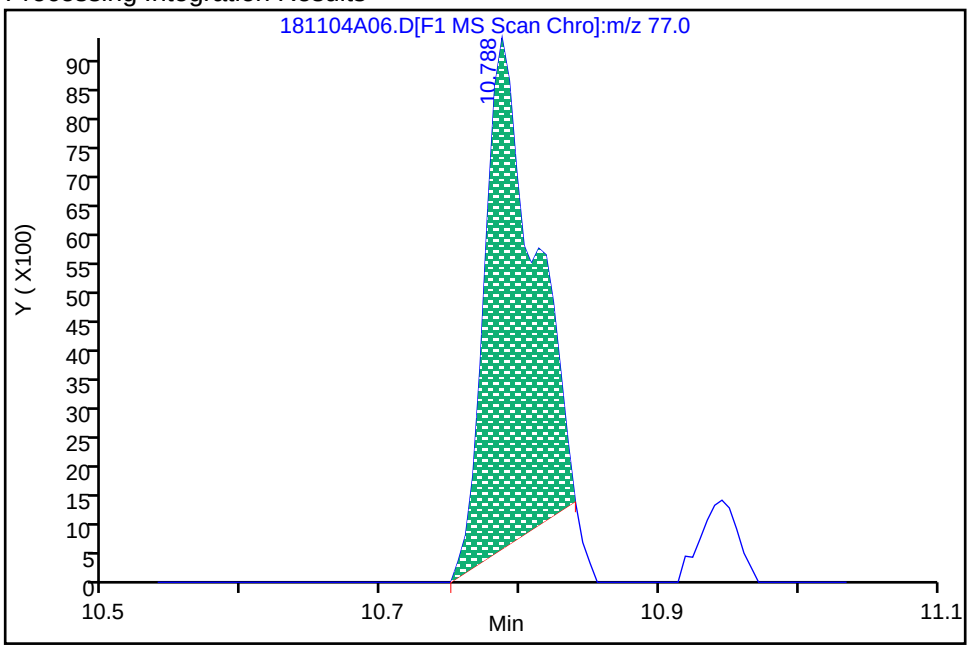
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A06.D		
Injection Date:	04-Nov-2019 15:40:30	Inst. ID:	msd18.i
Client ID:	1ml/100ml VSTD050IK	Lab ID:	VSTD0.5IK
Sample Info:	18110419, VSTD0.5IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

77 Chlorobenzene, CAS: 108-90-7

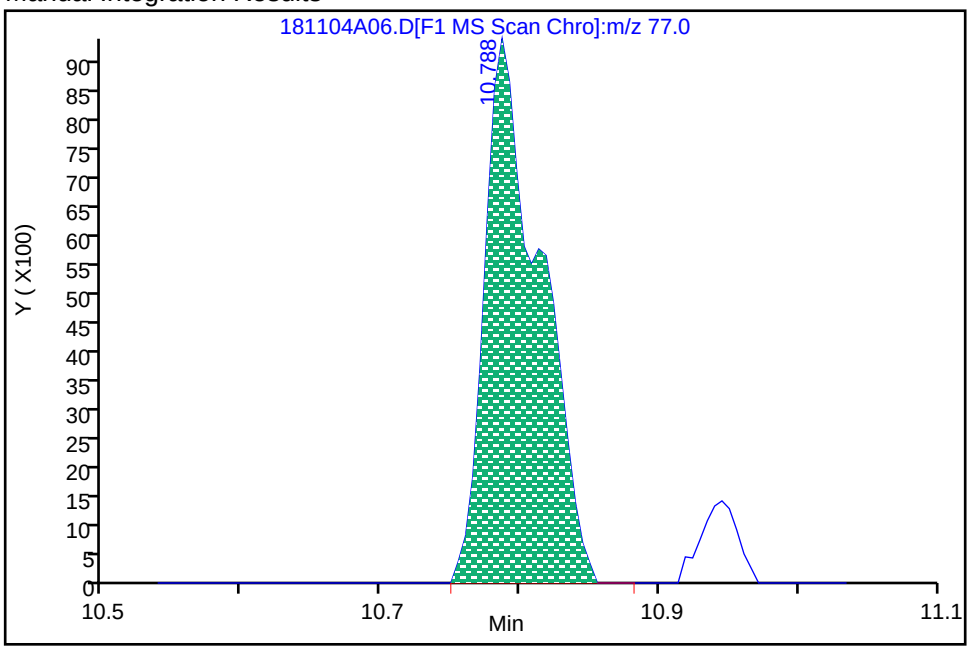
Processing Integration Results

RT: 10.788
Area: 21689
Amount: 0.52904
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 10.788
Area: 25939
Amount: 0.53048
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A07.D
Lab Sample ID: VSTD001IK Client Sample ID: 2ml/100ml VSTD050IK
Injection Date: 04-Nov-2019 16:05:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VSTD001IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: Ical, Level: 2 ALS Bottle: 7
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: ecb Review Date: 07-Nov-2019 09:06:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	6675	1.0000	0.83623	M
2 Chloromethane	50.0	1.566	1.566	0.000	9463	1.0000	0.97332	Q
3 Vinyl chloride	62.0	1.681	1.686	-0.004	12915	1.0000	0.95007	Q
4 Bromomethane	94.0	2.017	2.006	0.011	7520	1.0000	0.97321	M
5 Chloroethane	64.0	2.142	2.137	0.005	6268	1.0000	0.92404	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.001	4468	1.0000	0.86411	
8 Ethyl ether	59.0	2.772	2.771	0.000	9501	1.0000	1.0247	M
9 Acrolein	56.0	2.939	2.934	0.006	43397	10.000	9.2295	
10 Acetone	43.0	3.139	3.128	0.011	22198	2.0000	2.0356	
11 1,1-Dichloroethene	96.0	3.050	3.049	0.000	9851	1.0000	0.9914	
12 Freon 113	101.0	3.091	3.086	0.005	9106	1.0000	0.86711	
13 Methyl iodide	142.0	3.223	3.222	0.000	19643	1.0000	0.95972	
14 Carbon disulfide	76.0	3.291	3.290	0.000	30603	1.0000	0.92366	Q
15 Acetonitrile	40.0	3.500	3.495	0.006	22837	10.000	9.0371	M
17 Allyl chloride	76.0	3.532	3.542	-0.010	4739	1.0000	0.83790	
16 Methyl Acetate	43.0	3.558	3.553	0.006	26243	1.0000	1.1430	
18 Methylene chloride	84.0	3.721	3.720	0.000	13666	1.0000	0.93032	
20 Acrylonitrile	53.0	4.046	4.035	0.010	22169	2.0000	2.0403	
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	11333	1.0000	1.0462	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.077	0.001	18022	1.0000	1.0157	QM
23 Hexane	57.0	4.449	4.454	-0.004	14375	1.0000	0.9976	
24 1,1-Dichloroethane	63.0	4.654	4.648	0.005	19003	1.0000	0.96714	
25 Vinyl acetate	86.0	4.701	4.696	0.006	2735	1.0000	0.89725	M
26 Diisopropyl ether (IPE)	87.0	4.733	4.738	-0.004	8140	1.0000	0.93324	Q
27 Chloroprene	53.0	4.738	4.738	0.000	13389	1.0000	0.91695	
29 cis-1,2-Dichloroethene	96.0	5.393	5.398	-0.004	12043	1.0000	0.95070	
30 2-Butanone (MEK)	72.0	5.409	5.403	0.005	9424	2.0000	2.1232	M

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	9764	1.0000	1.0093	QM
32 Propionitrile	54.0	5.488	5.482	0.005	52333	10.000	9.6523	
33 Ethyl Acetate	43.0	5.482	5.483	0.000	48316	1.0000	1.1520	M
34 Methacrylonitrile	67.0	5.676	5.671	0.006	46947	5.0000	4.7586	
35 Bromochloromethane	128.0	5.692	5.692	0.001	6866	1.0000	0.95085	
36 Tetrahydrofuran	42.0	5.713	5.702	0.011	15667	1.0000	1.0945	
37 Chloroform	83.0	5.860	5.854	0.005	19668	1.0000	0.97741	
$ 39 dibromofluoromethane	111.0	6.054	6.054	0.000	13732	1.0000	1.0402	
40 1,1,1-Trichloroethane	97.0	6.022	6.027	-0.004	14836	1.0000	0.97885	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1361942	50.000	50.000	
42 Cyclohexane	41.0	6.091	6.101	-0.009	9965	1.0000	1.0012	QM
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	15050	1.0000	0.97281	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	13051	1.0000	0.87568	
45 Isobutyl alcohol	42.0	6.484	6.478	0.005	14331	10.000	9.4065	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.001	14518	1.0000	1.0344	
48 Benzene	78.0	6.479	6.478	0.000	40194	1.0000	0.91837	
49 Isopropyl Acetate	43.0	6.631	6.630	0.000	32196	1.0000	0.93601	
50 1,2-Dichloroethane	62.0	6.568	6.567	0.000	15352	1.0000	0.94272	
* 52 1,4-Difluorobenzene	114.0	7.071	7.076	-0.005	2020943	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.354	0.001	11899	1.0000	0.87815	
54 Methylcyclohexane	83.0	7.632	7.637	-0.005	15723	1.0000	0.90223	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	10998	1.0000	0.92857	
56 Dibromomethane	93.0	7.789	7.789	0.000	8000	1.0000	0.90434	
57 Methyl methacrylate	41.0	7.816	7.810	0.005	15452	1.0000	0.95498	
58 1,4-Dioxane	88.0	7.805	7.800	0.006	4520	10.000	9.5397	Q
59 Bromodichloromethane	83.0	8.046	8.046	0.001	13445	1.0000	0.89440	
60 2-nitropropane	43.0	8.345	8.345	0.001	8282	1.0000	0.95474	
61 2-Chloroethylvinyl ether	63.0	8.450	8.450	0.000	9299	1.0000	0.91791	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	16693	1.0000	0.88991	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.001	48084	2.0000	1.8966	
$ 64 Toluene-d8	98.0	8.959	8.964	-0.004	48324	1.0000	1.1333	
65 Toluene	92.0	9.048	9.053	-0.004	26841	1.0000	0.96216	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	16183	1.0000	0.94644	
67 Ethyl methacrylate	69.0	9.509	9.504	0.006	17136	1.0000	0.89439	
68 1,1,2-Trichloroethane	97.0	9.656	9.656	0.000	11662	1.0000	0.96746	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	10303	1.0000	0.96136	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.001	19475	1.0000	0.98986	
71 2-Hexanone	43.0	9.955	9.954	0.000	39751	2.0000	1.9131	
72 Dibromochloromethane	129.0	10.117	10.112	0.006	12443	1.0000	0.89846	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	30341	1.0000	1.0227	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.238	0.000	12956	1.0000	0.91800	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1890640	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	33428	1.0000	0.9963	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.001	10290	1.0000	0.86395	
79 Ethylbenzene	106.0	10.946	10.945	0.000	16255	1.0000	0.96016	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	19951	1.0000	0.94626	
81 o-Xylene	106.0	11.501	11.501	0.000	19586	1.0000	0.96350	
82 Styrene	104.0	11.522	11.522	0.000	29864	1.0000	0.88508	
83 Bromoform	173.0	11.695	11.700	-0.004	10439	1.0000	0.90447	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	46752	1.0000	0.95437	
85 Cyclohexanone	55.0	11.963	11.963	0.000	14558	10.000	9.6524	

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A07.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	20191	1.0000	1.2175	
88 1,1,2,2-Tetrachloroethane	83.0	12.204	12.209	-0.005	20873	1.0000	0.97536	
87 Bromobenzene	156.0	12.183	12.183	0.001	14902	1.0000	0.97095	
89 1,2,3-Trichloropropane	110.0	12.246	12.251	-0.004	7580	1.0000	1.0525	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	5676	1.0000	1.0222	
91 n-Propylbenzene	91.0	12.293	12.298	-0.004	56837	1.0000	0.95252	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	33455	1.0000	0.92849	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	34848	1.0000	0.91836	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	13353	1.0000	0.95837	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	33698	1.0000	0.98757	
96 1,2,4-Trimethylbenzene	105.0	12.823	12.828	-0.004	35009	1.0000	0.91099	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	43223	1.0000	0.92689	
98 1,3-Dichlorobenzene	146.0	13.074	13.074	0.000	27156	1.0000	0.95755	
99 p-Isopropyltoluene	119.0	13.122	13.121	0.000	36312	1.0000	0.93394	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	1047476	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.169	13.174	-0.004	28657	1.0000	0.98780	Q
102 Benzyl chloride	91.0	13.279	13.279	0.000	27450	1.0000	0.85944	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	32394	1.0000	0.88938	
104 1,2-Dichlorobenzene	146.0	13.489	13.488	0.000	26851	1.0000	0.9943	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	5421	1.0000	0.93655	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	17890	1.0000	0.94937	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	9562	1.0000	0.90510	
108 Naphthalene	128.0	15.082	15.077	0.005	41070	1.0000	0.80374	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	15007	1.0000	0.91629	
S 110 Xylenes (total)	106.0	16.000		0.000		2.0000	1.9098	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		2.0000	1.9969	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

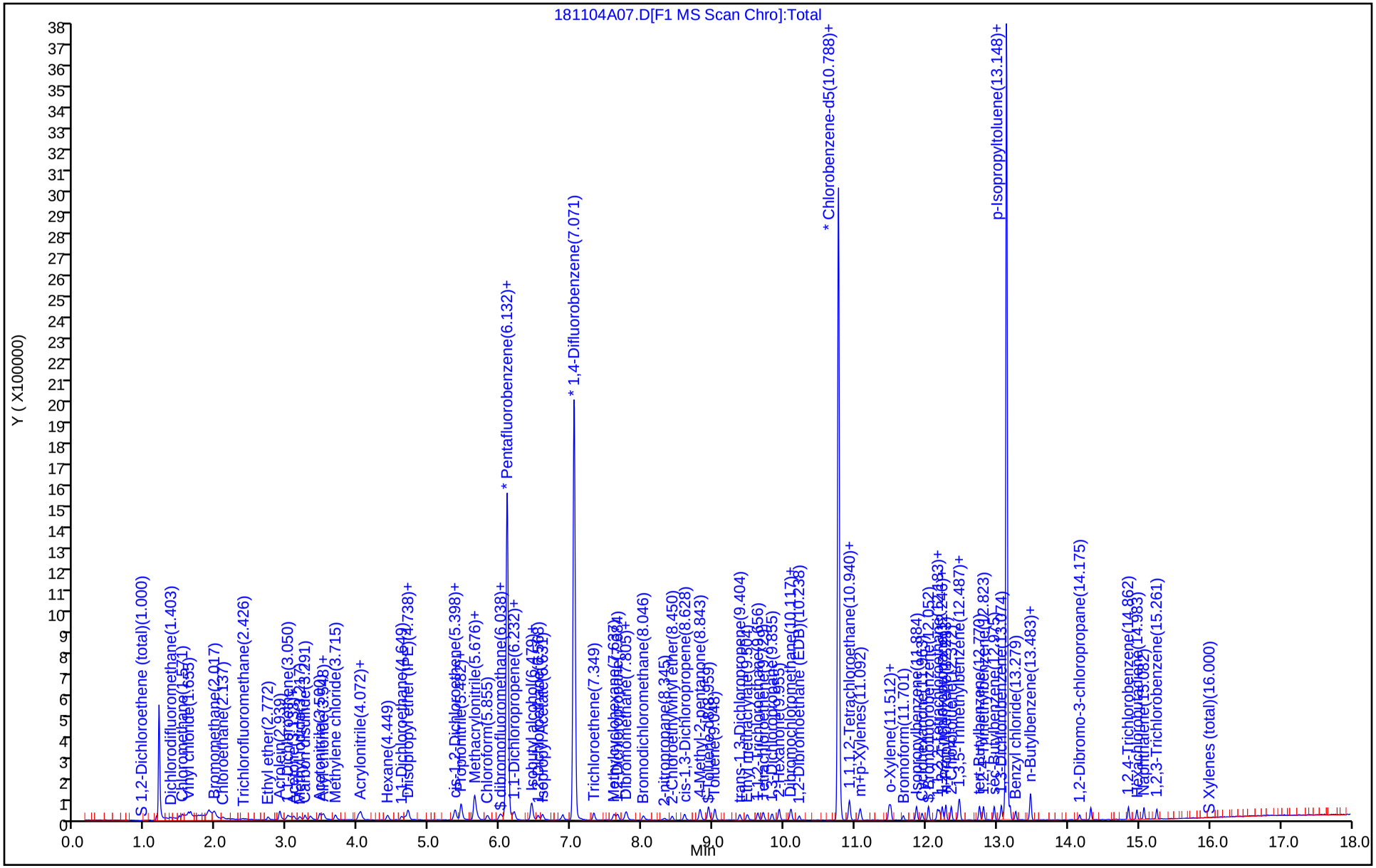
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D				
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK		
Sample Info:	18110419, VSTD001IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

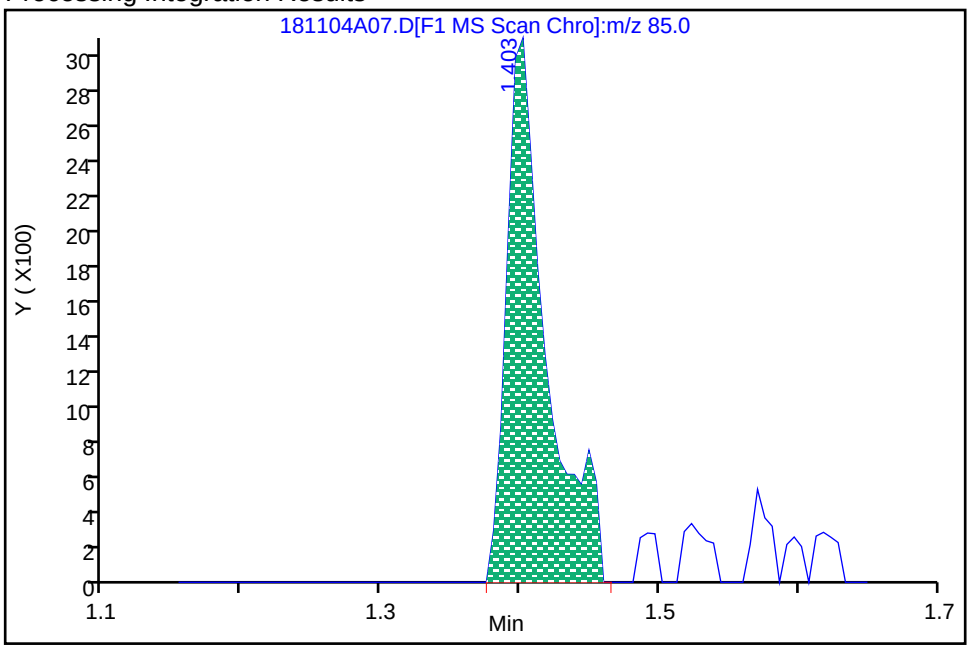
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

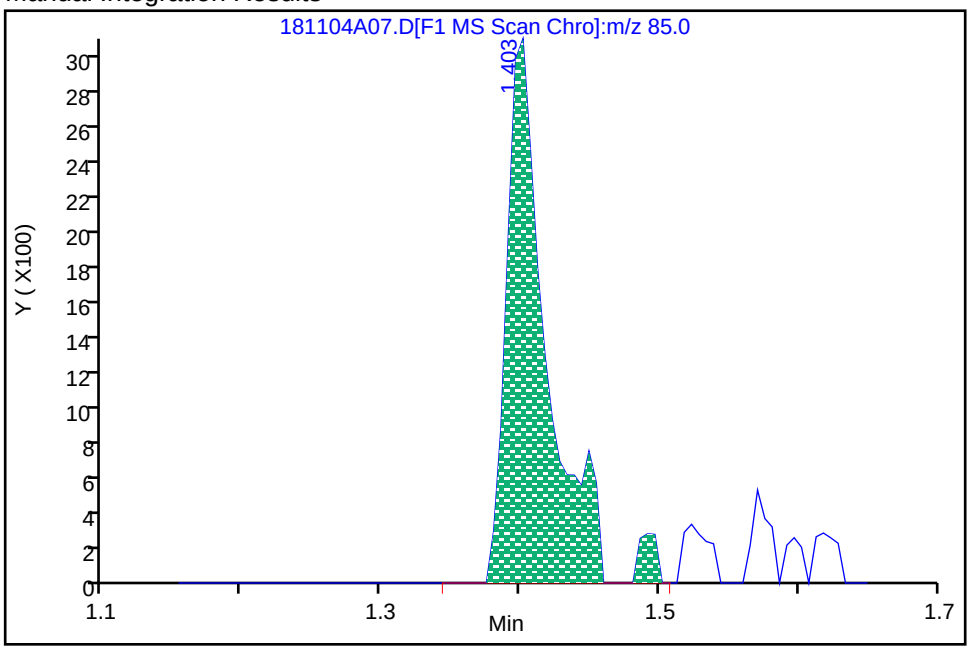
Processing Integration Results

RT: 1.403
Area: 6154
Amount: 0.83195
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 6675
Amount: 0.83623
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

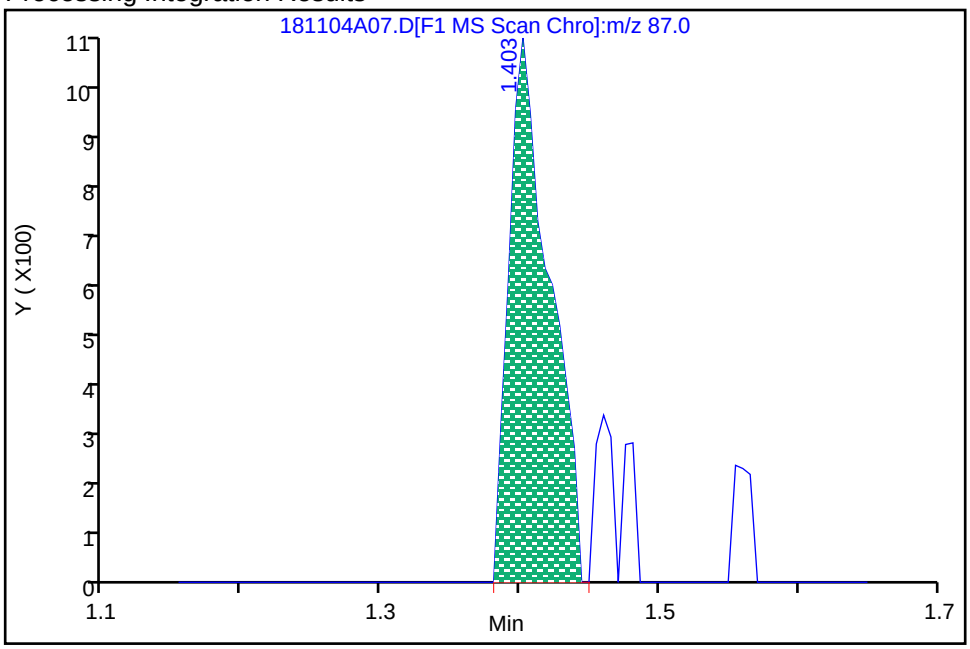
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

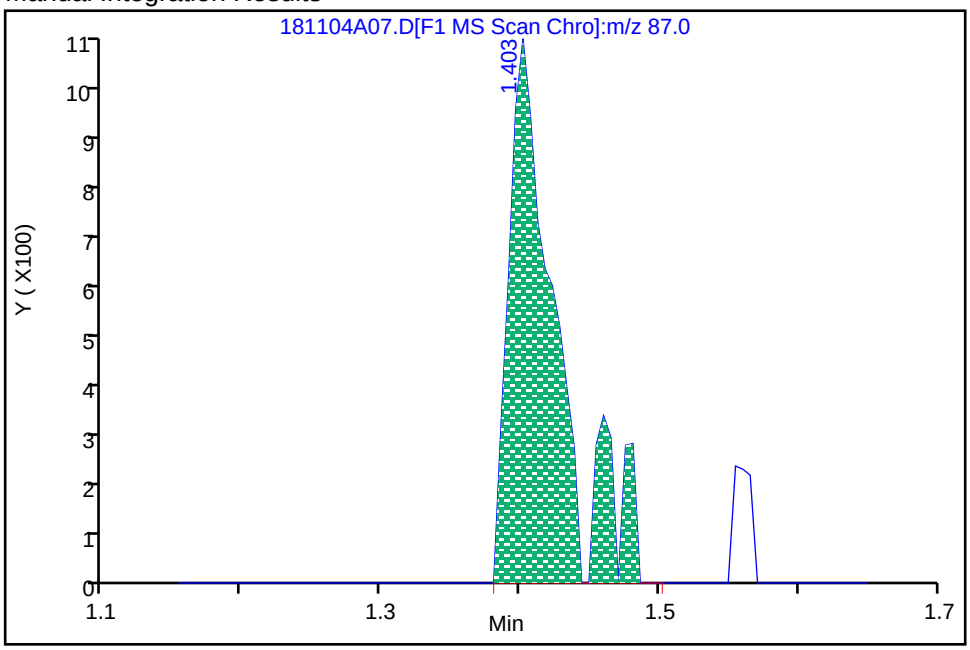
Processing Integration Results

RT: 1.403
Area: 2065
Amount: 0.83195
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 2495
Amount: 0.83623
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

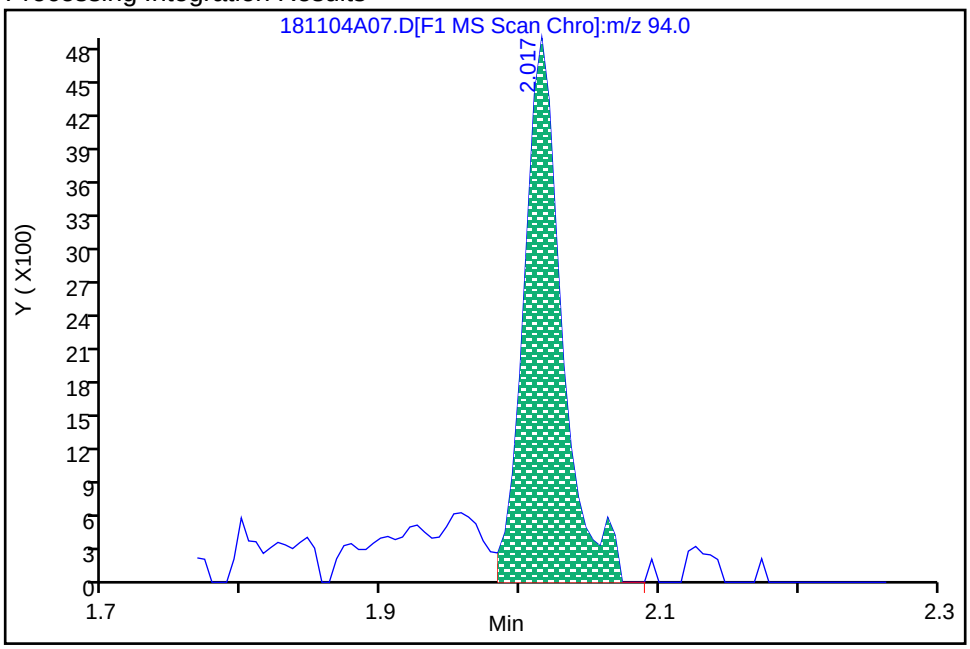
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

4 Bromomethane, CAS: 74-83-9

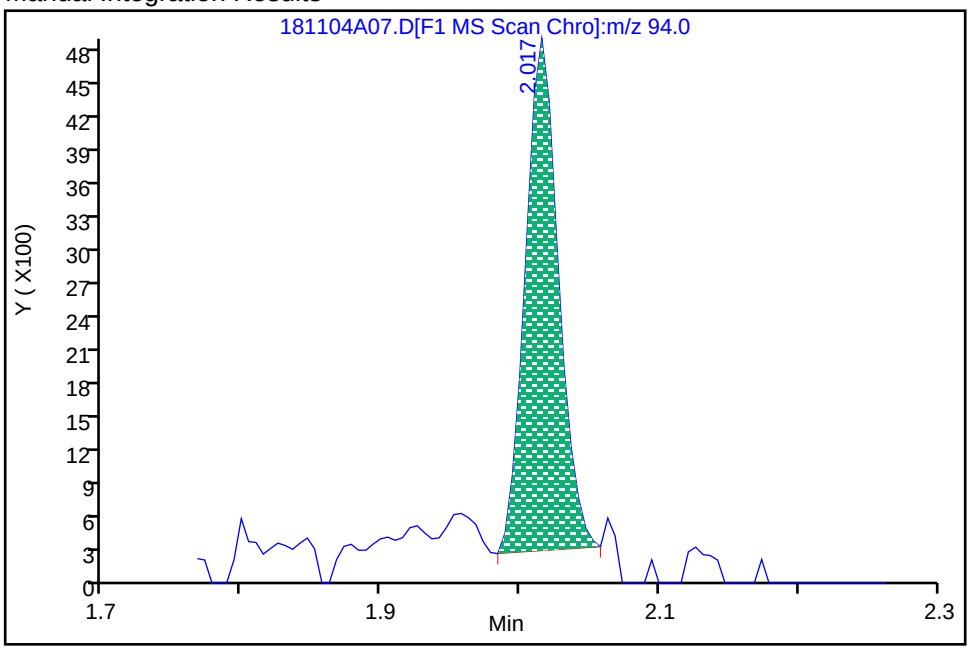
Processing Integration Results

RT: 2.017
Area: 9172
Amount: 1.1507
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.017
Area: 7520
Amount: 0.97321
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

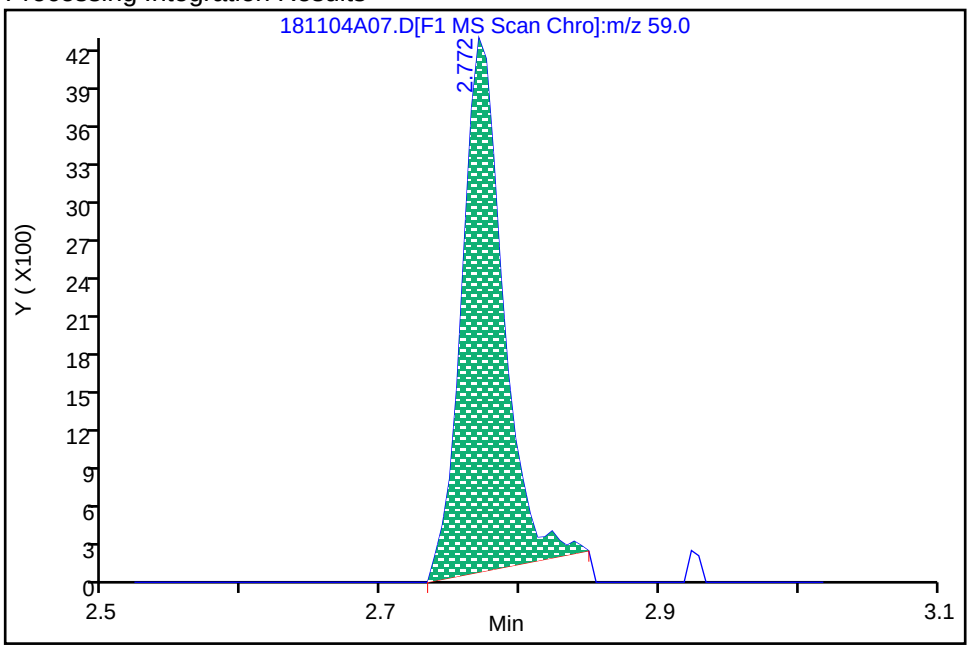
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

8 Ethyl ether, CAS: 60-29-7

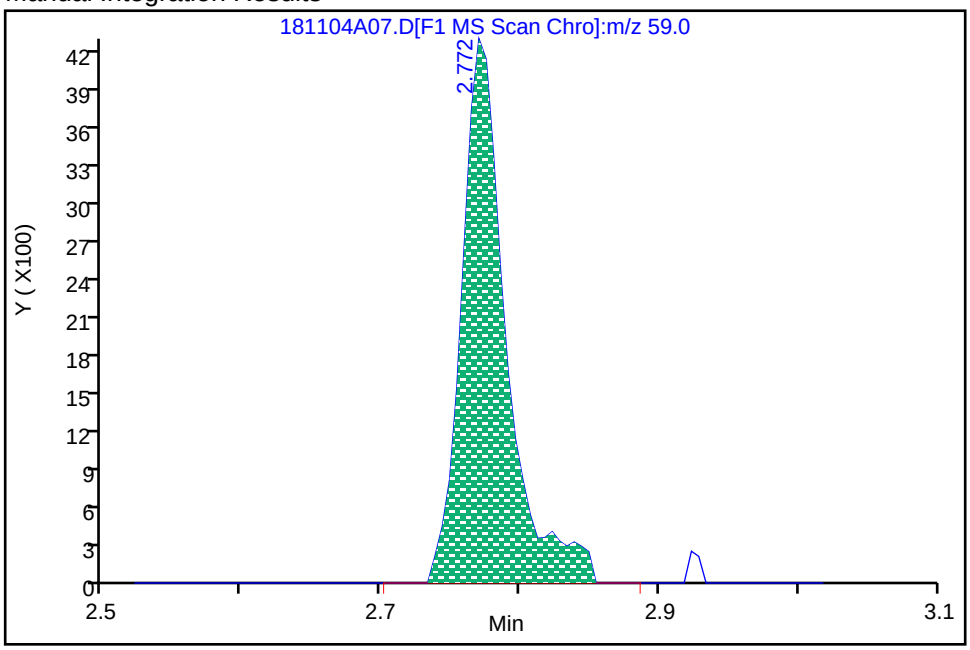
Processing Integration Results

RT: 2.772
Area: 8610
Amount: 0.93735
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 2.772
Area: 9501
Amount: 1.0247
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

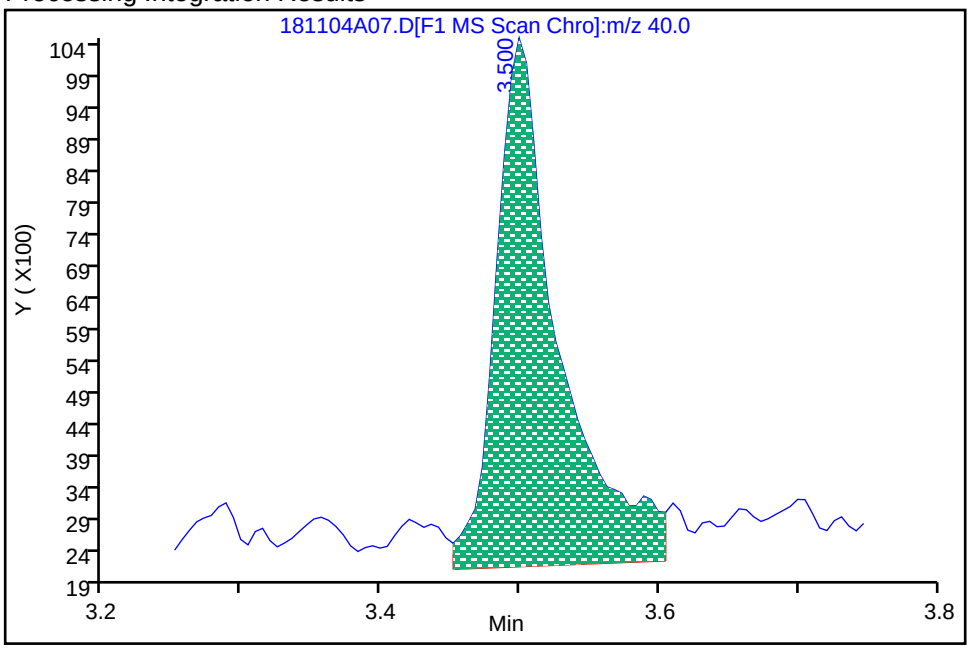
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

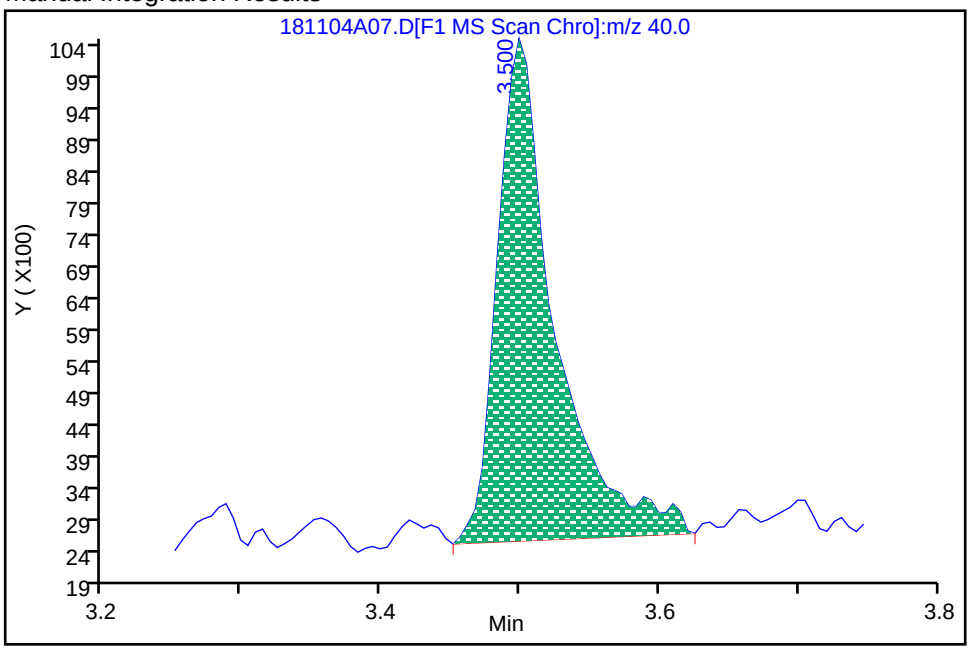
Processing Integration Results

RT: 3.500
Area: 26327
Amount: 10.418
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.500
Area: 22837
Amount: 9.0371
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

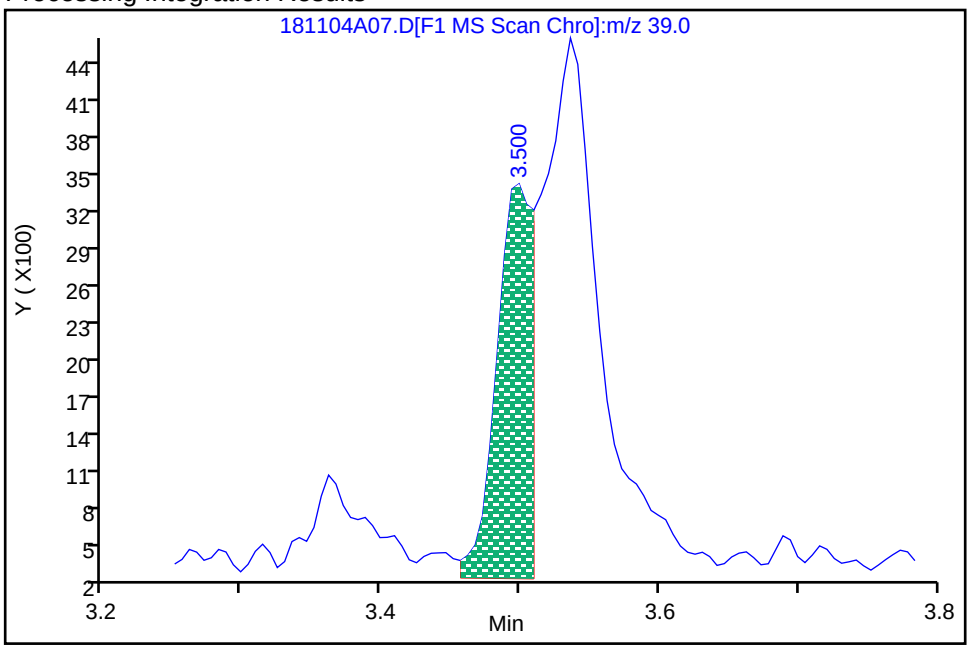
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

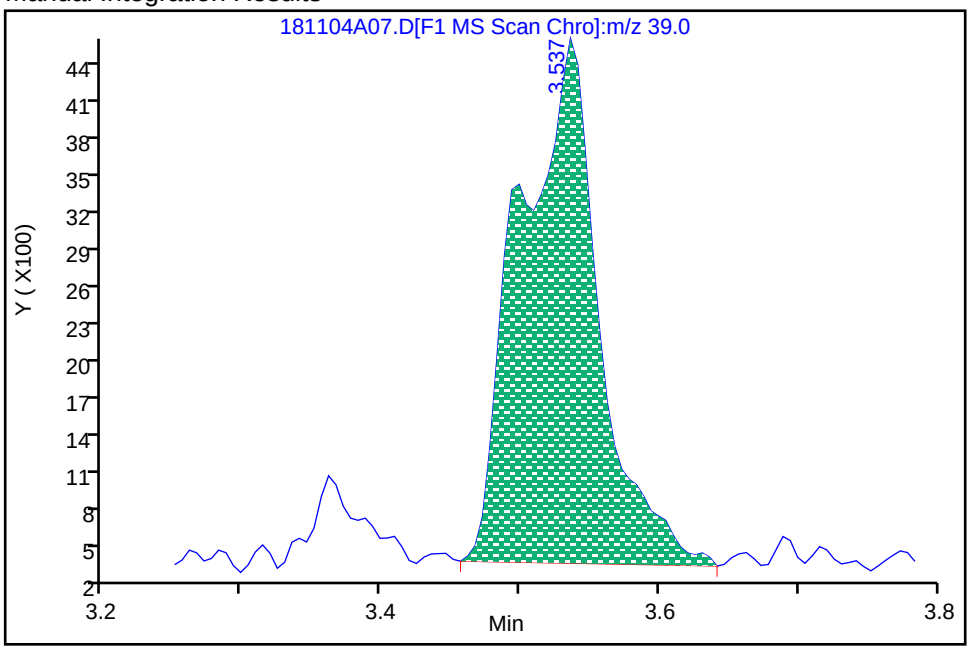
Processing Integration Results

RT: 3.500
Area: 5303
Amount: 10.418
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 16398
Amount: 9.0371
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

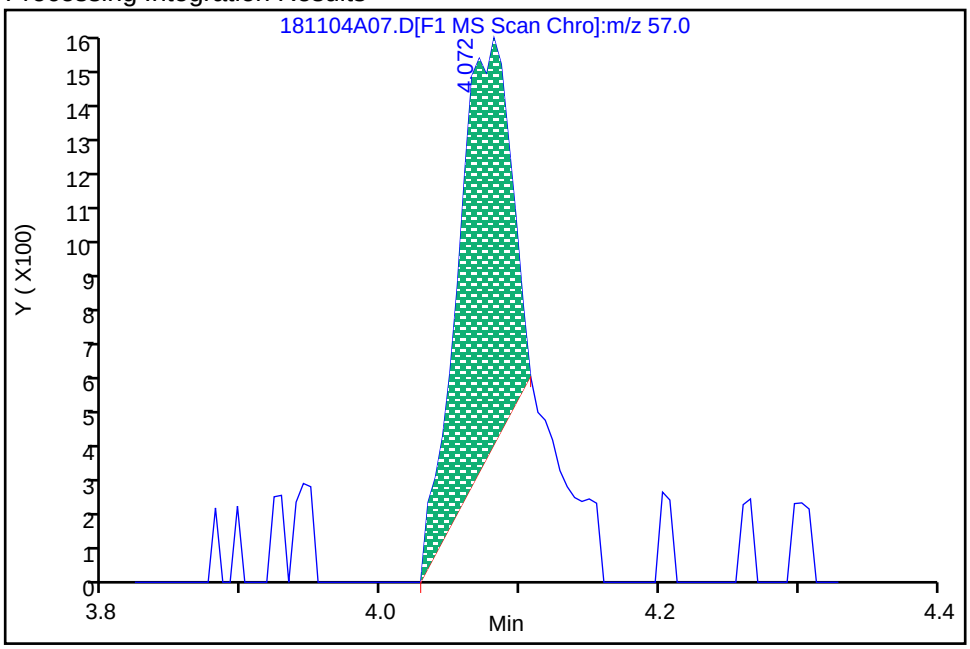
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

22 tert-Butyl methyl ether(MTBE), CAS: 1634-04-4

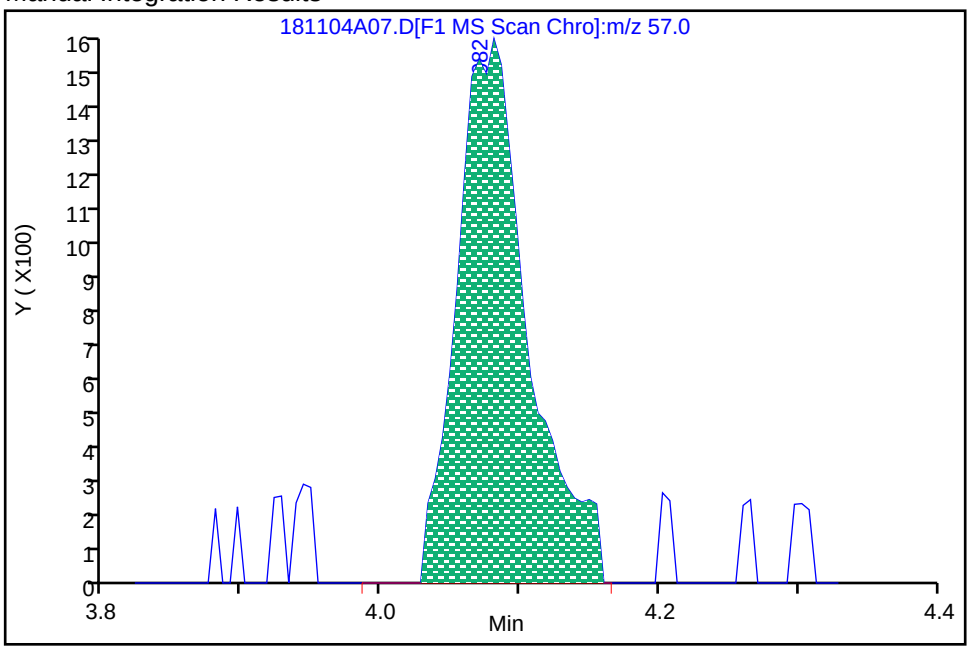
Processing Integration Results

RT: 4.072
Area: 3055
Amount: 1.0182
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.082
Area: 5385
Amount: 1.0157
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

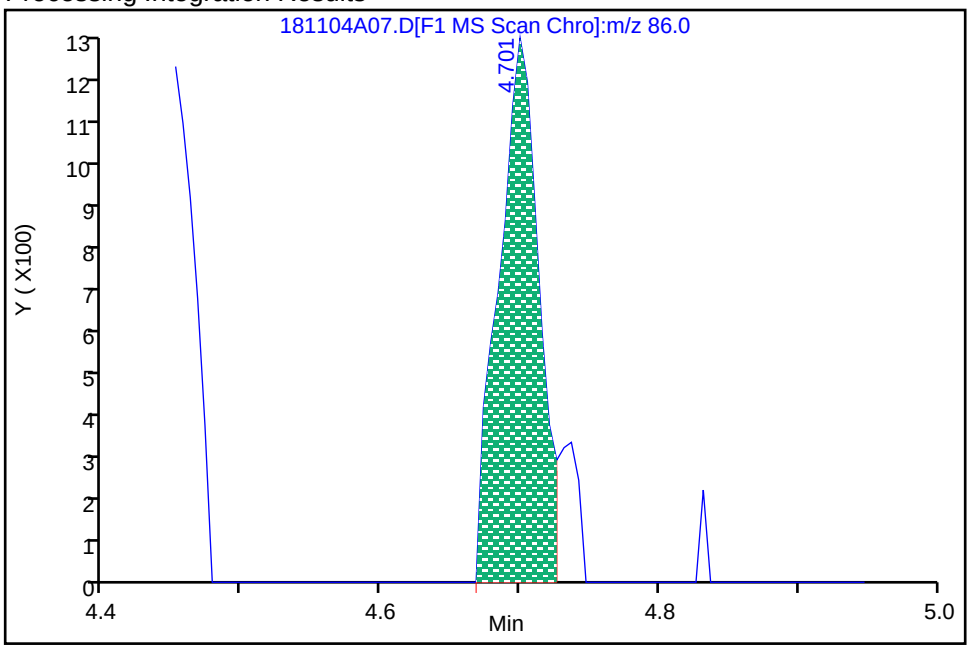
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

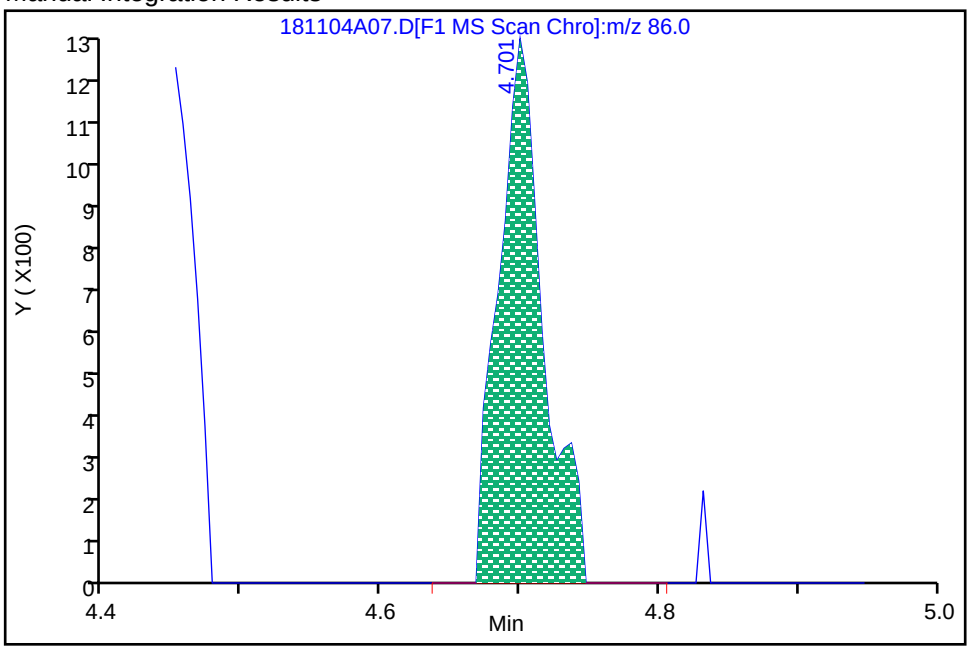
Processing Integration Results

RT: 4.701
Area: 2425
Amount: 0.82078
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.701
Area: 2735
Amount: 0.89725
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

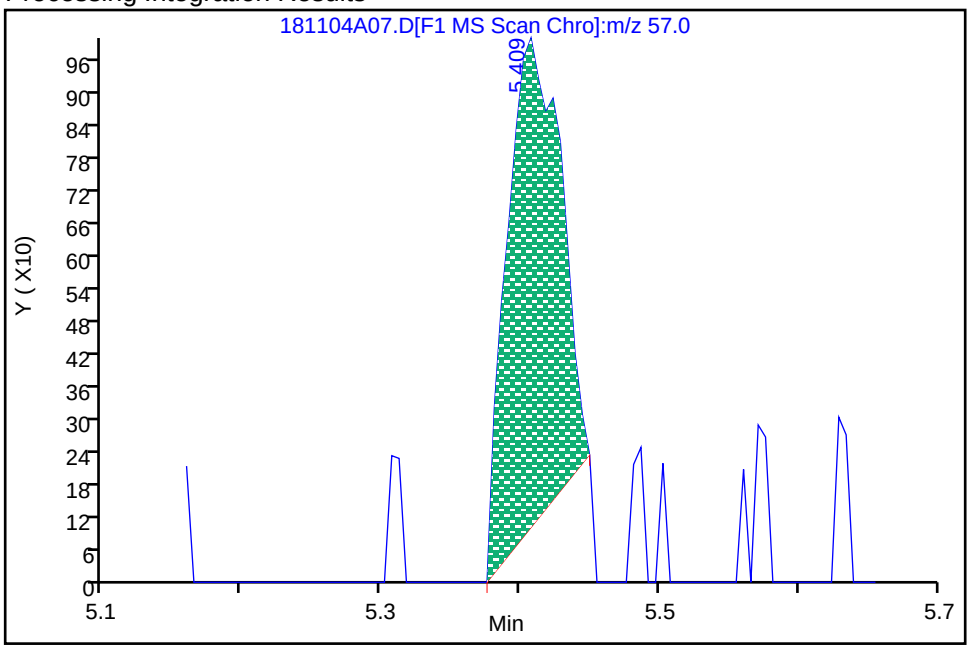
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

30 2-Butanone (MEK), CAS: 78-93-3

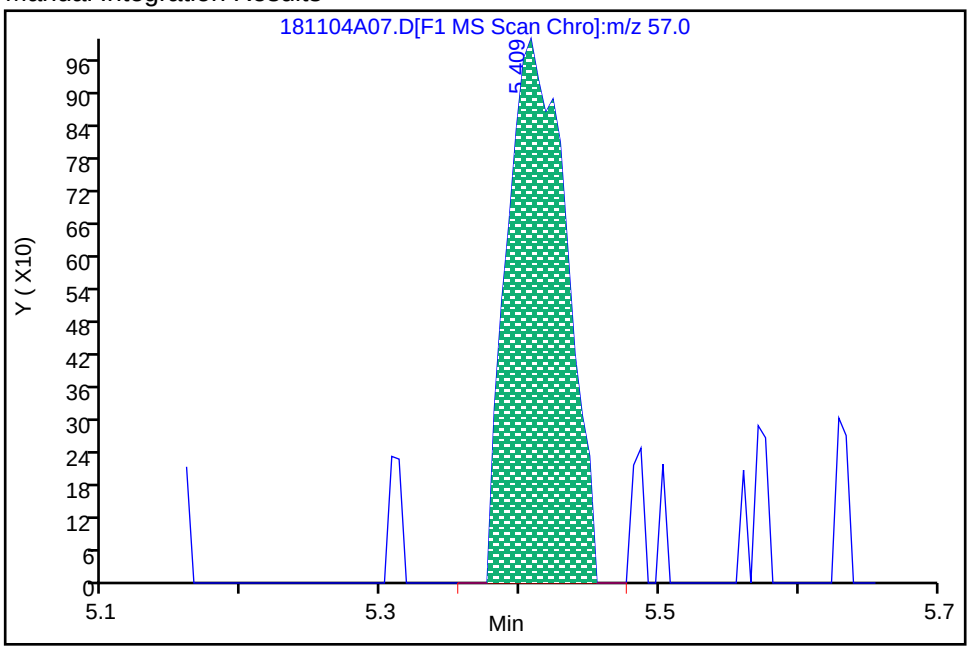
Processing Integration Results

RT: 5.409
Area: 2376
Amount: 2.1085
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.409
Area: 2926
Amount: 2.1232
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

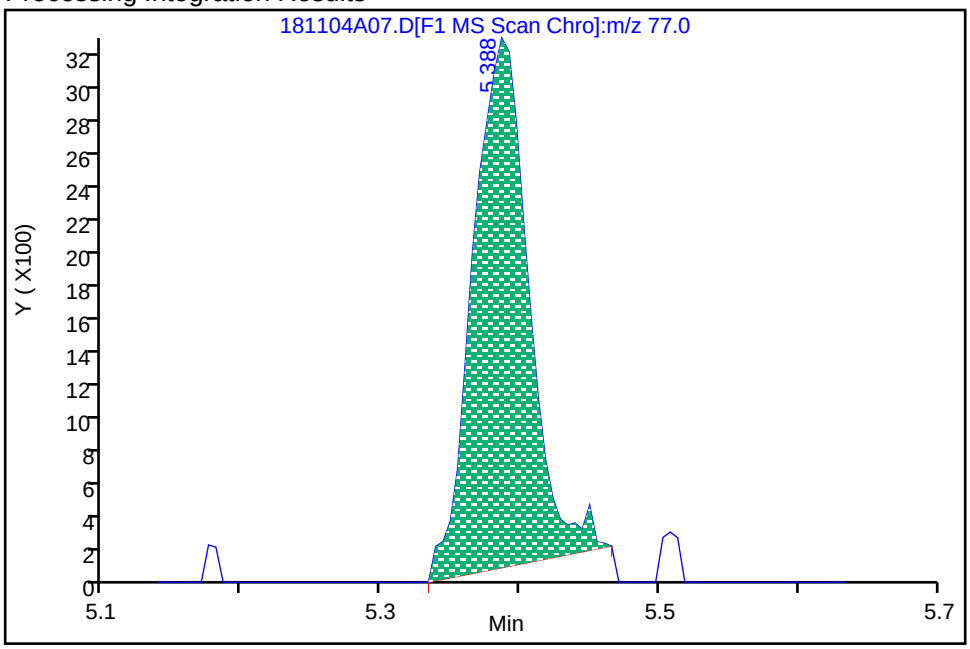
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

31 2,2-Dichloropropane, CAS: 594-20-7

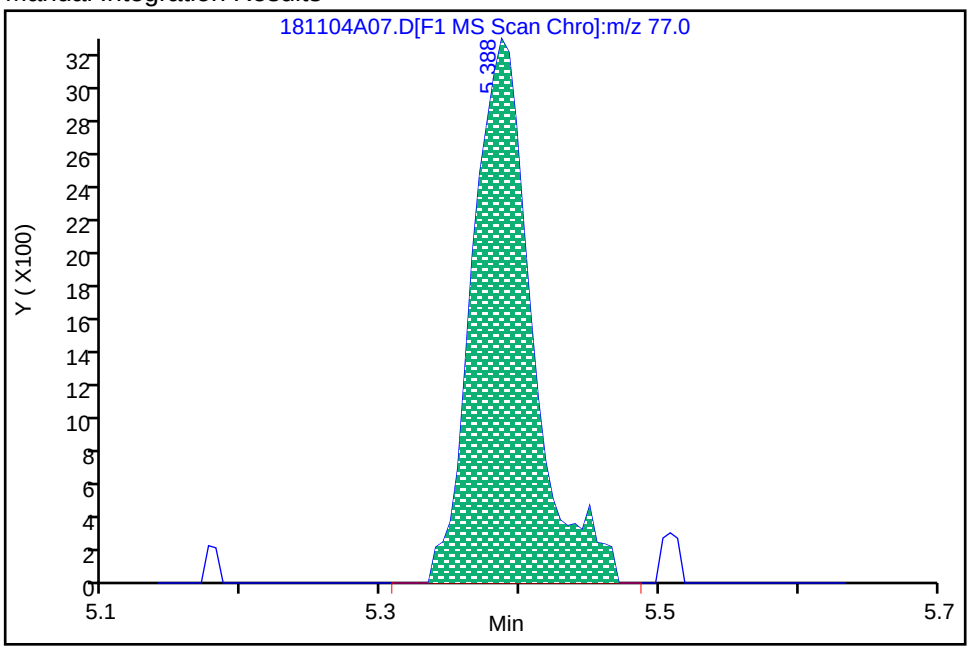
Processing Integration Results

RT: 5.388
Area: 8868
Amount: 0.93091
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.388
Area: 9764
Amount: 1.0093
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

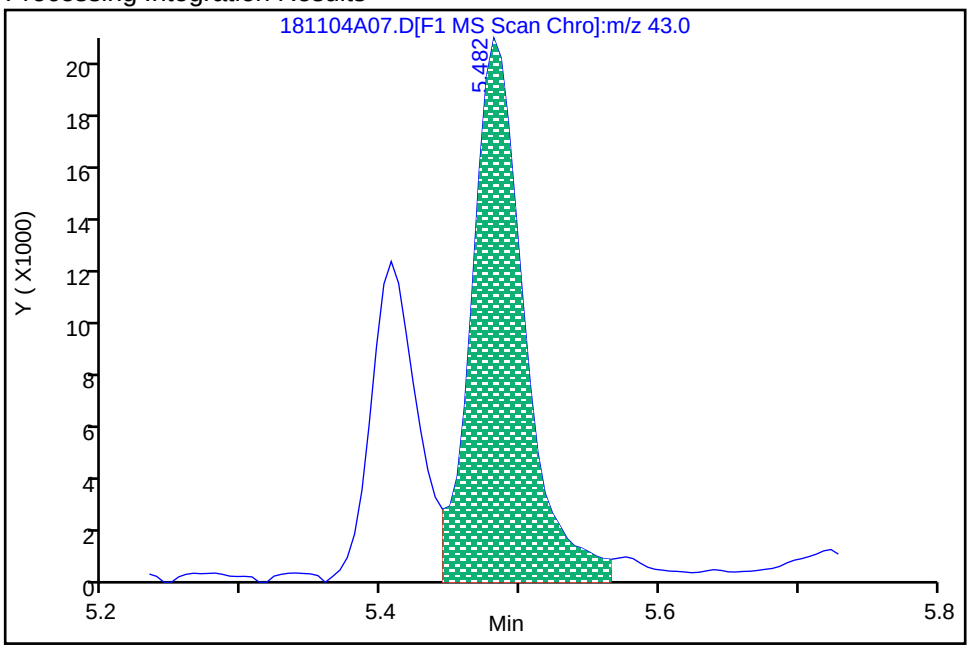
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

33 Ethyl Acetate, CAS: 141-78-6

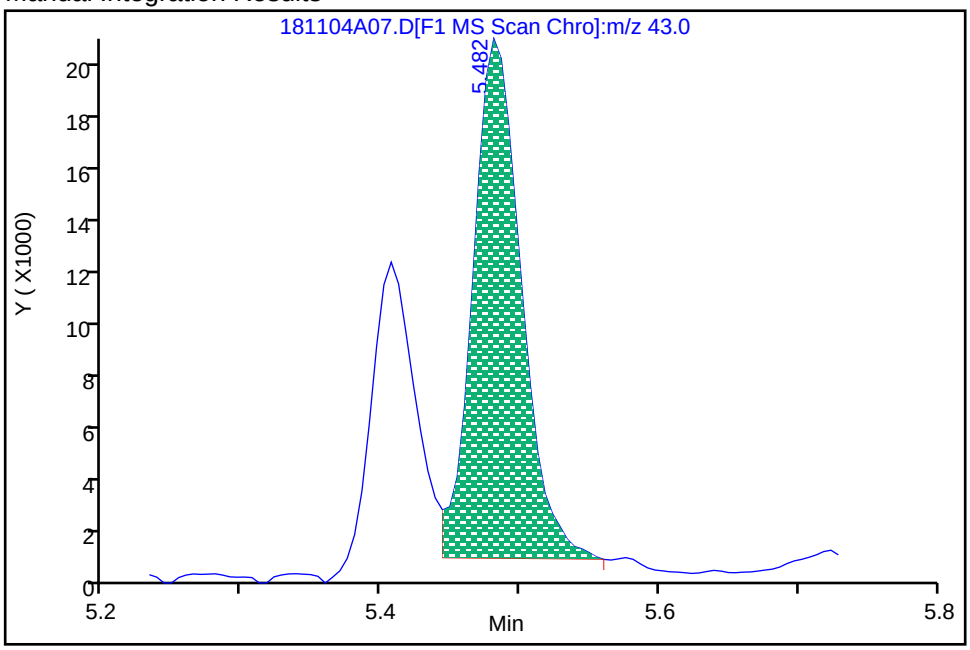
Processing Integration Results

RT: 5.482
Area: 54835
Amount: 1.0811
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.482
Area: 48316
Amount: 1.1520
Amount Units: ug/L



Data Editor: ecb, 07-Nov-2019 09:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

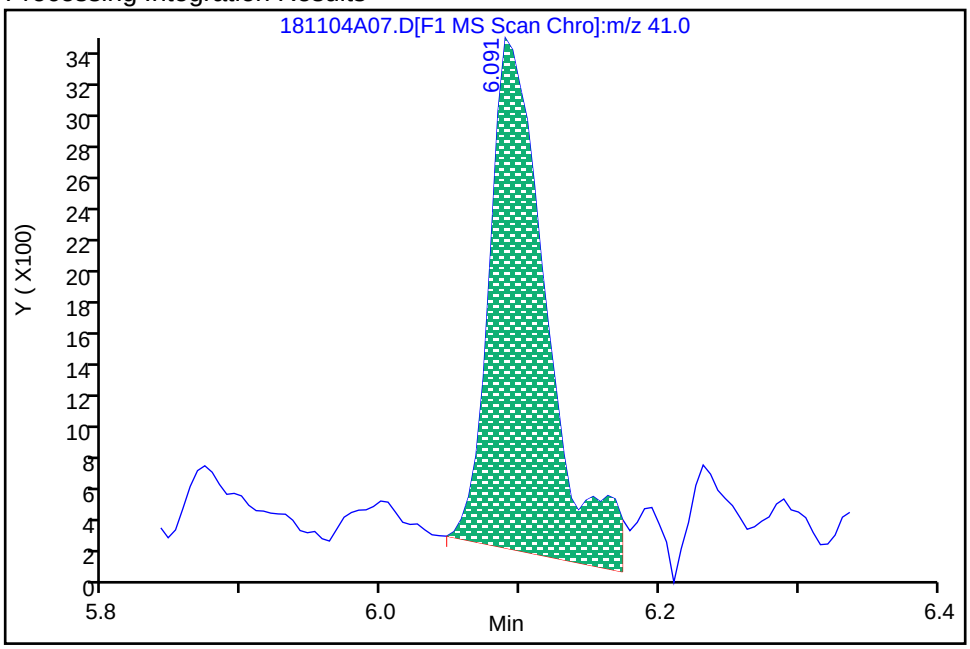
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A07.D		
Injection Date:	04-Nov-2019 16:05:30	Inst. ID:	msd18.i
Client ID:	2ml/100ml VSTD050IK	Lab ID:	VSTD001IK
Sample Info:	18110419, VSTD001IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

42 Cyclohexane, CAS: 110-82-7

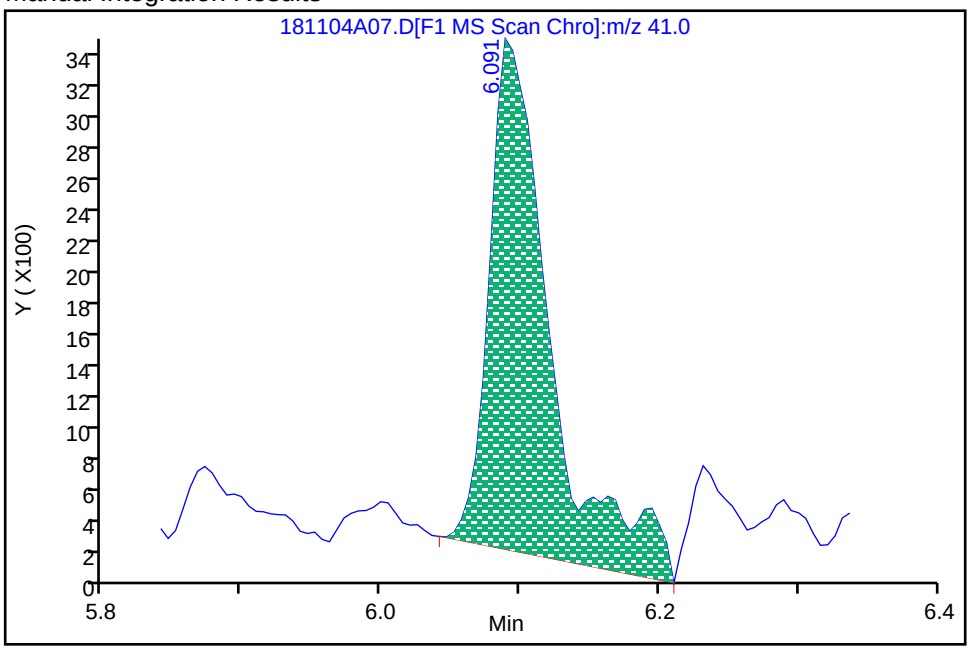
Processing Integration Results

RT: 6.091
Area: 9230
Amount: 0.97524
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.091
Area: 9965
Amount: 1.0012
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A08.D
Lab Sample ID: VSTD005IK Client Sample ID: 5ul/100ml 15576/74
Injection Date: 04-Nov-2019 16:30:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VSTD005IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: Ical, Level: 3 ALS Bottle: 8
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: ecb Review Date: 07-Nov-2019 09:07:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.000	36879	5.0000	4.8052	M
2 Chloromethane	50.0	1.565	1.566	0.000	46848	5.0000	5.0115	
3 Vinyl chloride	62.0	1.686	1.686	0.000	68009	5.0000	5.2033	
4 Bromomethane	94.0	2.016	2.006	0.011	41700	5.0000	5.6127	
5 Chloroethane	64.0	2.142	2.137	0.004	32818	5.0000	5.0318	
6 Trichlorofluoromethane	101.0	2.420	2.415	0.005	33563	5.0000	4.6321	
8 Ethyl ether	59.0	2.771	2.771	0.000	44464	5.0000	4.9877	
9 Acrolein	56.0	2.939	2.934	0.005	236468	50.000	52.305	
10 Acetone	43.0	3.133	3.128	0.005	107934	10.000	10.294	
11 1,1-Dichloroethene	96.0	3.049	3.049	0.000	46268	5.0000	4.8430	
12 Freon 113	101.0	3.086	3.086	0.000	50942	5.0000	5.0451	
13 Methyl iodide	142.0	3.222	3.222	0.000	99653	5.0000	5.0638	
14 Carbon disulfide	76.0	3.295	3.290	0.005	155551	5.0000	4.8829	
15 Acetonitrile	40.0	3.495	3.495	0.000	129040	50.000	53.109	M
17 Allyl chloride	76.0	3.542	3.542	0.000	24857	5.0000	5.1124	
16 Methyl Acetate	43.0	3.552	3.553	0.000	106454	5.0000	4.8221	
18 Methylene chloride	84.0	3.720	3.720	0.000	59965	5.0000	5.2176	
20 Acrylonitrile	53.0	4.040	4.035	0.004	110811	10.000	10.607	
21 trans-1,2-Dichloroethene	96.0	4.071	4.072	0.000	52705	5.0000	5.0602	
22 tert-Butyl methyl ether(MTBE)	73.0	4.082	4.077	0.005	91075	5.0000	5.3383	
23 Hexane	57.0	4.454	4.454	0.000	72056	5.0000	5.2007	
24 1,1-Dichloroethane	63.0	4.653	4.648	0.005	98034	5.0000	5.1892	
25 Vinyl acetate	86.0	4.701	4.696	0.005	15676	5.0000	5.3487	
26 Diisopropyl ether (IPE)	87.0	4.737	4.738	0.000	41543	5.0000	4.9536	
27 Chloroprene	53.0	4.743	4.738	0.005	70140	5.0000	4.9959	
29 cis-1,2-Dichloroethene	96.0	5.398	5.398	0.000	65232	5.0000	5.3558	
30 2-Butanone (MEK)	72.0	5.408	5.403	0.005	44025	10.000	10.316	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.387	5.388	0.000	47509	5.0000	5.1078	
32 Propionitrile	54.0	5.482	5.482	0.000	282475	50.000	54.186	
33 Ethyl Acetate	43.0	5.482	5.483	0.000	148666	5.0000	4.9934	M
34 Methacrylonitrile	67.0	5.671	5.671	0.000	254108	25.000	26.788	
35 Bromochloromethane	128.0	5.692	5.692	0.000	36733	5.0000	5.2907	
36 Tetrahydrofuran	42.0	5.707	5.702	0.005	71656	5.0000	5.2064	
37 Chloroform	83.0	5.854	5.854	0.000	103931	5.0000	5.3718	
$ 39 dibromofluoromethane	111.0	6.053	6.054	0.000	62753	5.0000	4.9438	
40 1,1,1-Trichloroethane	97.0	6.027	6.027	0.000	75053	5.0000	5.1502	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1309501	50.000	50.000	
42 Cyclohexane	41.0	6.106	6.101	0.005	51666	5.0000	5.3991	
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	74061	5.0000	4.9789	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	71772	5.0000	5.0085	
45 Isobutyl alcohol	42.0	6.478	6.478	0.000	80812	50.000	55.167	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.000	69607	5.0000	5.1081	
48 Benzene	78.0	6.478	6.478	0.000	226364	5.0000	5.3272	
49 Isopropyl Acetate	43.0	6.630	6.630	0.000	180269	5.0000	5.3981	
50 1,2-Dichloroethane	62.0	6.567	6.567	0.000	85109	5.0000	5.3831	
* 52 1,4-Difluorobenzene	114.0	7.076	7.076	0.000	1962074	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.354	0.000	66868	5.0000	5.0829	
54 Methylcyclohexane	83.0	7.637	7.637	0.000	86521	5.0000	5.1138	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	61296	5.0000	5.3306	
56 Dibromomethane	93.0	7.789	7.789	0.000	45720	5.0000	5.3234	
57 Methyl methacrylate	41.0	7.815	7.810	0.005	83952	5.0000	5.3441	
58 1,4-Dioxane	88.0	7.799	7.800	0.000	24667	50.000	53.623	
59 Bromodichloromethane	83.0	8.046	8.046	0.000	78000	5.0000	5.3445	
60 2-nitropropane	43.0	8.345	8.345	0.000	42352	5.0000	5.0288	
61 2-Chloroethylvinyl ether	63.0	8.449	8.450	0.000	51917	5.0000	5.2785	
62 cis-1,3-Dichloropropene	75.0	8.628	8.623	0.005	94849	5.0000	5.2082	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.000	276196	10.000	11.221	
$ 64 Toluene-d8	98.0	8.963	8.964	0.000	223283	5.0000	5.1951	
65 Toluene	92.0	9.052	9.053	0.000	143122	5.0000	5.0899	
66 trans-1,3-Dichloropropene	75.0	9.404	9.399	0.005	90941	5.0000	5.2765	
67 Ethyl methacrylate	69.0	9.503	9.504	0.000	103253	5.0000	5.3465	
68 1,1,2-Trichloroethane	97.0	9.655	9.656	0.000	64773	5.0000	5.3310	
69 Tetrachloroethene	164.0	9.734	9.729	0.004	53655	5.0000	4.9669	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.000	108301	5.0000	5.4611	
71 2-Hexanone	43.0	9.954	9.954	0.000	221867	10.000	10.593	
72 Dibromochloromethane	129.0	10.117	10.112	0.005	72152	5.0000	5.1686	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	158527	5.0000	5.3013	
75 1,2-Dibromoethane (EDB)	107.0	10.237	10.238	0.000	75961	5.0000	5.3397	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1905701	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.820	0.000	177018	5.0000	5.2343	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	63756	5.0000	5.3106	
79 Ethylbenzene	106.0	10.945	10.945	0.000	90461	5.0000	5.3012	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	106308	5.0000	5.0022	
81 o-Xylene	106.0	11.501	11.501	0.000	109318	5.0000	5.3352	
82 Styrene	104.0	11.522	11.522	0.000	176787	5.0000	5.1980	
83 Bromoform	173.0	11.700	11.700	0.000	57478	5.0000	4.9407	
84 Isopropylbenzene	105.0	11.884	11.884	0.000	256013	5.0000	5.1848	
85 Cyclohexanone	55.0	11.962	11.963	0.000	77813	50.000	51.185	

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A08.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.051	12.052	0.000	85390	5.0000	5.1082	
88 1,1,2,2-Tetrachloroethane	83.0	12.209	12.209	0.000	120501	5.0000	5.5116	
87 Bromobenzene	156.0	12.183	12.183	0.000	84985	5.0000	5.4200	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.000	38346	5.0000	5.2115	
90 trans-1,4-Dichloro-2-butene	53.0	12.240	12.240	0.000	29604	5.0000	5.2186	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	310879	5.0000	5.0997	
92 2-Chlorotoluene	91.0	12.371	12.372	0.000	191797	5.0000	5.2103	
93 1,3,5-Trimethylbenzene	105.0	12.476	12.476	0.000	200011	5.0000	5.1594	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	72120	5.0000	5.0666	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	179028	5.0000	5.1356	
96 1,2,4-Trimethylbenzene	105.0	12.827	12.828	0.000	208201	5.0000	5.3030	
97 sec-Butylbenzene	105.0	12.974	12.975	0.000	241307	5.0000	5.0651	
98 1,3-Dichlorobenzene	146.0	13.079	13.074	0.005	154588	5.0000	5.3356	
99 p-Isopropyltoluene	119.0	13.121	13.121	0.000	203244	5.0000	5.1167	
* 100 1,4-Dichlorobenzene-d4	152.0	13.147	13.148	0.000	1070132	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.173	13.174	0.000	158294	5.0000	5.3408	
102 Benzyl chloride	91.0	13.278	13.279	0.000	168241	5.0000	5.1560	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	190566	5.0000	5.1212	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	152335	5.0000	5.5214	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	31068	5.0000	5.2538	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	100619	5.0000	5.2265	
107 Hexachlorobutadiene	225.0	14.982	14.983	0.000	46472	5.0000	5.7782	
108 Naphthalene	128.0	15.082	15.077	0.004	277675	5.0000	5.3191	
109 1,2,3-Trichlorobenzene	180.0	15.260	15.261	0.000	93255	5.0000	5.5734	
S 110 Xylenes (total)	106.0	16.000		0.000		10.000	10.337	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		10.000	10.416	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

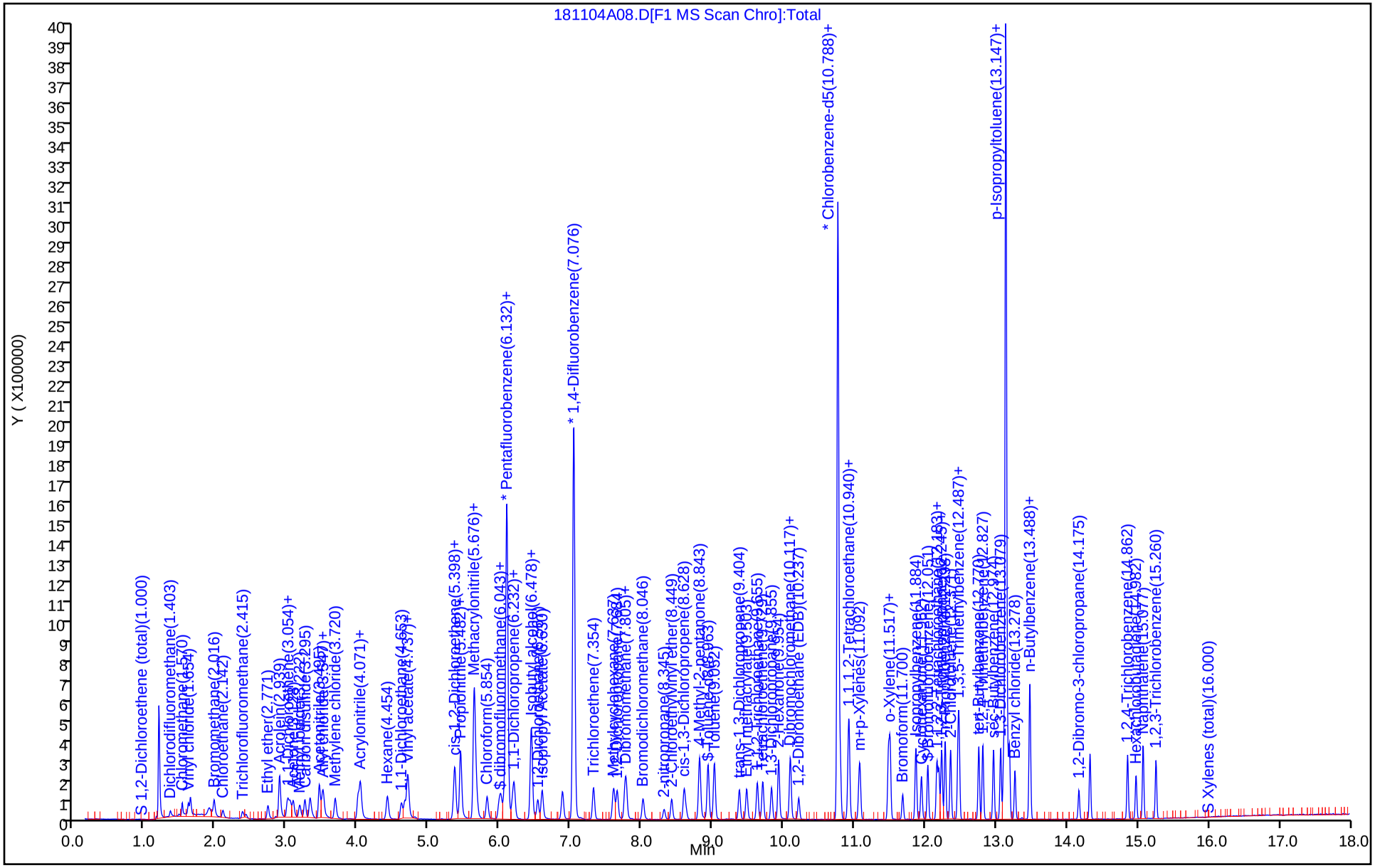
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A08.D				
Injection Date:	04-Nov-2019 16:30:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	5ul/100ml 15576/74	Lab ID:	VSTD005IK		
Sample Info:	18110419, VSTD005IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

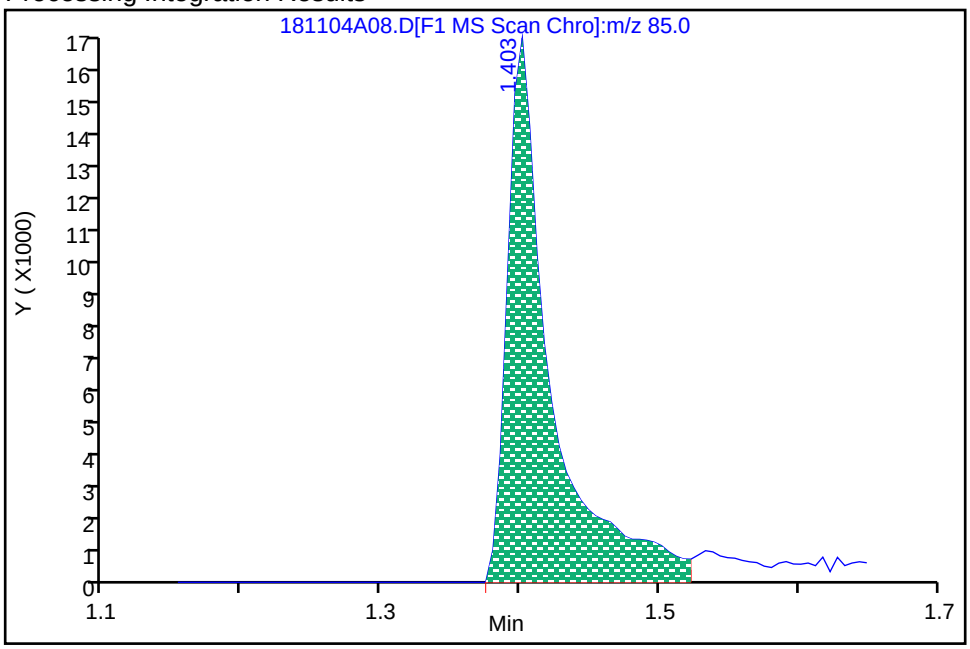
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A08.D		
Injection Date:	04-Nov-2019 16:30:30	Inst. ID:	msd18.i
Client ID:	5ul/100ml 15576/74	Lab ID:	VSTD005IK
Sample Info:	18110419, VSTD005IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

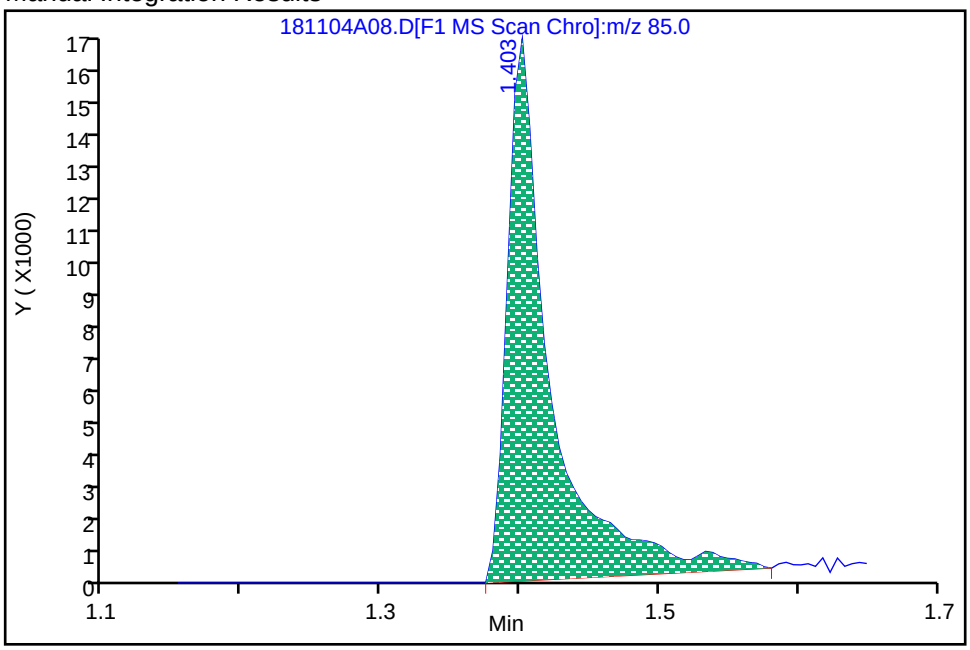
Processing Integration Results

RT: 1.403
Area: 37147
Amount: 5.1844
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 36879
Amount: 4.8052
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:09:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

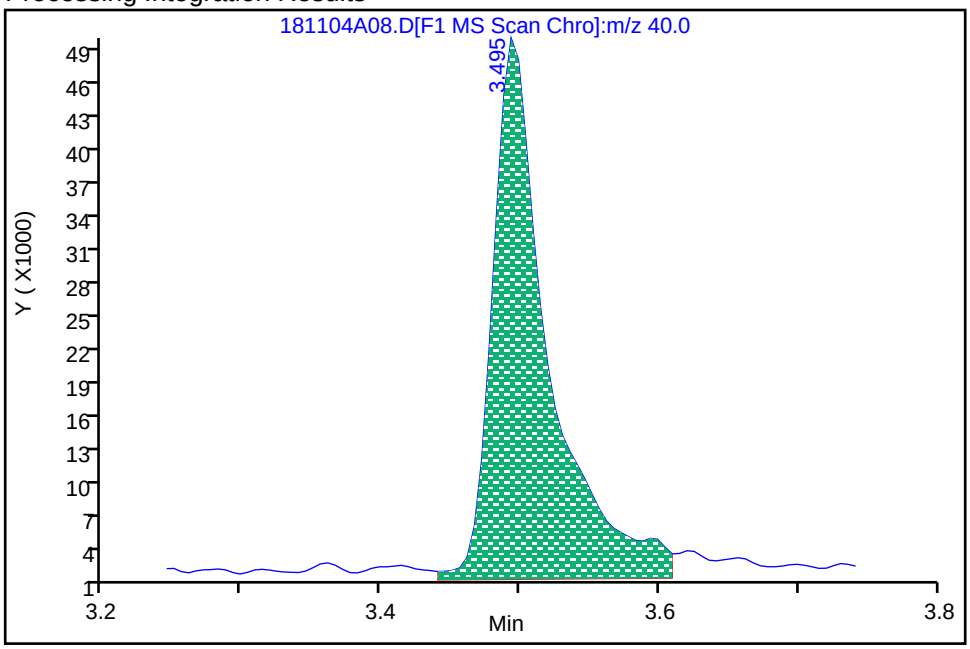
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A08.D		
Injection Date:	04-Nov-2019 16:30:30	Inst. ID:	msd18.i
Client ID:	5ul/100ml 15576/74	Lab ID:	VSTD005IK
Sample Info:	18110419, VSTD005IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

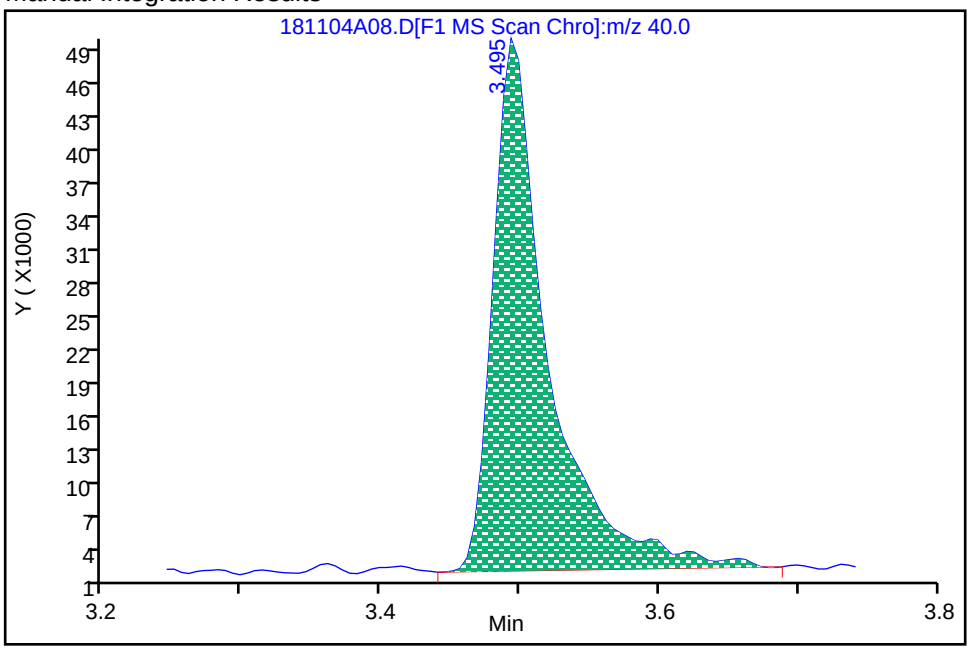
Processing Integration Results

RT: 3.495
Area: 134252
Amount: 54.302
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.495
Area: 129040
Amount: 53.109
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:09:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

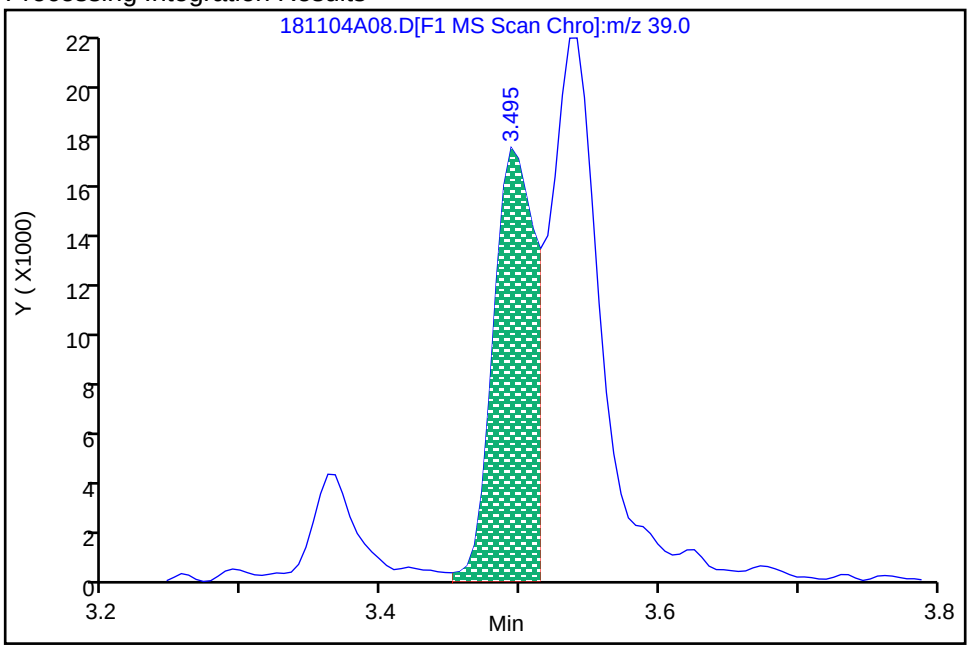
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A08.D		
Injection Date:	04-Nov-2019 16:30:30	Inst. ID:	msd18.i
Client ID:	5ul/100ml 15576/74	Lab ID:	VSTD005IK
Sample Info:	18110419, VSTD005IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

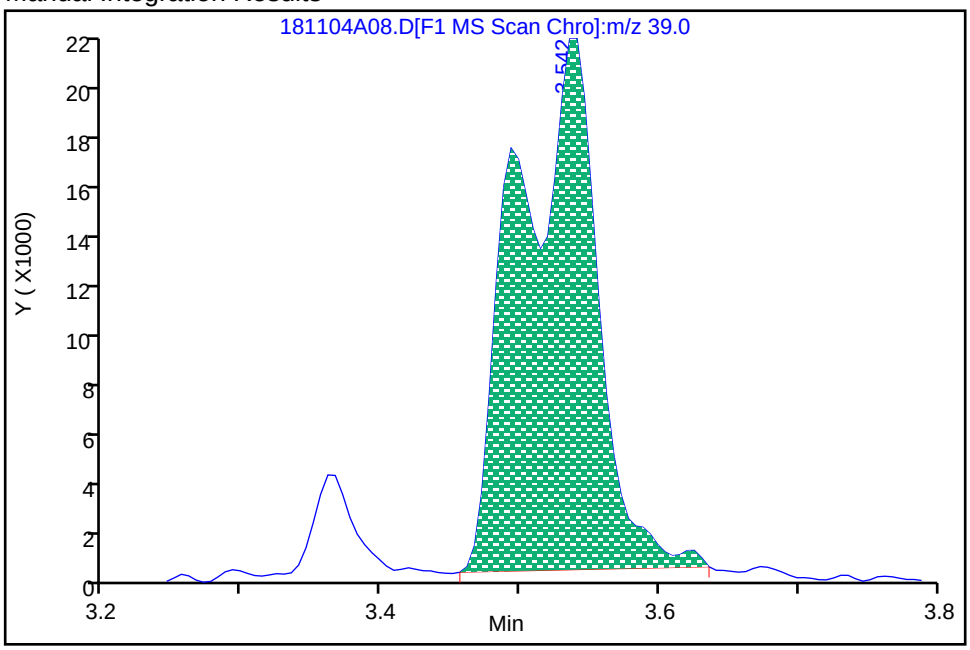
Processing Integration Results

RT: 3.495
Area: 34458
Amount: 54.302
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.542
Area: 84222
Amount: 53.109
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:09:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

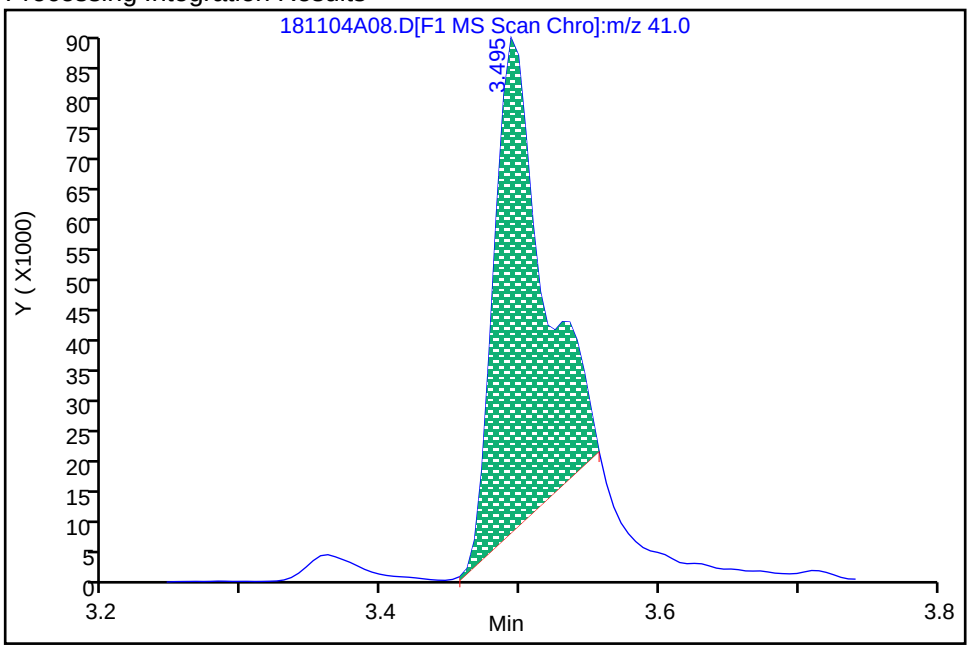
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A08.D		
Injection Date:	04-Nov-2019 16:30:30	Inst. ID:	msd18.i
Client ID:	5ul/100ml 15576/74	Lab ID:	VSTD005IK
Sample Info:	18110419, VSTD005IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

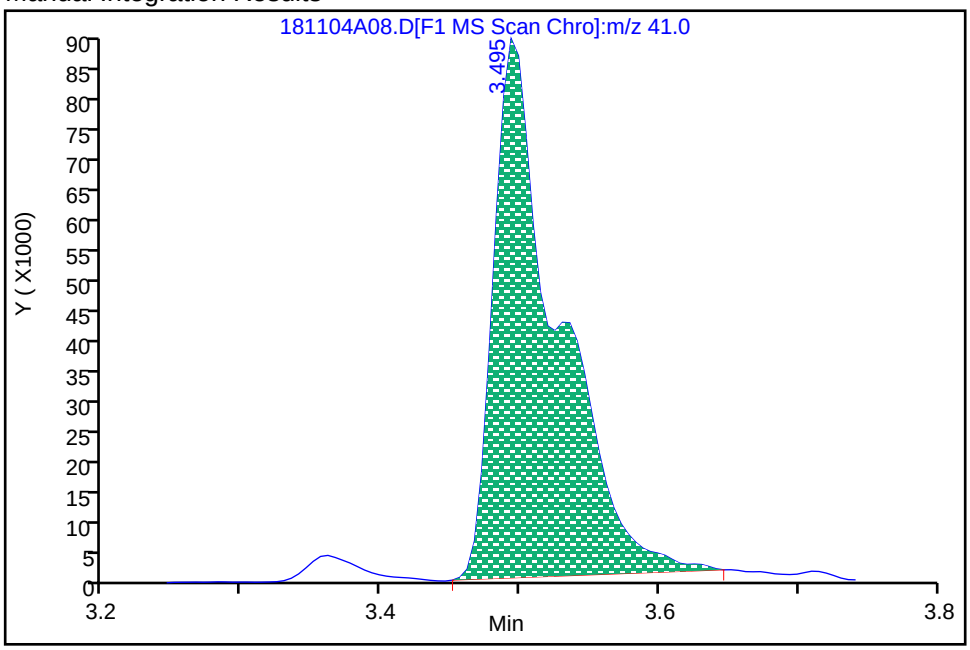
Processing Integration Results

RT: 3.495
Area: 200250
Amount: 54.302
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.495
Area: 283652
Amount: 53.109
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:09:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

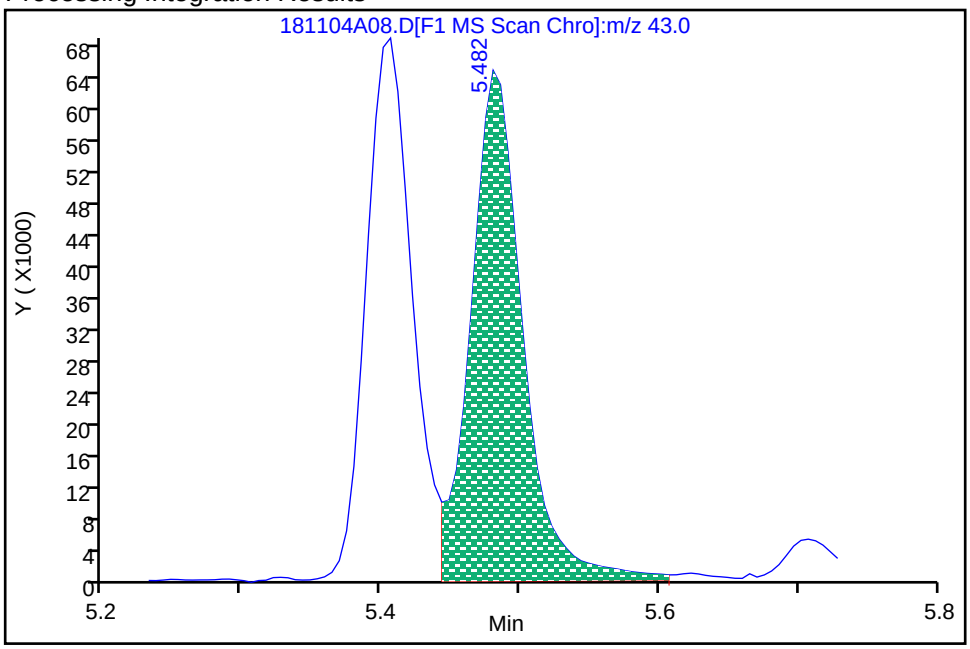
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A08.D		
Injection Date:	04-Nov-2019 16:30:30	Inst. ID:	msd18.i
Client ID:	5ul/100ml 15576/74	Lab ID:	VSTD005IK
Sample Info:	18110419, VSTD005IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

33 Ethyl Acetate, CAS: 141-78-6

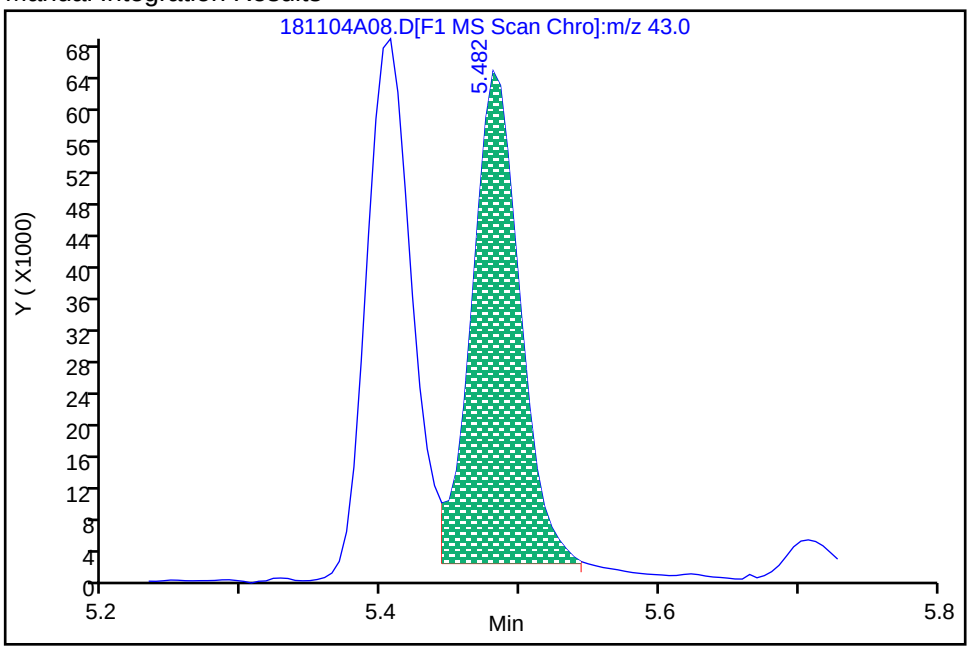
Processing Integration Results

RT: 5.482
Area: 166273
Amount: 5.4678
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 5.482
Area: 148666
Amount: 4.9934
Amount Units: ug/L



Data Editor: ecb, 07-Nov-2019 09:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D		
Lab Sample ID:	VSTD020IK	Client Sample ID:	20ul/100ml 15576/74
Injection Date:	04-Nov-2019 16:55:30	Dil. Factor:	1.0
Operator:	ECB	Inst. ID:	msd18.i
Sample Info:	18110419, VSTD020IK		
Method:	\\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m		
Method Date:	07-Nov-2019 09:09:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	Ical, Level: 4	ALS Bottle:	9
Cpnd Sublist:	std.sub		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	ecb	Review Date:	05-Nov-2019 10:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	154978	20.000	20.327	M
2 Chloromethane	50.0	1.566	1.566	0.000	169176	20.000	18.218	
3 Vinyl chloride	62.0	1.686	1.686	0.000	261251	20.000	20.121	
4 Bromomethane	94.0	2.011	2.006	0.006	159201	20.000	21.570	
5 Chloroethane	64.0	2.137	2.137	0.000	126268	20.000	19.489	
6 Trichlorofluoromethane	101.0	2.420	2.415	0.006	139381	20.000	18.375	
8 Ethyl ether	59.0	2.772	2.771	0.000	174834	20.000	19.742	
9 Acrolein	56.0	2.934	2.934	0.001	895130	200.00	199.31	
10 Acetone	43.0	3.128	3.128	0.001	388110	40.000	37.262	
11 1,1-Dichloroethene	96.0	3.050	3.049	0.000	183371	20.000	19.321	
12 Freon 113	101.0	3.086	3.086	0.000	203157	20.000	20.254	
13 Methyl iodide	142.0	3.223	3.222	0.000	386106	20.000	19.750	
14 Carbon disulfide	76.0	3.291	3.290	0.000	621774	20.000	19.648	
15 Acetonitrile	40.0	3.495	3.495	0.001	482405	200.00	199.86	M
17 Allyl chloride	76.0	3.542	3.542	0.000	94052	20.000	19.814	
16 Methyl Acetate	43.0	3.553	3.553	0.000	406859	20.000	18.552	
18 Methylene chloride	84.0	3.721	3.720	0.000	219660	20.000	19.973	
20 Acrylonitrile	53.0	4.040	4.035	0.005	409503	40.000	39.458	
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	200023	20.000	19.332	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.077	0.001	320260	20.000	18.897	
23 Hexane	57.0	4.455	4.454	0.000	283543	20.000	20.601	
24 1,1-Dichloroethane	63.0	4.649	4.648	0.000	357304	20.000	19.038	
25 Vinyl acetate	86.0	4.696	4.696	0.000	57197	20.000	19.645	M
26 Diisopropyl ether (IPE)	87.0	4.738	4.738	0.000	163670	20.000	19.645	
27 Chloroprene	53.0	4.743	4.738	0.006	273561	20.000	19.614	
29 cis-1,2-Dichloroethene	96.0	5.398	5.398	0.000	241797	20.000	19.984	
30 2-Butanone (MEK)	72.0	5.404	5.403	0.000	158336	40.000	37.347	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	177805	20.000	19.243	
32 Propionitrile	54.0	5.482	5.482	0.000	1028592	200.00	198.62	
33 Ethyl Acetate	43.0	5.482	5.483	0.000	531368	20.000	19.509	
34 Methacrylonitrile	67.0	5.671	5.671	0.001	922885	100.00	97.936	
35 Bromochloromethane	128.0	5.692	5.692	0.001	132504	20.000	19.212	
36 Tetrahydrofuran	42.0	5.703	5.702	0.000	253048	20.000	18.508	
37 Chloroform	83.0	5.855	5.854	0.000	371075	20.000	19.307	
$ 39 dibromofluoromethane	111.0	6.054	6.054	0.000	233178	20.000	18.492	
40 1,1,1-Trichloroethane	97.0	6.028	6.027	0.000	290455	20.000	20.063	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1300866	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.101	0.001	207556	20.000	21.833	
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	290546	20.000	19.662	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	287059	20.000	20.165	
45 Isobutyl alcohol	42.0	6.479	6.478	0.000	292978	200.00	201.33	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.001	253024	20.000	18.756	
48 Benzene	78.0	6.479	6.478	0.000	852623	20.000	20.269	
49 Isopropyl Acetate	43.0	6.631	6.630	0.000	654566	20.000	19.799	
50 1,2-Dichloroethane	62.0	6.568	6.567	0.000	296519	20.000	18.944	
* 52 1,4-Difluorobenzene	114.0	7.076	7.076	0.000	1942418	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.354	0.001	250773	20.000	19.255	
54 Methylcyclohexane	83.0	7.637	7.637	0.000	330139	20.000	19.710	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	219453	20.000	19.278	
56 Dibromomethane	93.0	7.789	7.789	0.000	161865	20.000	19.037	
57 Methyl methacrylate	41.0	7.810	7.810	0.000	293209	20.000	18.854	
58 1,4-Dioxane	88.0	7.800	7.800	0.000	85785	200.00	188.37	
59 Bromodichloromethane	83.0	8.046	8.046	0.001	282047	20.000	19.521	
60 2-nitropropane	43.0	8.345	8.345	0.001	149870	20.000	17.975	
61 2-Chloroethylvinyl ether	63.0	8.450	8.450	0.000	186383	20.000	19.142	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	335605	20.000	18.615	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.001	965958	40.000	39.640	
$ 64 Toluene-d8	98.0	8.964	8.964	0.000	800812	20.000	18.927	
65 Toluene	92.0	9.053	9.053	0.000	537620	20.000	19.422	
66 trans-1,3-Dichloropropene	75.0	9.404	9.399	0.006	328492	20.000	19.361	
67 Ethyl methacrylate	69.0	9.504	9.504	0.000	369667	20.000	19.444	
68 1,1,2-Trichloroethane	97.0	9.656	9.656	0.000	231808	20.000	19.380	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	212430	20.000	19.975	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.001	372961	20.000	19.104	
71 2-Hexanone	43.0	9.955	9.954	0.000	791564	40.000	38.391	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	260942	20.000	18.988	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	568407	20.000	19.308	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.238	0.000	266727	20.000	19.046	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1876072	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	629877	20.000	18.919	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.001	228427	20.000	19.328	
79 Ethylbenzene	106.0	10.946	10.945	0.000	329200	20.000	19.596	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	397256	20.000	18.988	
81 o-Xylene	106.0	11.501	11.501	0.000	390924	20.000	19.380	
82 Styrene	104.0	11.522	11.522	0.000	664015	20.000	19.832	
83 Bromoform	173.0	11.701	11.700	0.000	221777	20.000	19.365	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	969336	20.000	19.941	
85 Cyclohexanone	55.0	11.963	11.963	0.000	313355	200.00	209.38	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	307332	20.000	18.675	
88 1,1,2,2-Tetrachloroethane	83.0	12.209	12.209	0.000	412401	20.000	19.290	
87 Bromobenzene	156.0	12.183	12.183	0.001	297488	20.000	19.402	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	135387	20.000	18.816	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	102419	20.000	18.463	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	1188172	20.000	19.932	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	707324	20.000	19.650	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	754086	20.000	19.892	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	262406	20.000	18.852	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	671850	20.000	19.709	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.828	0.000	788921	20.000	20.549	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	939959	20.000	20.176	
98 1,3-Dichlorobenzene	146.0	13.074	13.074	0.000	550118	20.000	19.417	
99 p-Isopropyltoluene	119.0	13.122	13.121	0.000	782859	20.000	20.155	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	1046455	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.174	0.000	558422	20.000	19.267	
102 Benzyl chloride	91.0	13.279	13.279	0.000	637302	20.000	19.973	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	741416	20.000	20.375	
104 1,2-Dichlorobenzene	146.0	13.489	13.488	0.000	524199	20.000	19.429	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	115406	20.000	19.957	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	378503	20.000	20.106	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	163512	20.000	21.809	
108 Naphthalene	128.0	15.082	15.077	0.005	1106935	20.000	21.684	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	340502	20.000	20.810	
S 110 Xylenes (total)	106.0	16.000		0.000		40.000	38.368	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		40.000	39.316	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

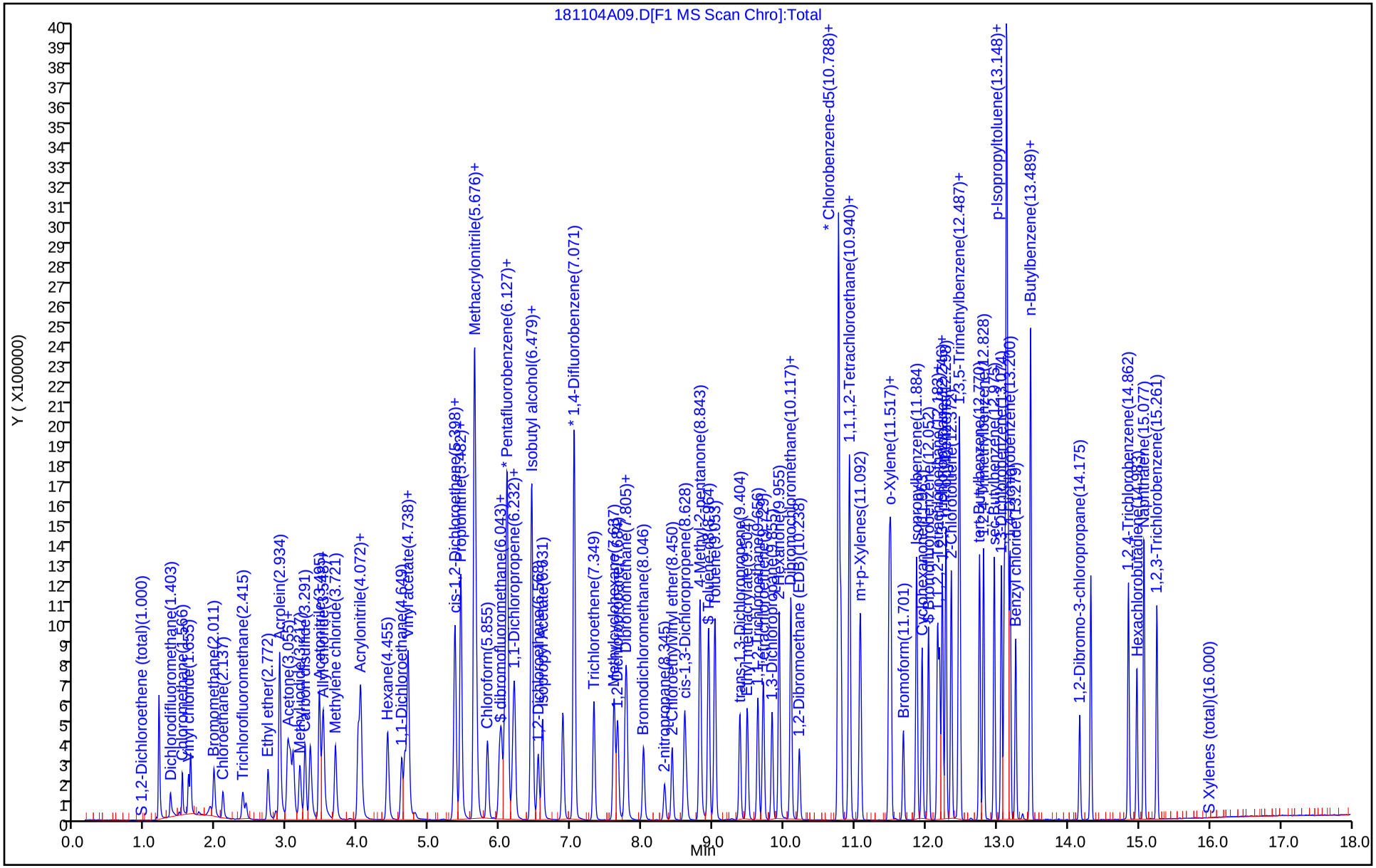
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D				
Injection Date:	04-Nov-2019 16:55:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	20ul/100ml 15576/74	Lab ID:	VSTD020IK		
Sample Info:	18110419, VSTD020IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

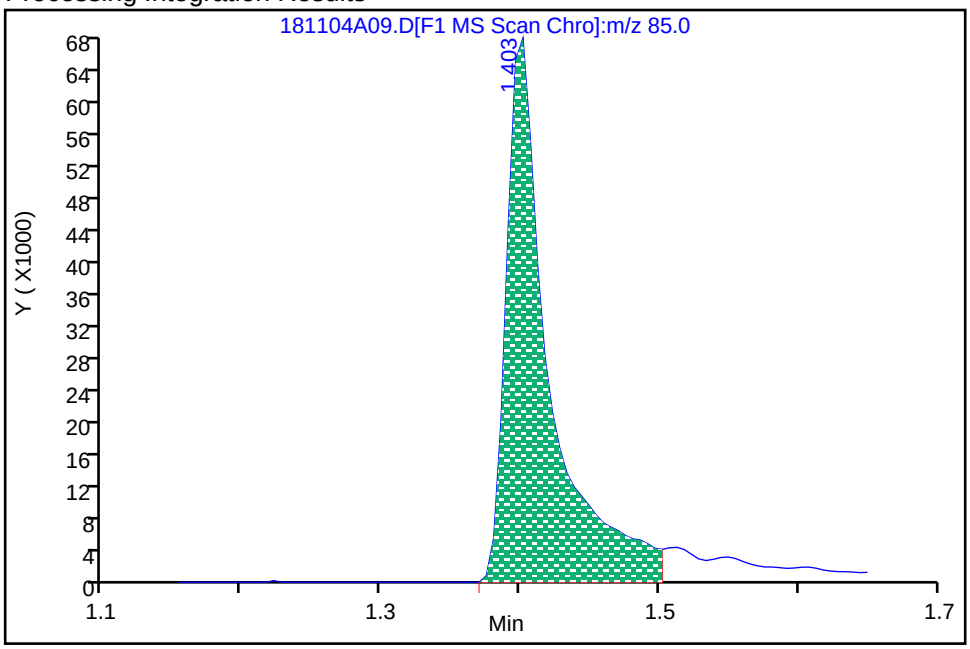
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D		
Injection Date:	04-Nov-2019 16:55:30	Inst. ID:	msd18.i
Client ID:	20ul/100ml 15576/74	Lab ID:	VSTD020IK
Sample Info:	18110419, VSTD020IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

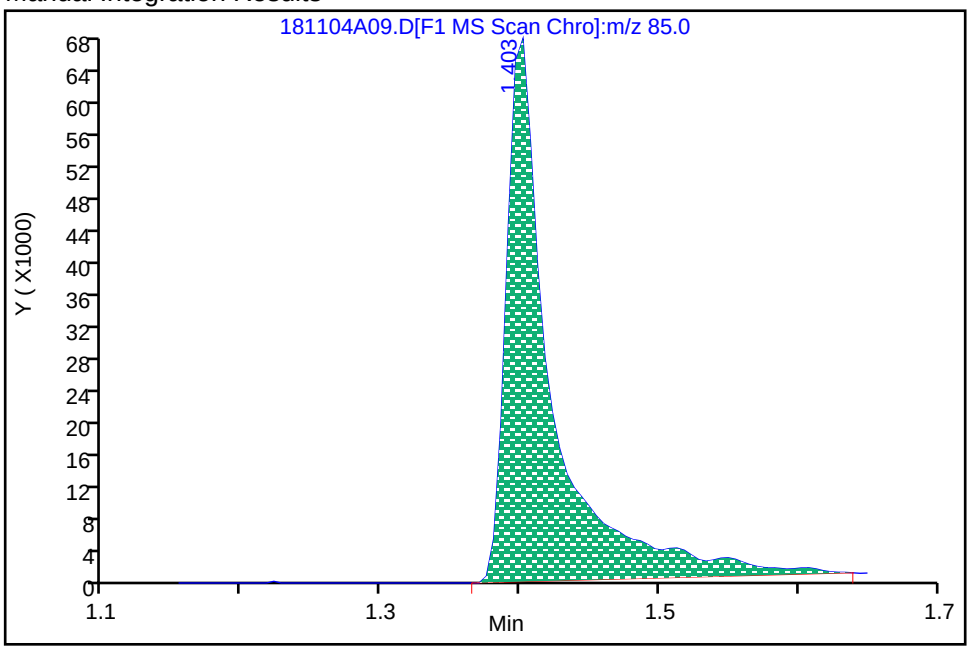
Processing Integration Results

RT: 1.403
Area: 145392
Amount: 20.364
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 154978
Amount: 20.327
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:10:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:50 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

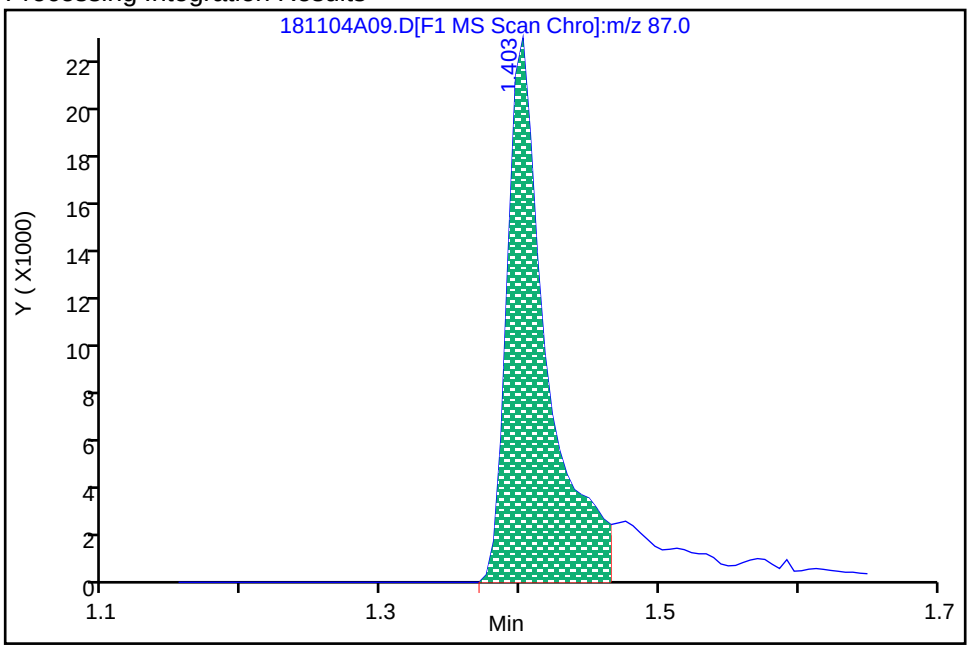
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D		
Injection Date:	04-Nov-2019 16:55:30	Inst. ID:	msd18.i
Client ID:	20ul/100ml 15576/74	Lab ID:	VSTD020IK
Sample Info:	18110419, VSTD020IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

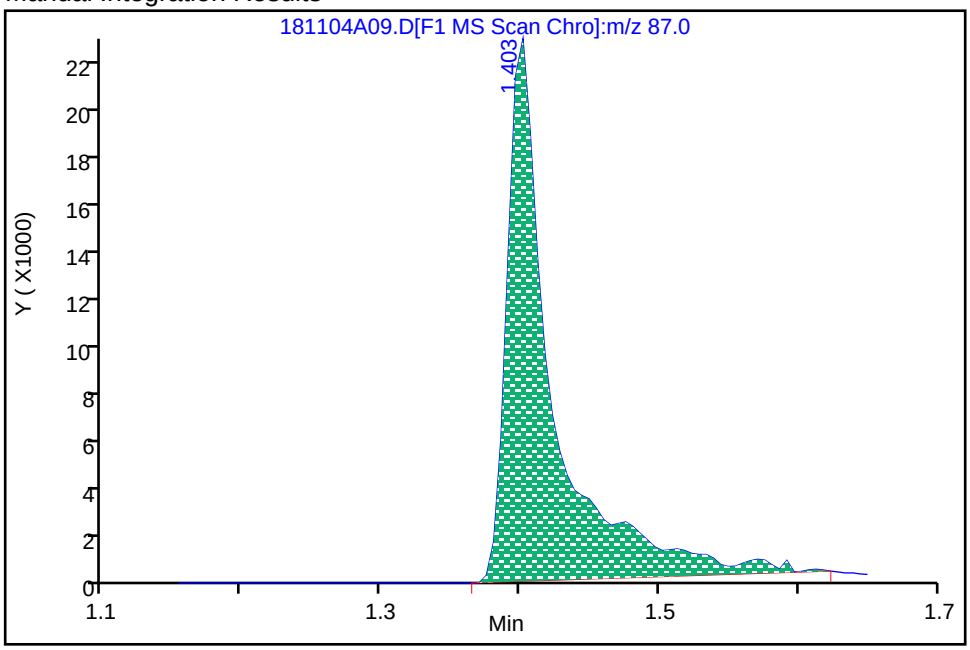
Processing Integration Results

RT: 1.403
Area: 43848
Amount: 20.364
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 50897
Amount: 20.327
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:10:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

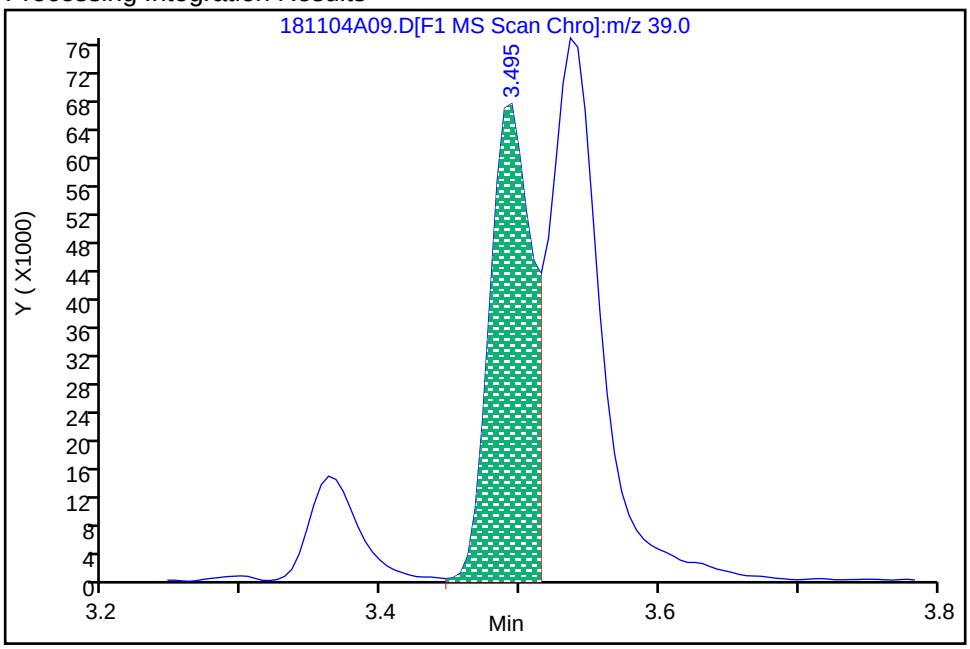
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D		
Injection Date:	04-Nov-2019 16:55:30	Inst. ID:	msd18.i
Client ID:	20ul/100ml 15576/74	Lab ID:	VSTD020IK
Sample Info:	18110419, VSTD020IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

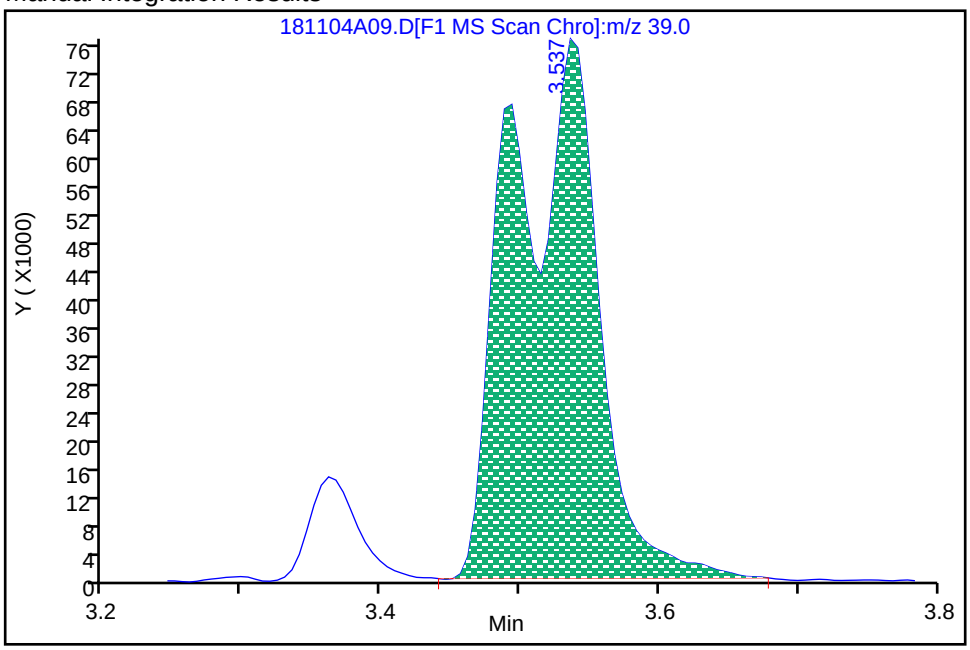
Processing Integration Results

RT: 3.495
Area: 140641
Amount: 196.92
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 328971
Amount: 199.86
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:10:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

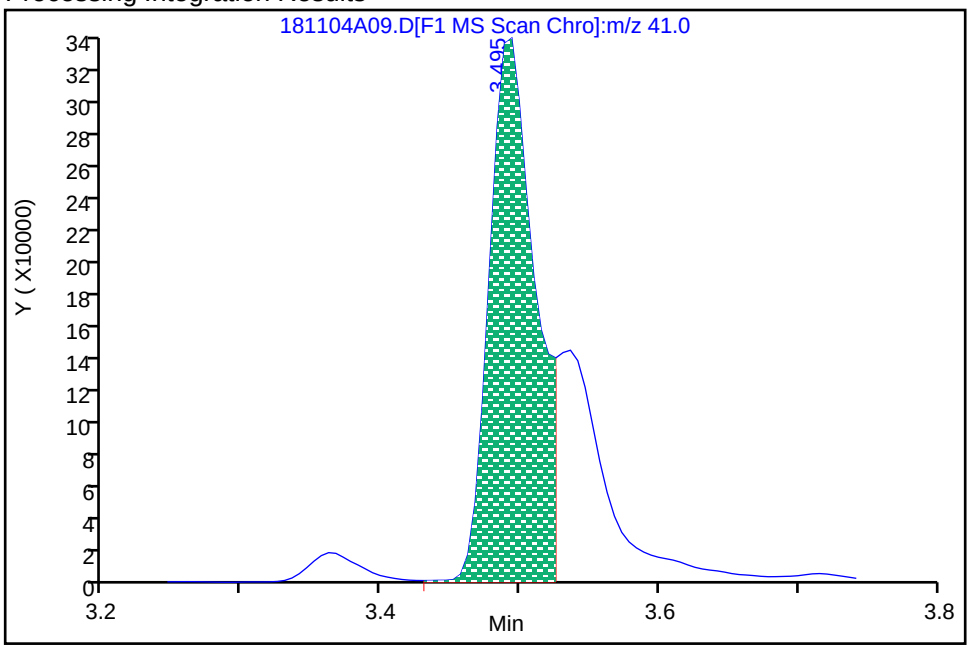
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D		
Injection Date:	04-Nov-2019 16:55:30	Inst. ID:	msd18.i
Client ID:	20ul/100ml 15576/74	Lab ID:	VSTD020IK
Sample Info:	18110419, VSTD020IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

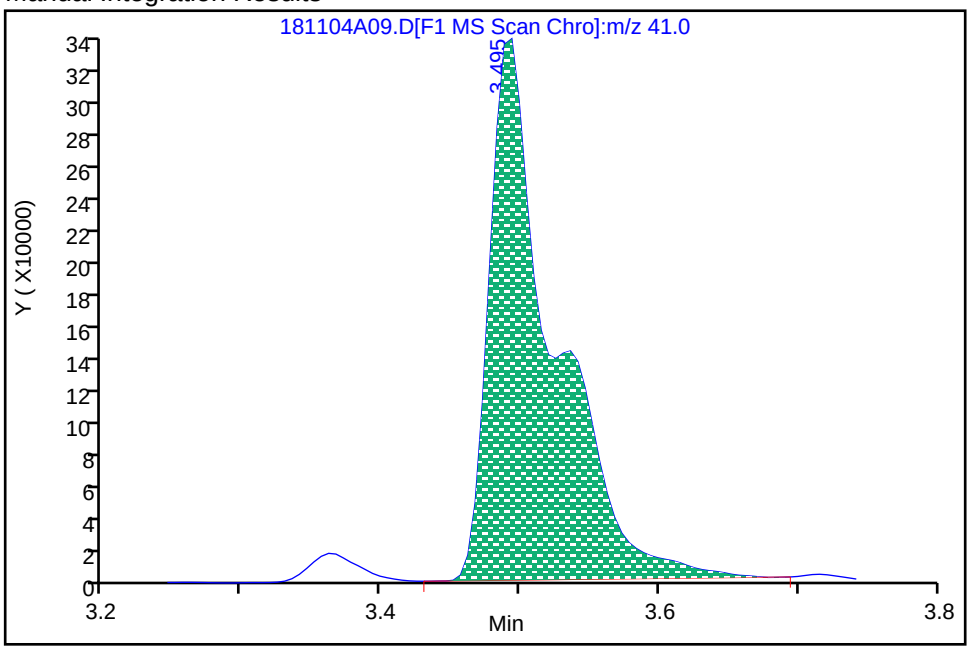
Processing Integration Results

RT: 3.495
Area: 764884
Amount: 196.92
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.495
Area: 1084837
Amount: 199.86
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:10:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

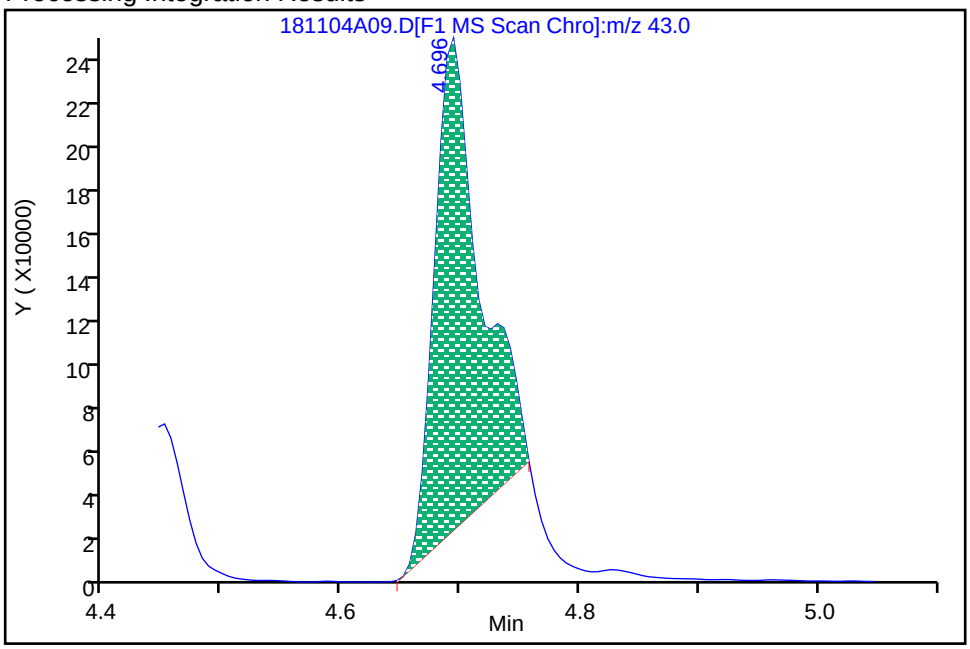
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A09.D		
Injection Date:	04-Nov-2019 16:55:30	Inst. ID:	msd18.i
Client ID:	20ul/100ml 15576/74	Lab ID:	VSTD020IK
Sample Info:	18110419, VSTD020IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

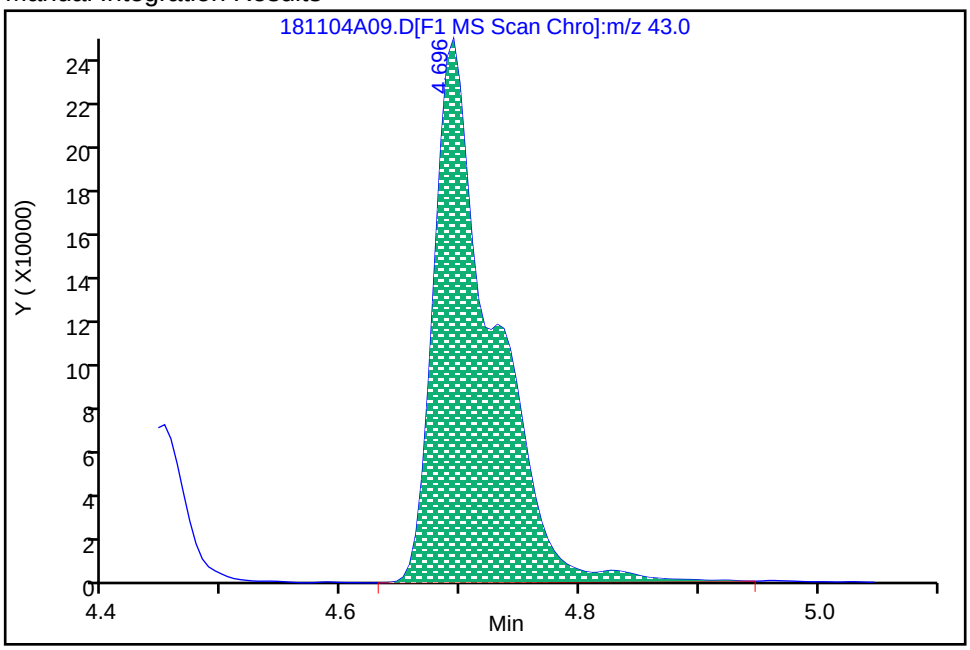
Processing Integration Results

RT: 4.696
Area: 577895
Amount: 19.935
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.696
Area: 818483
Amount: 19.645
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:10:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D		
Lab Sample ID:	VSTD050IK	Client Sample ID:	50ul/100ml 15576/74
Injection Date:	04-Nov-2019 17:20:30	Dil. Factor:	1.0
Operator:	ECB	Inst. ID:	msd18.i
Sample Info:	18110419, VSTD050IK		
Method:	\\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m		
Method Date:	07-Nov-2019 09:09:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	Ical, Level: 5	ALS Bottle:	10
Cpnd Sublist:	std.sub		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	ecb	Review Date:	05-Nov-2019 09:59:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.000	390759	50.000	50.562	M
2 Chloromethane	50.0	1.566	1.566	0.000	430814	50.000	45.767	
3 Vinyl chloride	62.0	1.686	1.686	0.000	641676	50.000	48.754	
4 Bromomethane	94.0	2.006	2.006	0.000	379811	50.000	50.768	
5 Chloroethane	64.0	2.137	2.137	0.000	326413	50.000	49.701	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.000	370030	50.000	47.621	
8 Ethyl ether	59.0	2.771	2.771	0.000	435723	50.000	48.539	
9 Acrolein	56.0	2.934	2.934	0.000	2270726	500.00	498.79	
10 Acetone	43.0	3.128	3.128	0.000	974852	100.00	92.333	
11 1,1-Dichloroethene	96.0	3.049	3.049	0.000	462146	50.000	48.039	
12 Freon 113	101.0	3.086	3.086	0.000	506075	50.000	49.773	
13 Methyl iodide	142.0	3.222	3.222	0.000	982513	50.000	49.580	
14 Carbon disulfide	76.0	3.290	3.290	0.000	1562697	50.000	48.715	
15 Acetonitrile	40.0	3.495	3.495	0.000	1212112	500.00	495.41	M
17 Allyl chloride	76.0	3.542	3.542	0.000	237312	50.000	49.502	
16 Methyl Acetate	43.0	3.553	3.553	0.000	1001676	50.000	45.059	
18 Methylene chloride	84.0	3.720	3.720	0.000	542307	50.000	49.037	
20 Acrylonitrile	53.0	4.035	4.035	0.000	1028829	100.00	97.799	
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	498997	50.000	47.577	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.077	0.000	823656	50.000	47.944	
23 Hexane	57.0	4.454	4.454	0.000	687254	50.000	49.259	
24 1,1-Dichloroethane	63.0	4.648	4.648	0.000	936529	50.000	49.229	
25 Vinyl acetate	86.0	4.696	4.696	0.000	147571	50.000	50.003	
26 Diisopropyl ether (IPE)	87.0	4.738	4.738	0.000	418814	50.000	49.593	
27 Chloroprene	53.0	4.738	4.738	0.000	691376	50.000	48.904	
29 cis-1,2-Dichloroethene	96.0	5.398	5.398	0.000	594209	50.000	48.449	
30 2-Butanone (MEK)	72.0	5.403	5.403	0.000	415112	100.00	96.593	

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A10.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	446186	50.000	47.638	
32 Propionitrile	54.0	5.482	5.482	0.000	2564371	500.00	488.50	
33 Ethyl Acetate	43.0	5.482	5.482	0.000	1284182	50.000	47.335	
34 Methacrylonitrile	67.0	5.671	5.671	0.000	2311965	250.00	242.04	
35 Bromochloromethane	128.0	5.692	5.692	0.000	329078	50.000	47.070	
36 Tetrahydrofuran	42.0	5.702	5.702	0.000	624640	50.000	45.071	
37 Chloroform	83.0	5.854	5.854	0.000	935234	50.000	48.004	
$ 39 dibromofluoromethane	111.0	6.054	6.054	0.000	590714	50.000	46.215	
40 1,1,1-Trichloroethane	97.0	6.027	6.027	0.000	719933	50.000	49.060	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1318632	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.101	0.000	459209	50.000	47.655	M
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	719763	50.000	48.052	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	722580	50.000	50.075	
45 Isobutyl alcohol	42.0	6.478	6.478	0.000	732849	500.00	496.82	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.000	636238	50.000	47.158	
48 Benzene	78.0	6.478	6.478	0.000	2128435	50.000	50.593	
49 Isopropyl Acetate	43.0	6.630	6.630	0.000	1604240	50.000	48.520	
50 1,2-Dichloroethane	62.0	6.567	6.567	0.000	757087	50.000	48.365	
* 52 1,4-Difluorobenzene	114.0	7.076	7.076	0.000	1942595	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.354	0.000	633095	50.000	48.607	
54 Methylcyclohexane	83.0	7.637	7.637	0.000	868748	50.000	51.862	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	557950	50.000	49.008	
56 Dibromomethane	93.0	7.789	7.789	0.000	411456	50.000	48.388	
57 Methyl methacrylate	41.0	7.810	7.810	0.000	766636	50.000	49.291	
58 1,4-Dioxane	88.0	7.800	7.800	0.000	219259	500.00	481.42	
59 Bromodichloromethane	83.0	8.046	8.046	0.000	725165	50.000	50.186	
60 2-nitropropane	43.0	8.345	8.345	0.000	401227	50.000	48.118	
61 2-Chloroethylvinyl ether	63.0	8.450	8.450	0.000	489166	50.000	50.234	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	887360	50.000	49.214	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.000	2438931	100.00	100.08	
$ 64 Toluene-d8	98.0	8.964	8.964	0.000	2003277	50.000	47.007	
65 Toluene	92.0	9.053	9.053	0.000	1363537	50.000	48.905	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	853383	50.000	49.936	
67 Ethyl methacrylate	69.0	9.504	9.504	0.000	955145	50.000	49.879	
68 1,1,2-Trichloroethane	97.0	9.656	9.656	0.000	593964	50.000	49.301	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	533479	50.000	49.805	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.000	944713	50.000	48.043	
71 2-Hexanone	43.0	9.954	9.954	0.000	2135933	100.00	102.85	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	691554	50.000	49.961	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	1464353	50.000	49.386	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.238	0.000	673418	50.000	47.741	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1889615	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	1618102	50.000	48.254	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	586990	50.000	49.310	
79 Ethylbenzene	106.0	10.945	10.945	0.000	840460	50.000	49.672	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	1031467	50.000	48.948	
81 o-Xylene	106.0	11.501	11.501	0.000	992646	50.000	48.858	
82 Styrene	104.0	11.522	11.522	0.000	1726376	50.000	51.192	
83 Bromoform	173.0	11.700	11.700	0.000	593884	50.000	51.484	
84 Isopropylbenzene	105.0	11.884	11.884	0.000	2405793	50.000	49.137	
85 Cyclohexanone	55.0	11.963	11.963	0.000	743499	500.00	493.23	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	768208	50.000	46.347	
88 1,1,2,2-Tetrachloroethane	83.0	12.209	12.209	0.000	1056744	50.000	49.202	
87 Bromobenzene	156.0	12.183	12.183	0.000	760974	50.000	49.403	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.000	345172	50.000	47.752	
90 trans-1,4-Dichloro-2-butene	53.0	12.240	12.240	0.000	267066	50.000	47.923	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	3004072	50.000	50.163	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	1792507	50.000	49.568	
93 1,3,5-Trimethylbenzene	105.0	12.476	12.476	0.000	1884266	50.000	49.477	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	677054	50.000	48.418	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	1658806	50.000	48.438	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.828	0.000	1955460	50.000	50.700	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	2319487	50.000	49.560	
98 1,3-Dichlorobenzene	146.0	13.074	13.074	0.000	1381575	50.000	48.540	
99 p-Isopropyltoluene	119.0	13.121	13.121	0.000	1900377	50.000	48.701	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	1051275	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.174	0.000	1387862	50.000	47.666	
102 Benzyl chloride	91.0	13.279	13.279	0.000	1674670	50.000	52.243	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	1856253	50.000	50.779	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	1332291	50.000	49.155	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	283977	50.000	48.883	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	924217	50.000	48.868	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	388254	50.000	52.081	
108 Naphthalene	128.0	15.077	15.077	0.000	2660460	50.000	51.877	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	789134	50.000	48.008	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	97.806	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	96.026	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

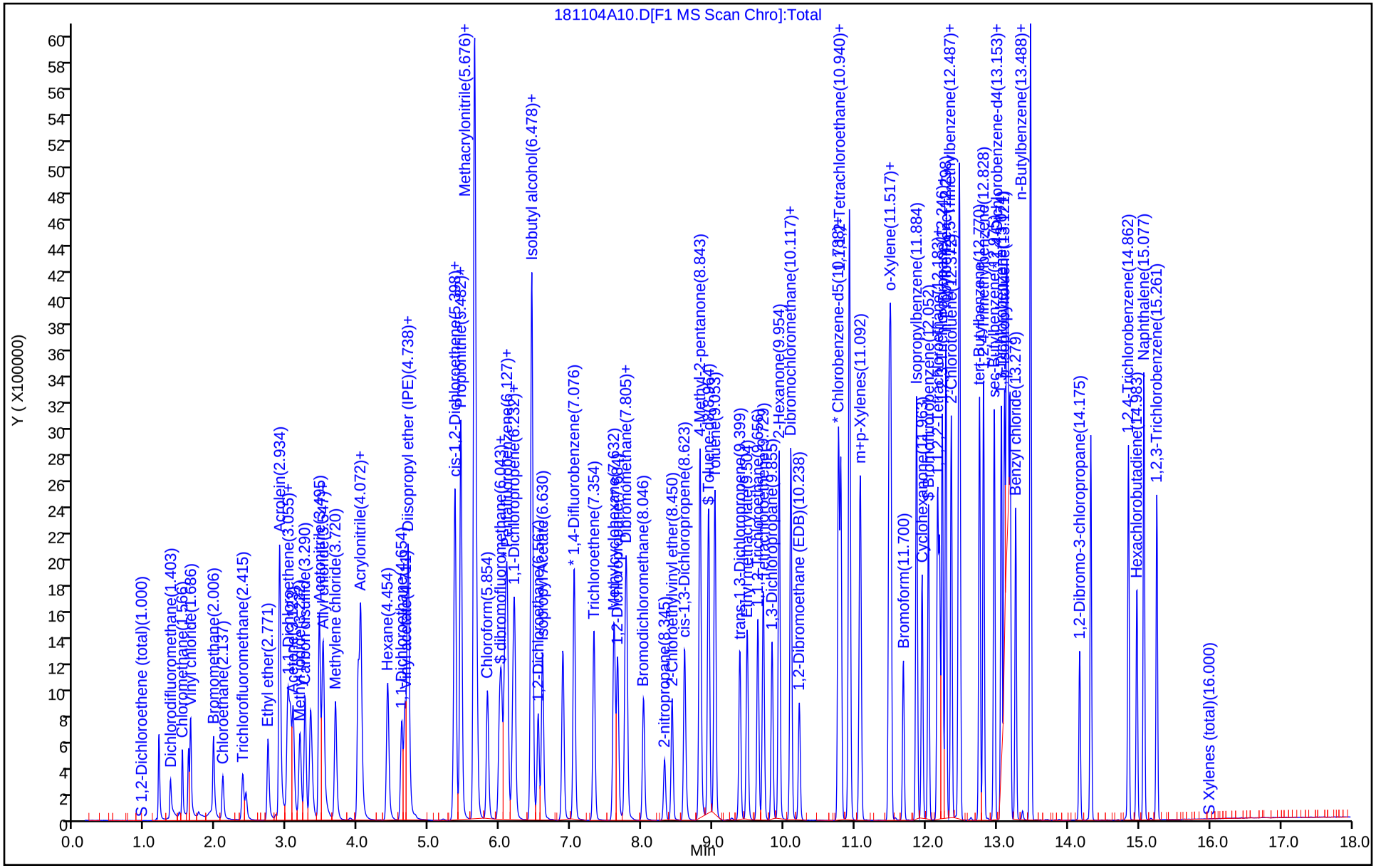
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D				
Injection Date:	04-Nov-2019 17:20:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	50ul/100ml 15576/74	Lab ID:	VSTD050IK		
Sample Info:	18110419, VSTD050IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

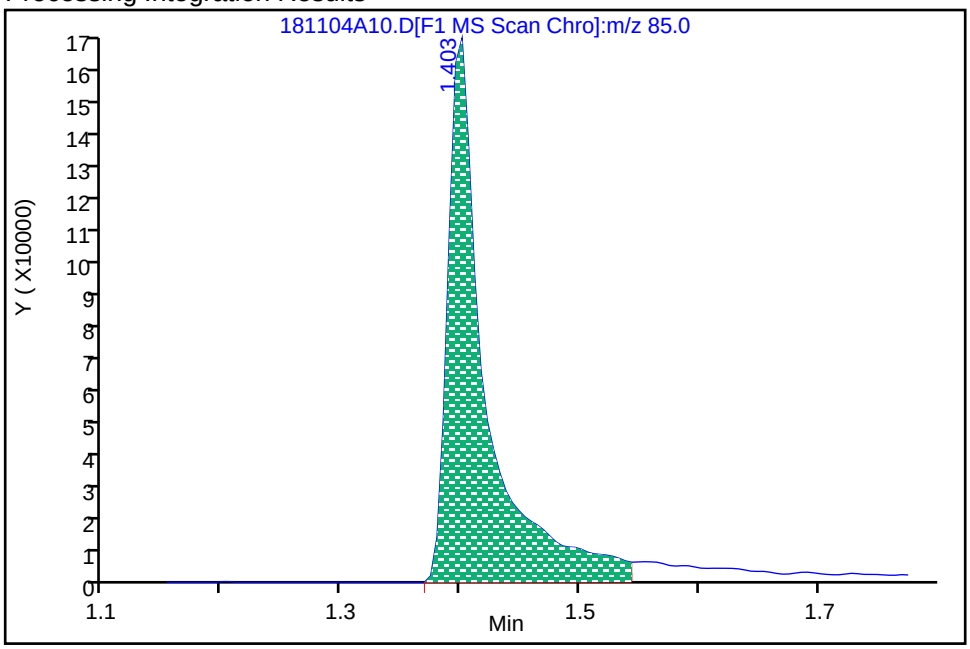
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D		
Injection Date:	04-Nov-2019 17:20:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15576/74	Lab ID:	VSTD050IK
Sample Info:	18110419, VSTD050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

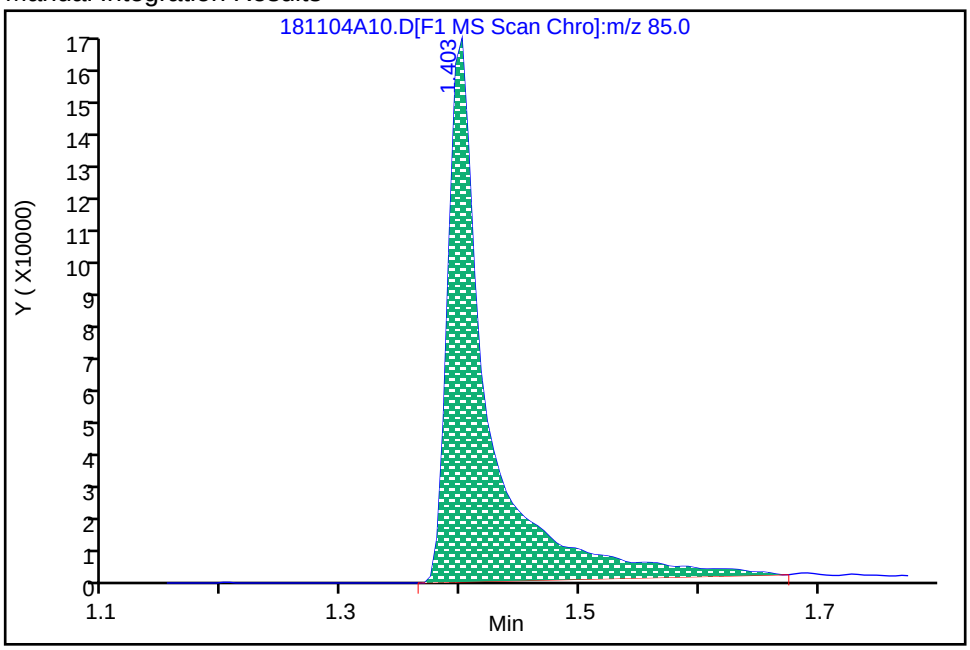
Processing Integration Results

RT: 1.403
Area: 378574
Amount: 50.000
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 390759
Amount: 50.562
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 09:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

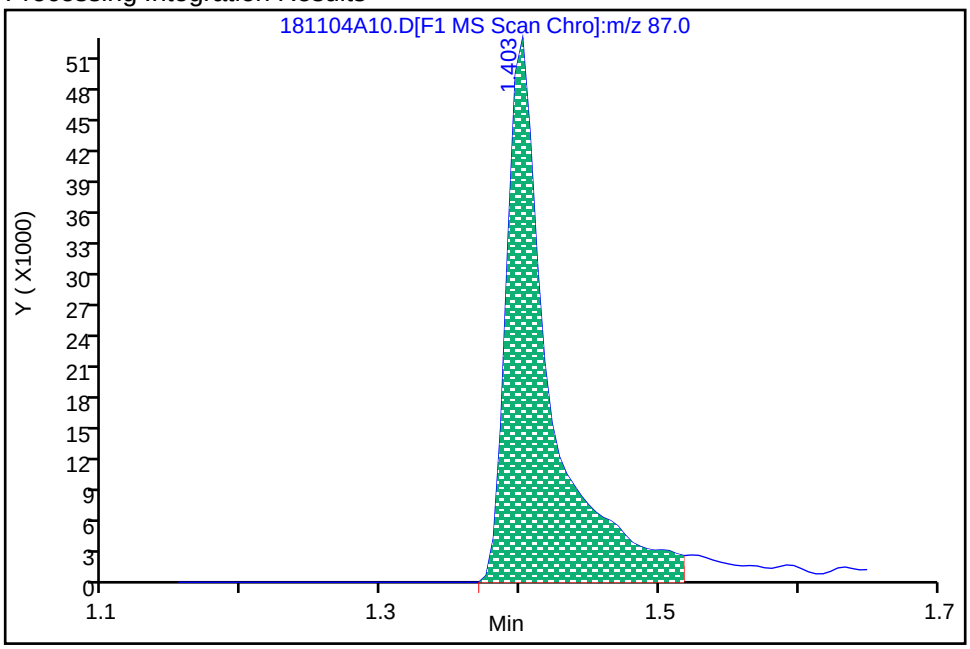
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D		
Injection Date:	04-Nov-2019 17:20:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15576/74	Lab ID:	VSTD050IK
Sample Info:	18110419, VSTD050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

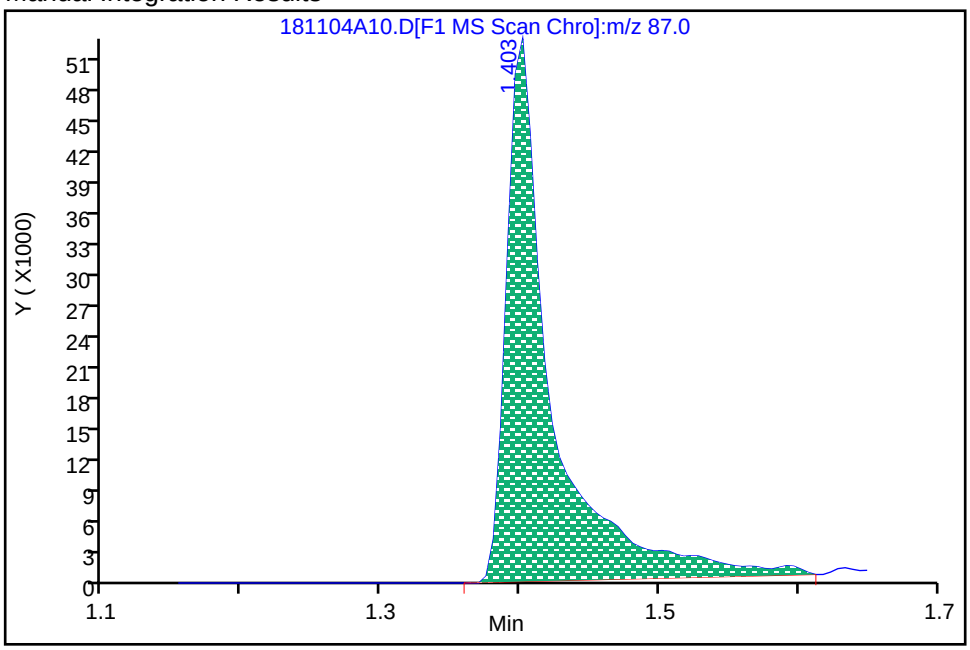
Processing Integration Results

RT: 1.403
Area: 115311
Amount: 50.000
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 119048
Amount: 50.562
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 09:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

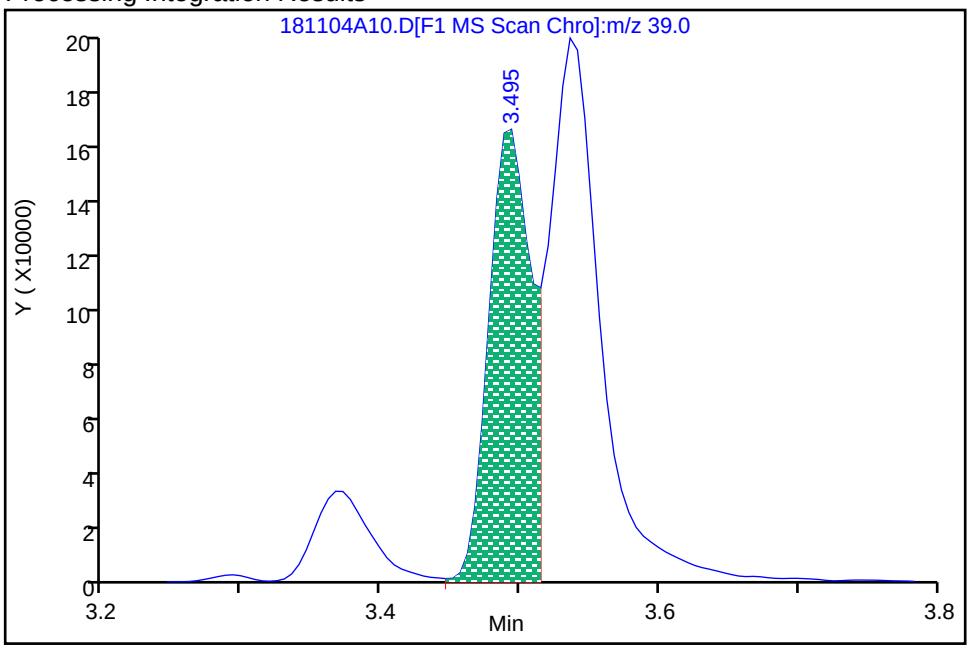
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D		
Injection Date:	04-Nov-2019 17:20:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15576/74	Lab ID:	VSTD050IK
Sample Info:	18110419, VSTD050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

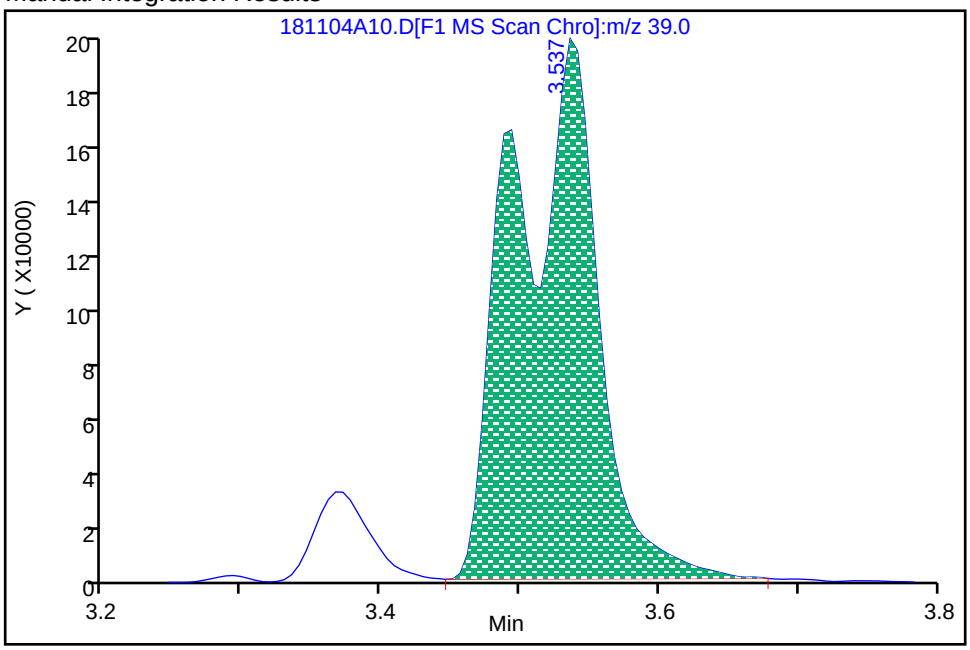
Processing Integration Results

RT: 3.495
Area: 341367
Amount: 500.00
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 817530
Amount: 495.41
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 09:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

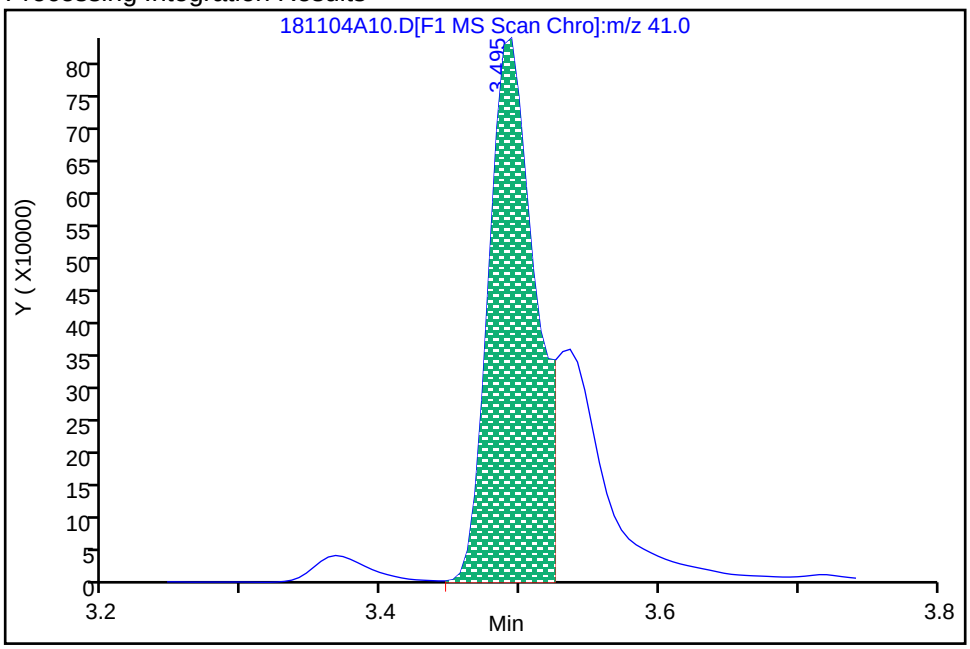
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D		
Injection Date:	04-Nov-2019 17:20:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15576/74	Lab ID:	VSTD050IK
Sample Info:	18110419, VSTD050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

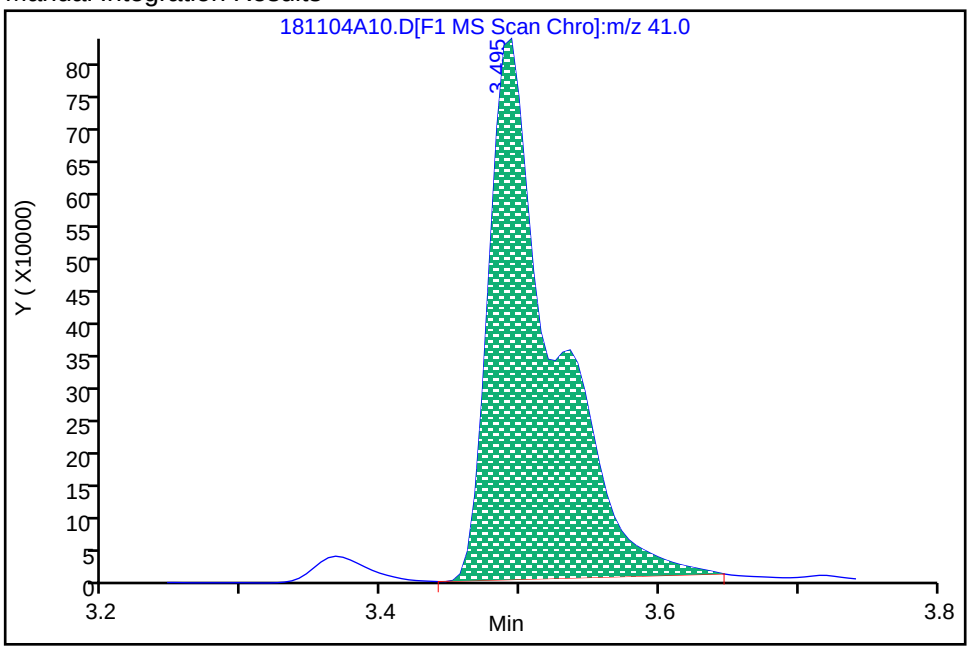
Processing Integration Results

RT: 3.495
Area: 1914794
Amount: 500.00
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.495
Area: 2675110
Amount: 495.41
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 09:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

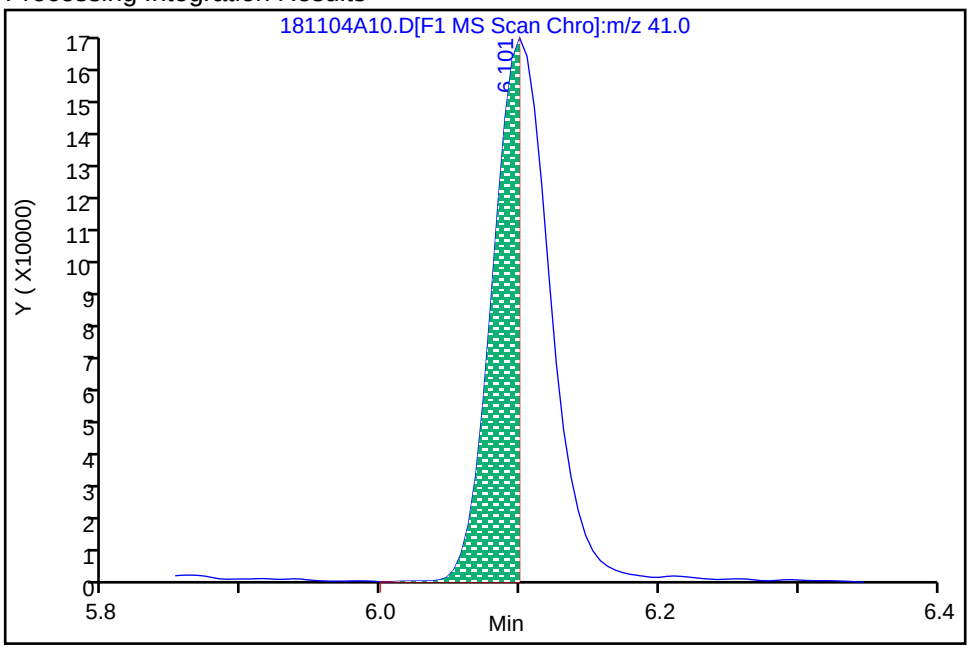
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A10.D		
Injection Date:	04-Nov-2019 17:20:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15576/74	Lab ID:	VSTD050IK
Sample Info:	18110419, VSTD050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

42 Cyclohexane, CAS: 110-82-7

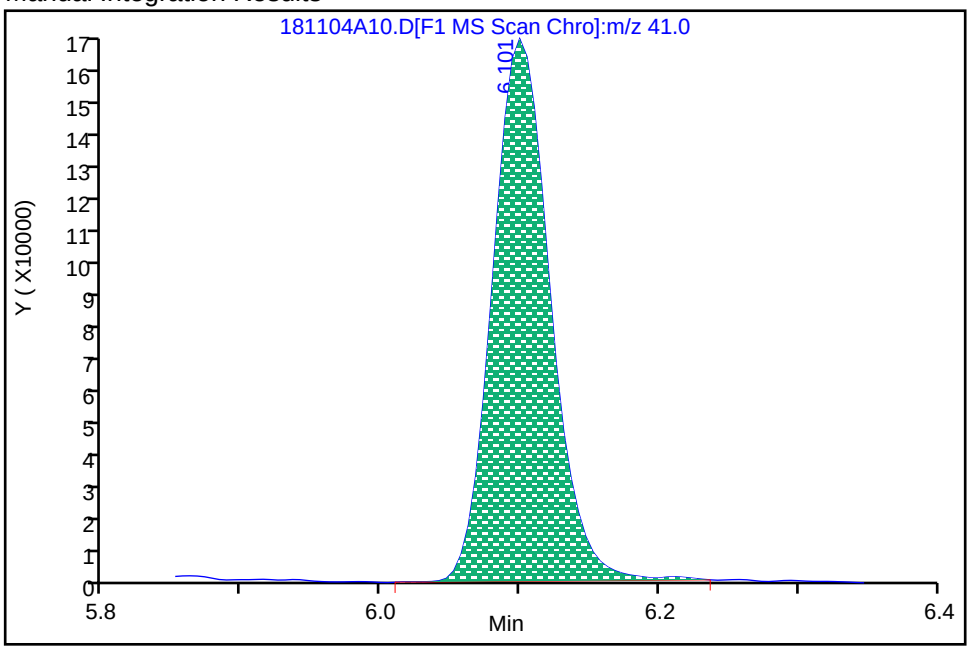
Processing Integration Results

RT: 6.101
Area: 213503
Amount: 50.000
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 6.101
Area: 459209
Amount: 47.655
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 09:59:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A11.D
Lab Sample ID: VSTD100IK Client Sample ID: 50ul/50ml 15576/74
Injection Date: 04-Nov-2019 17:45:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VSTD100IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: Ical, Level: 6 ALS Bottle: 11
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: ecb Review Date: 05-Nov-2019 10:01:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	784022	100.00	111.20	
2 Chloromethane	50.0	1.566	1.566	0.000	885665	100.00	103.13	
3 Vinyl chloride	62.0	1.686	1.686	0.000	1265480	100.00	105.40	
4 Bromomethane	94.0	2.006	2.006	0.000	596736	100.00	87.433	
5 Chloroethane	64.0	2.132	2.137	-0.005	655198	100.00	109.35	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.000	747819	100.00	105.12	
8 Ethyl ether	59.0	2.771	2.771	0.000	879215	100.00	107.36	
9 Acrolein	56.0	2.934	2.934	0.000	4564979	1000.00	1099.16	
10 Acetone	43.0	3.128	3.128	0.000	1935182	200.00	200.91	
11 1,1-Dichloroethene	96.0	3.049	3.049	0.000	925221	100.00	105.42	
12 Freon 113	101.0	3.086	3.086	0.000	981533	100.00	105.82	
13 Methyl iodide	142.0	3.222	3.222	0.000	1927519	100.00	106.62	
14 Carbon disulfide	76.0	3.291	3.290	0.000	3114586	100.00	106.43	
15 Acetonitrile	40.0	3.495	3.495	0.001	2384159	1000.00	1068.14	M
17 Allyl chloride	76.0	3.542	3.542	0.000	471818	100.00	108.02	
16 Methyl Acetate	43.0	3.553	3.553	0.000	1978042	100.00	97.535	
18 Methylene chloride	84.0	3.720	3.720	0.000	1076823	100.00	107.05	
20 Acrylonitrile	53.0	4.040	4.035	0.005	2045769	200.00	213.16	
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	988822	100.00	103.34	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.077	0.000	1596614	100.00	101.87	
23 Hexane	57.0	4.455	4.454	0.000	1336955	100.00	105.04	
24 1,1-Dichloroethane	63.0	4.649	4.648	0.000	1847762	100.00	106.47	
25 Vinyl acetate	86.0	4.696	4.696	0.000	307365	100.00	114.16	M
26 Diisopropyl ether (IPE)	87.0	4.738	4.738	0.000	814594	100.00	105.73	
27 Chloroprene	53.0	4.743	4.738	0.005	1376168	100.00	106.70	
29 cis-1,2-Dichloroethene	96.0	5.398	5.398	0.000	1196901	100.00	106.97	
30 2-Butanone (MEK)	72.0	5.404	5.403	0.000	815920	200.00	208.11	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	854487	100.00	100.00	
32 Propionitrile	54.0	5.482	5.482	0.000	5014895	1000.00	1047.17	
33 Ethyl Acetate	43.0	5.482	5.482	0.000	2526985	100.00	102.79	
34 Methacrylonitrile	67.0	5.676	5.671	0.006	4587096	500.00	526.39	
35 Bromochloromethane	128.0	5.697	5.692	0.006	658381	100.00	103.23	
36 Tetrahydrofuran	42.0	5.702	5.702	0.000	1257422	100.00	99.453	
37 Chloroform	83.0	5.854	5.854	0.000	1879831	100.00	105.76	
$ 39 dibromofluoromethane	111.0	6.054	6.054	0.000	1167144	100.00	100.09	
40 1,1,1-Trichloroethane	97.0	6.027	6.027	0.000	1420785	100.00	106.13	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1202969	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.101	0.000	903730	100.00	102.80	
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	1422716	100.00	104.11	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	1451200	100.00	110.24	
45 Isobutyl alcohol	42.0	6.484	6.478	0.005	1426813	1000.00	1060.29	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.000	1264821	100.00	101.98	
48 Benzene	78.0	6.478	6.478	0.000	4196694	100.00	108.52	
49 Isopropyl Acetate	43.0	6.630	6.630	0.000	3209024	100.00	105.58	
50 1,2-Dichloroethane	62.0	6.567	6.567	0.000	1507091	100.00	104.73	
* 52 1,4-Difluorobenzene	114.0	7.076	7.076	0.000	1785764	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.354	0.000	1264874	100.00	105.64	
54 Methylcyclohexane	83.0	7.637	7.637	0.000	1709357	100.00	111.01	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	1110374	100.00	106.10	
56 Dibromomethane	93.0	7.789	7.789	0.000	826372	100.00	105.72	
57 Methyl methacrylate	41.0	7.810	7.810	0.000	1534243	100.00	107.31	
58 1,4-Dioxane	88.0	7.800	7.800	0.000	437776	1000.00	1045.63	
59 Bromodichloromethane	83.0	8.046	8.046	0.001	1466736	100.00	110.42	
60 2-nitropropane	43.0	8.345	8.345	0.000	793735	100.00	103.55	
61 2-Chloroethylvinyl ether	63.0	8.450	8.450	0.000	987168	100.00	110.28	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	1786234	100.00	107.77	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.000	4765726	200.00	212.73	
$ 64 Toluene-d8	98.0	8.964	8.964	0.000	4007348	100.00	101.80	
65 Toluene	92.0	9.053	9.053	0.000	2736952	100.00	106.28	
66 trans-1,3-Dichloropropene	75.0	9.404	9.399	0.005	1719342	100.00	108.92	
67 Ethyl methacrylate	69.0	9.504	9.504	0.000	1935632	100.00	109.43	
68 1,1,2-Trichloroethane	97.0	9.656	9.656	0.000	1195466	100.00	107.43	
69 Tetrachloroethene	164.0	9.734	9.729	0.005	1039875	100.00	105.10	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.000	1873906	100.00	103.17	
71 2-Hexanone	43.0	9.955	9.954	0.000	4173709	200.00	217.58	
72 Dibromochloromethane	129.0	10.117	10.112	0.006	1381732	100.00	108.07	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	2870989	100.00	104.83	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.238	0.000	1359885	100.00	104.37	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1745386	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	3211424	100.00	103.68	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	1181423	100.00	107.45	
79 Ethylbenzene	106.0	10.945	10.945	0.000	1676994	100.00	107.30	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	2055274	100.00	105.59	
81 o-Xylene	106.0	11.501	11.501	0.000	1978073	100.00	105.41	
82 Styrene	104.0	11.522	11.522	0.000	3453475	100.00	110.87	
83 Bromoform	173.0	11.700	11.700	0.000	1203939	100.00	112.99	
84 Isopropylbenzene	105.0	11.884	11.884	0.000	4801038	100.00	106.16	
85 Cyclohexanone	55.0	11.963	11.963	0.000	1505972	1000.00	1081.60	

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A11.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	1514899	100.00	98.947	
88 1,1,2,2-Tetrachloroethane	83.0	12.209	12.209	0.000	2043482	100.00	104.13	
87 Bromobenzene	156.0	12.183	12.183	0.000	1516721	100.00	107.77	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	674962	100.00	102.20	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	518549	100.00	101.84	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	5938108	100.00	108.52	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	3532319	100.00	106.91	
93 1,3,5-Trimethylbenzene	105.0	12.476	12.476	0.000	3721809	100.00	106.96	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	1317500	100.00	103.12	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	3300647	100.00	105.49	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.828	0.000	3854782	100.00	109.39	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	4596403	100.00	107.49	
98 1,3-Dichlorobenzene	146.0	13.079	13.074	0.005	2708504	100.00	104.15	
99 p-Isopropyltoluene	119.0	13.121	13.121	0.000	3749223	100.00	105.16	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	960531	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.174	0.000	2719749	100.00	102.23	
102 Benzyl chloride	91.0	13.279	13.279	0.000	3305012	100.00	112.84	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	3611398	100.00	108.13	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	2610713	100.00	105.42	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	567810	100.00	106.98	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	1819242	100.00	105.28	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	715046	100.00	105.38	
108 Naphthalene	128.0	15.082	15.077	0.005	5210308	100.00	111.20	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	1548461	100.00	103.10	
S 110 Xylenes (total)	106.0	16.000		0.000		200.00	211.00	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		200.00	210.32	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

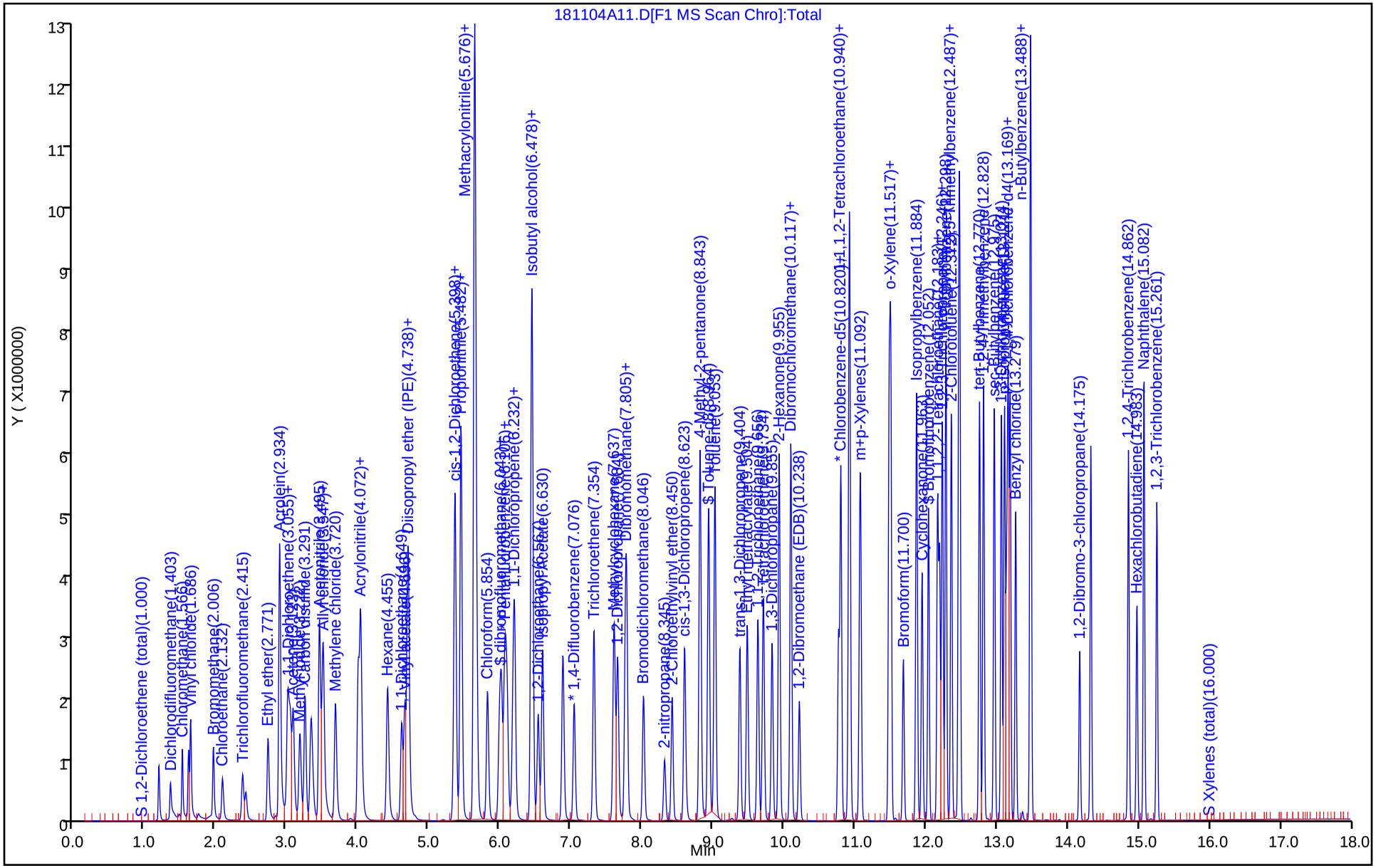
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A11.D				
Injection Date:	04-Nov-2019 17:45:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	50ul/50ml 15576/74	Lab ID:	VSTD100IK		
Sample Info:	18110419, VSTD100IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

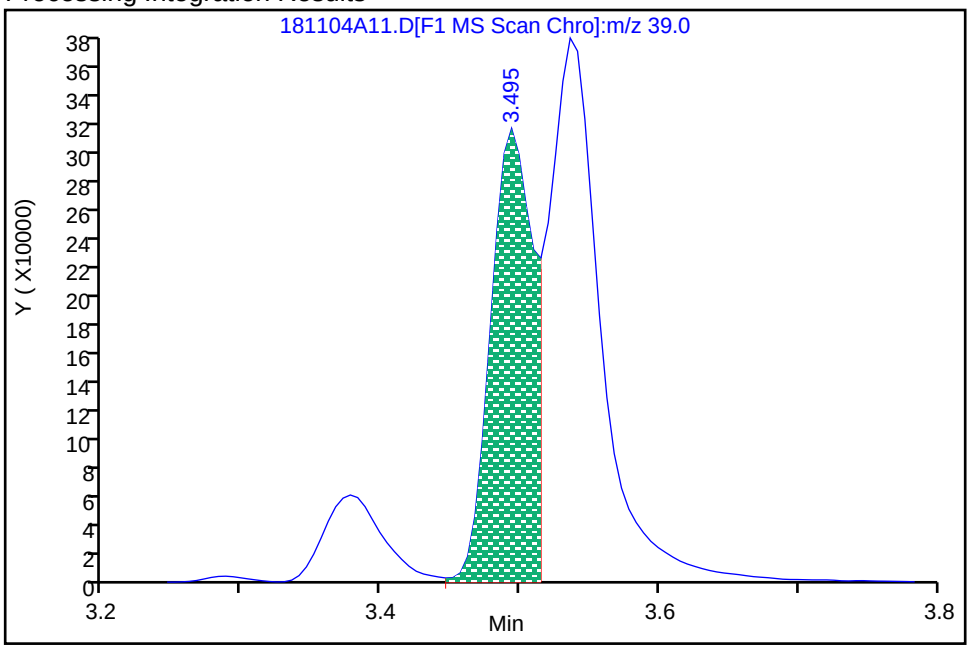
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A11.D		
Injection Date:	04-Nov-2019 17:45:30	Inst. ID:	msd18.i
Client ID:	50ul/50ml 15576/74	Lab ID:	VSTD100IK
Sample Info:	18110419, VSTD100IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

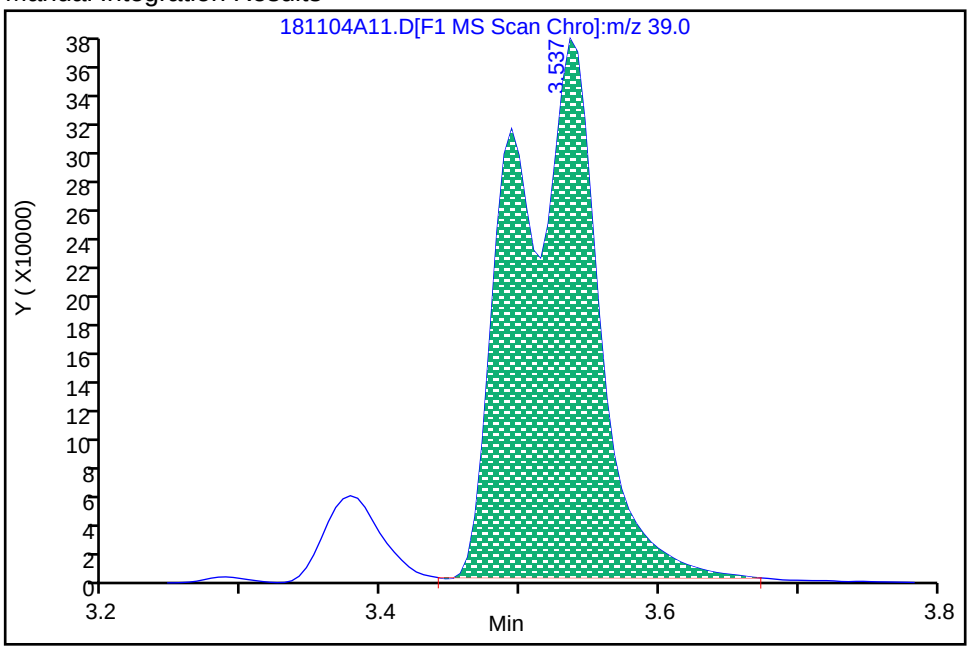
Processing Integration Results

RT: 3.495
Area: 655945
Amount: 1037.55
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 1577194
Amount: 1068.14
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

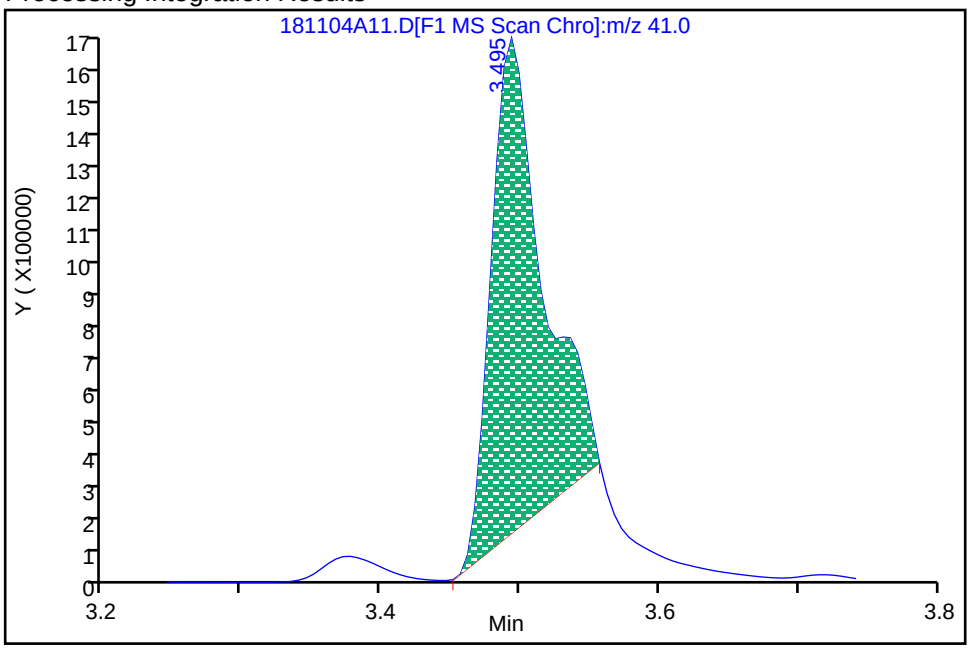
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A11.D		
Injection Date:	04-Nov-2019 17:45:30	Inst. ID:	msd18.i
Client ID:	50ul/50ml 15576/74	Lab ID:	VSTD100IK
Sample Info:	18110419, VSTD100IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

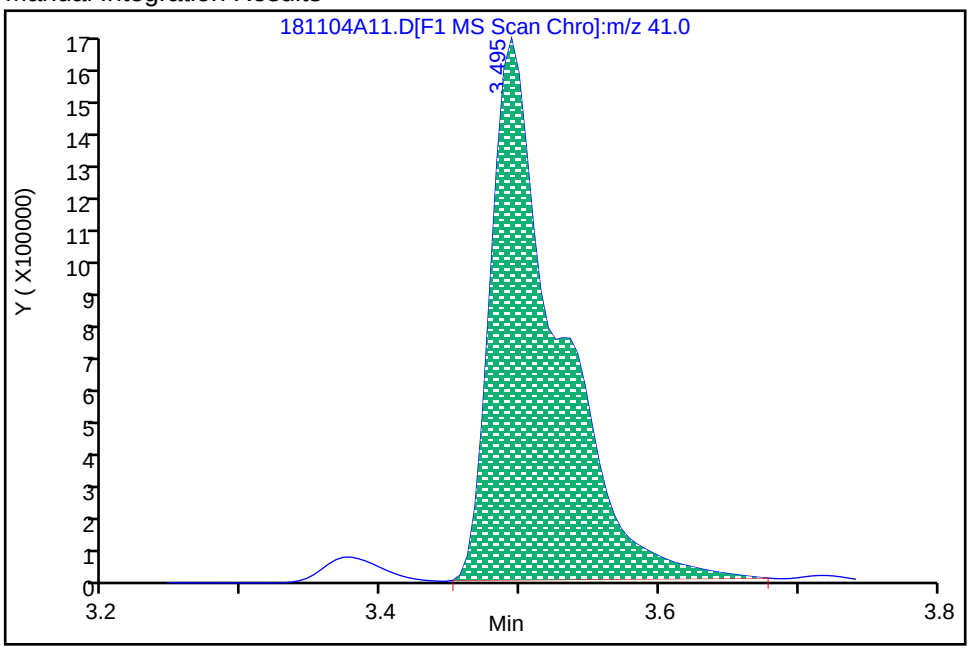
Processing Integration Results

RT: 3.495
Area: 3787359
Amount: 1037.55
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.495
Area: 5355861
Amount: 1068.14
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

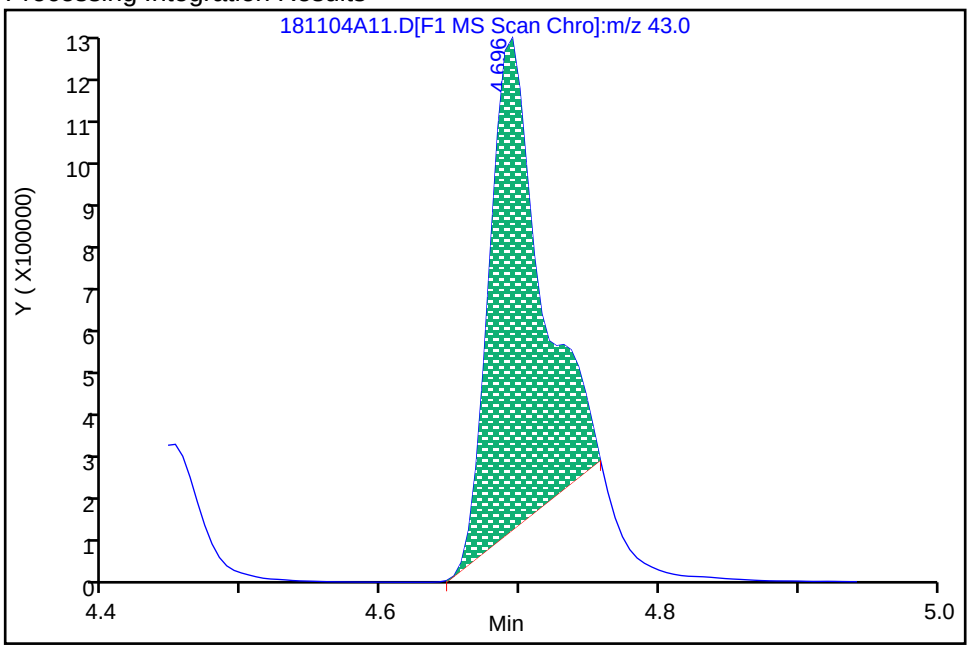
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A11.D		
Injection Date:	04-Nov-2019 17:45:30	Inst. ID:	msd18.i
Client ID:	50ul/50ml 15576/74	Lab ID:	VSTD100IK
Sample Info:	18110419, VSTD100IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

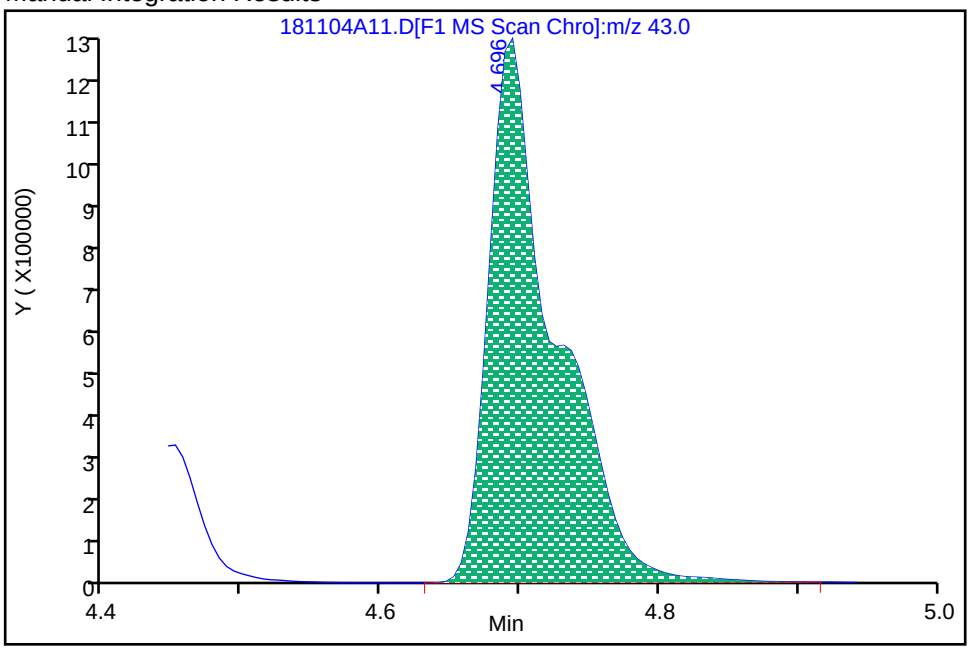
Processing Integration Results

RT: 4.696
Area: 2931466
Amount: 106.61
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.696
Area: 4160070
Amount: 114.16
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A12.D
Lab Sample ID: VSTD200IK Client Sample ID: 100ul/50ml 15576/74
Injection Date: 04-Nov-2019 18:09:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VSTD200IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: Ical, Level: 7 ALS Bottle: 12
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: ecb Review Date: 05-Nov-2019 10:02:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.398	1.403	-0.004	1554968	200.00	204.24	
2 Chloromethane	50.0	1.566	1.566	0.000	1893172	200.00	204.16	
3 Vinyl chloride	62.0	1.686	1.686	0.000	2475154	200.00	190.90	
4 Bromomethane	94.0	2.001	2.006	-0.004	1163872	200.00	157.92	
5 Chloroethane	64.0	2.121	2.137	-0.015	1291155	200.00	199.57	
6 Trichlorofluoromethane	101.0	2.410	2.415	-0.004	1529346	200.00	198.80	
8 Ethyl ether	59.0	2.772	2.771	0.000	1706518	200.00	192.97	
9 Acrolein	56.0	2.939	2.934	0.006	8915651	2000.00	1988.01	
10 Acetone	43.0	3.128	3.128	0.001	3734401	400.00	359.05	
11 1,1-Dichloroethene	96.0	3.050	3.049	0.000	1853317	200.00	195.56	
12 Freon 113	101.0	3.081	3.086	-0.005	1923445	200.00	192.03	
13 Methyl iodide	142.0	3.217	3.222	-0.004	3814358	200.00	195.39	
14 Carbon disulfide	76.0	3.291	3.290	0.000	6242042	200.00	197.53	
15 Acetonitrile	40.0	3.500	3.495	0.006	4594514	2000.00	1906.25	M
17 Allyl chloride	76.0	3.537	3.542	-0.004	904956	200.00	191.97	
16 Methyl Acetate	43.0	3.553	3.553	0.000	3871823	200.00	176.80	
18 Methylene chloride	84.0	3.721	3.720	0.000	2096280	200.00	193.21	
20 Acrylonitrile	53.0	4.040	4.035	0.005	3961413	400.00	382.26	
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	1928088	200.00	186.61	
22 tert-Butyl methyl ether(MTBE)	73.0	4.082	4.077	0.006	2924143	200.00	172.78	
23 Hexane	57.0	4.449	4.454	-0.004	2583815	200.00	187.99	
24 1,1-Dichloroethane	63.0	4.649	4.648	0.000	3609245	200.00	192.59	
25 Vinyl acetate	86.0	4.696	4.696	0.000	597681	200.00	205.58	M
26 Diisopropyl ether (IPE)	87.0	4.738	4.738	0.000	1579398	200.00	189.85	
27 Chloroprene	53.0	4.738	4.738	0.000	2675063	200.00	192.08	
29 cis-1,2-Dichloroethene	96.0	5.393	5.398	-0.004	2361703	200.00	195.47	
30 2-Butanone (MEK)	72.0	5.409	5.403	0.005	1643664	400.00	388.25	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	1521386	200.00	164.89	
32 Propionitrile	54.0	5.488	5.482	0.005	9539636	2000.00	1844.73	
33 Ethyl Acetate	43.0	5.482	5.482	0.000	4929856	200.00	186.18	
34 Methacrylonitrile	67.0	5.676	5.671	0.006	8876076	1000.00	943.27	
35 Bromochloromethane	128.0	5.697	5.692	0.006	1304419	200.00	189.40	
36 Tetrahydrofuran	42.0	5.703	5.702	0.000	2401604	200.00	175.91	
37 Chloroform	83.0	5.855	5.854	0.000	3655187	200.00	190.45	
$ 39 dibromofluoromethane	111.0	6.054	6.054	0.000	2300500	200.00	182.70	
40 1,1,1-Trichloroethane	97.0	6.028	6.027	0.000	2664902	200.00	184.34	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1299003	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.101	0.001	1690232	200.00	178.06	
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	2766655	200.00	187.50	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	2826515	200.00	198.84	
45 Isobutyl alcohol	42.0	6.489	6.478	0.010	2855106	2000.00	1964.83	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.001	2510294	200.00	188.63	
48 Benzene	78.0	6.479	6.478	0.000	8191667	200.00	197.40	
49 Isopropyl Acetate	43.0	6.631	6.630	0.000	6362493	200.00	195.08	
50 1,2-Dichloroethane	62.0	6.568	6.567	0.000	2935795	200.00	190.13	
* 52 1,4-Difluorobenzene	114.0	7.071	7.076	-0.005	1916185	50.000	50.000	
53 Trichloroethene	130.0	7.349	7.354	-0.004	2450096	200.00	190.70	
54 Methylcyclohexane	83.0	7.632	7.637	-0.005	3344854	200.00	202.43	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	2175980	200.00	193.76	
56 Dibromomethane	93.0	7.789	7.789	0.000	1640813	200.00	195.62	
57 Methyl methacrylate	41.0	7.810	7.810	0.000	2995004	200.00	195.22	
58 1,4-Dioxane	88.0	7.800	7.800	0.000	896987	2000.00	1996.64	
59 Bromodichloromethane	83.0	8.046	8.046	0.001	2951045	200.00	207.04	
60 2-nitropropane	43.0	8.345	8.345	0.001	1588348	200.00	193.11	
61 2-Chloroethylvinyl ether	63.0	8.450	8.450	0.000	1938914	200.00	201.86	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	3555139	200.00	199.89	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.001	9229845	400.00	383.95	
$ 64 Toluene-d8	98.0	8.964	8.964	0.000	7829512	200.00	184.63	
65 Toluene	92.0	9.053	9.053	0.000	5308394	200.00	191.33	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	3443057	200.00	202.47	
67 Ethyl methacrylate	69.0	9.504	9.504	0.000	3820928	200.00	200.52	
68 1,1,2-Trichloroethane	97.0	9.656	9.656	0.000	2309722	200.00	192.66	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	2067667	200.00	193.99	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.001	3682190	200.00	188.18	
71 2-Hexanone	43.0	9.955	9.954	0.000	8079939	400.00	390.99	
72 Dibromochloromethane	129.0	10.117	10.112	0.006	2791269	200.00	202.65	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	5588967	200.00	189.42	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.238	0.000	2717824	200.00	193.63	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1880340	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	6326776	200.00	189.60	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.001	2380506	200.00	200.96	
79 Ethylbenzene	106.0	10.946	10.945	0.000	3325539	200.00	197.51	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	4079437	200.00	194.54	
81 o-Xylene	106.0	11.501	11.501	0.000	3937872	200.00	194.78	
82 Styrene	104.0	11.522	11.522	0.000	6815074	200.00	203.09	
83 Bromoform	173.0	11.701	11.700	0.000	2441035	200.00	212.66	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	9479198	200.00	194.56	
85 Cyclohexanone	55.0	11.963	11.963	0.000	3091041	2000.00	2060.68	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	3004247	200.00	182.14	
88 1,1,2,2-Tetrachloroethane	83.0	12.209	12.209	0.000	4036737	200.00	190.26	
87 Bromobenzene	156.0	12.183	12.183	0.001	2987684	200.00	196.35	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	1323563	200.00	185.36	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	1013822	200.00	184.16	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	11248451	200.00	190.14	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	6918307	200.00	193.67	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	7435275	200.00	197.64	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	2591659	200.00	187.62	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	6459926	200.00	190.96	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.828	0.000	7583977	200.00	199.05	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	9126479	200.00	197.40	
98 1,3-Dichlorobenzene	146.0	13.080	13.074	0.005	5294104	200.00	188.29	
99 p-Isopropyltoluene	119.0	13.122	13.121	0.000	7522076	200.00	195.14	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	1038489	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.174	0.000	5345123	200.00	185.84	
102 Benzyl chloride	91.0	13.279	13.279	0.000	6481631	200.00	204.69	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	7025918	200.00	194.57	
104 1,2-Dichlorobenzene	146.0	13.489	13.488	0.000	5103526	200.00	190.61	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	1120789	200.00	195.31	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	3545452	200.00	189.78	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	1390165	200.00	189.80	
108 Naphthalene	128.0	15.077	15.077	0.000	9874453	200.00	194.92	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	2996513	200.00	184.54	
S 110 Xylenes (total)	106.0	16.000		0.000		400.00	389.32	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		400.00	382.08	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

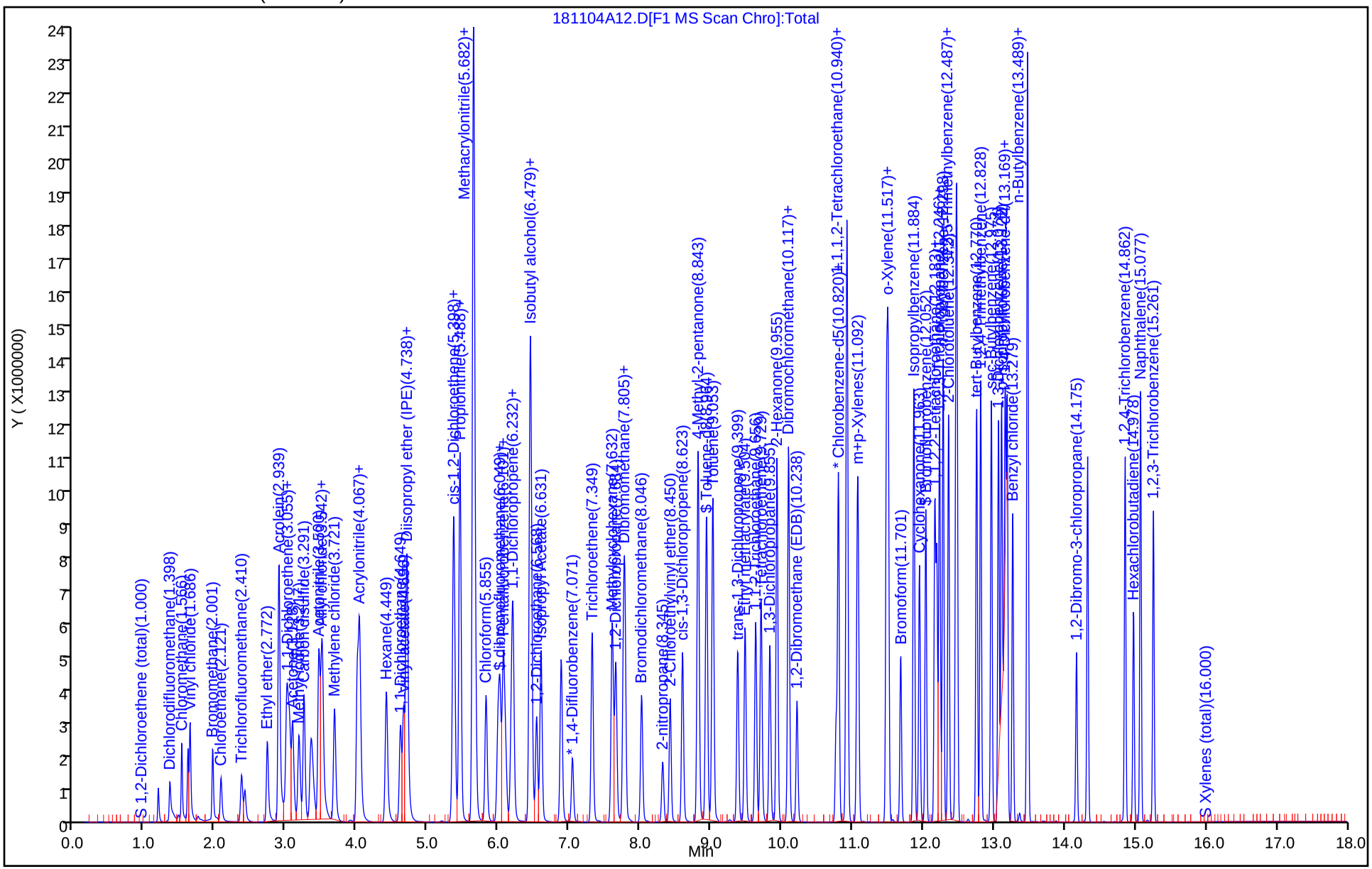
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A12.D				
Injection Date:	04-Nov-2019 18:09:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	100ul/50ml 15576/74	Lab ID:	VSTD200IK		
Sample Info:	18110419, VSTD200IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

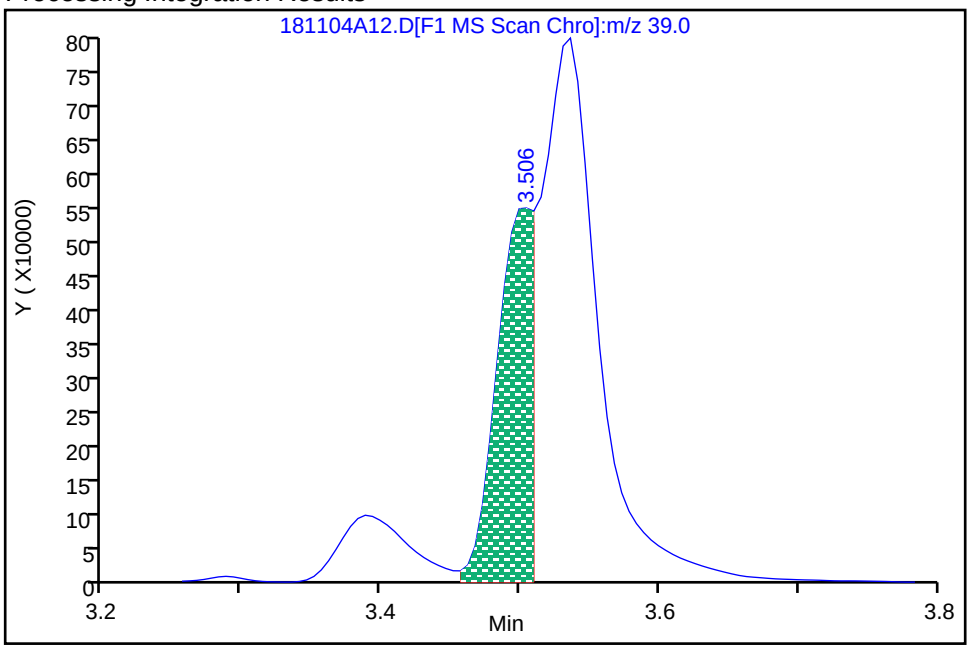
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A12.D		
Injection Date:	04-Nov-2019 18:09:30	Inst. ID:	msd18.i
Client ID:	100ul/50ml 15576/74	Lab ID:	VSTD200IK
Sample Info:	18110419, VSTD200IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

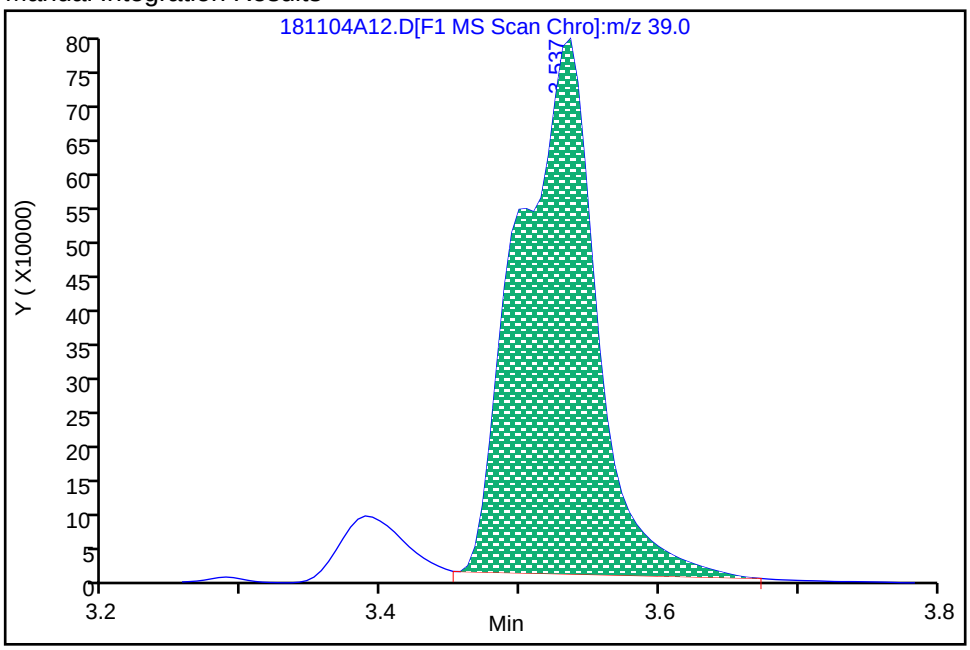
Processing Integration Results

RT: 3.506
Area: 950549
Amount: 1898.59
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 3032676
Amount: 1906.25
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

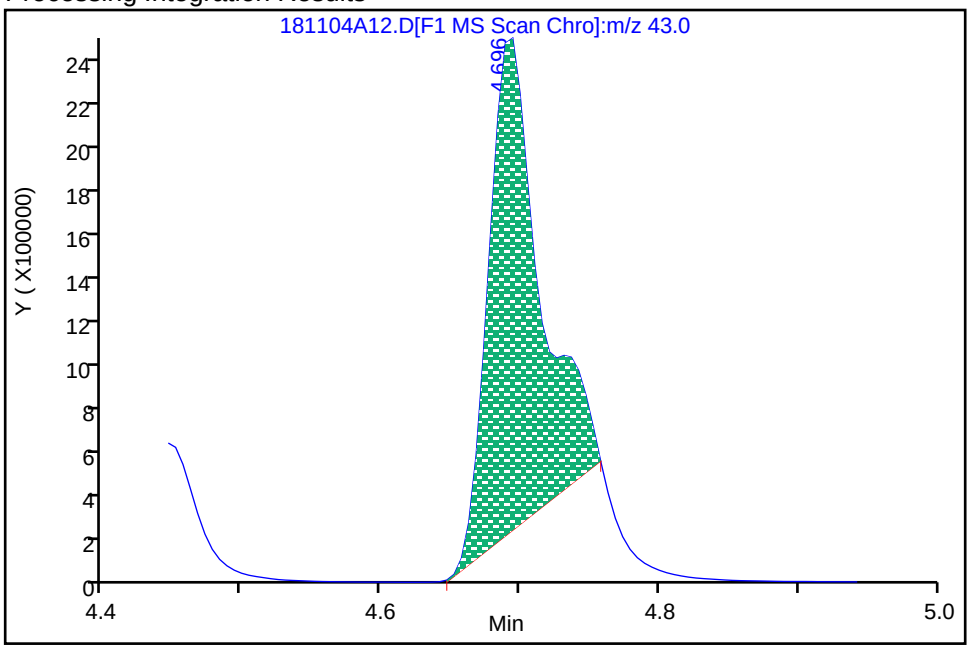
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A12.D		
Injection Date:	04-Nov-2019 18:09:30	Inst. ID:	msd18.i
Client ID:	100ul/50ml 15576/74	Lab ID:	VSTD200IK
Sample Info:	18110419, VSTD200IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

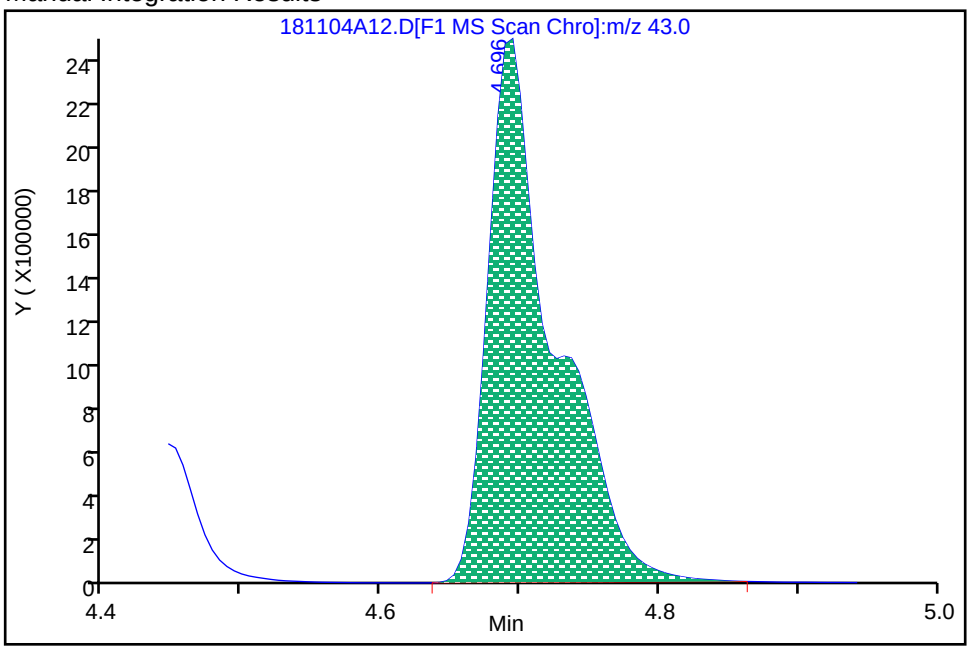
Processing Integration Results

RT: 4.696
Area: 5751393
Amount: 194.58
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.696
Area: 8086444
Amount: 205.58
Amount Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A14.D
Lab Sample ID: VICV050IK Client Sample ID: 50ul/100ml 15578/73
Injection Date: 04-Nov-2019 18:59:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VICV050IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: LCS ALS Bottle: 14
Cpnd Sublist: std.sub Aim Limits File: ICV.txt
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Conc. Added	Conc. Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	44.093	-11.8	30	88.2	70- 130
2 Chloromethane	50	46.203	-7.6	30	92.4	70- 130
3 Vinyl chloride	50	44.476	-11	30	89	70- 130
4 Bromomethane	50	39.738	-20.5	30	79.5	70- 130
5 Chloroethane	50	51.866	3.7	30	103	70- 130
6 Trichlorofluoromethane	50	47.026	-5.9	30	94.1	70- 130
8 Ethyl ether	50	50.351	0.7	30	100	70- 130
9 Acrolein	500	403.97	-19.2	30	80.8	70- 130
10 Acetone	100	91.16	-8.8	30	91.2	70- 130
11 1,1-Dichloroethene	50	55.264	10.5	30	110	70- 130
12 Freon 113	50	49.545	-0.9	30	99.1	70- 130
13 Methyl iodide	50	49.234	-1.5	30	98.5	70- 130
14 Carbon disulfide	50	48.264	-3.5	30	96.5	70- 130
15 Acetonitrile	500	495.5	-0.9	30	99.1	70- 130
16 Methyl Acetate	50	45.273	-9.5	30	90.5	70- 130
17 Allyl chloride	50	57.516	15	30	115	70- 130
18 Methylene chloride	50	48.027	-3.9	30	96.1	70- 130
20 Acrylonitrile	100	95.578	-4.4	30	95.6	70- 130
21 trans-1,2-Dichloroethene	50	51.283	2.6	30	102	70- 130
22 tert-Butyl methyl ether(MTB	50	47.115	-5.8	30	94.2	70- 130
23 Hexane	50	45.515	-9	30	91	70- 130
24 1,1-Dichloroethane	50	48.293	-3.4	30	96.6	70- 130
25 Vinyl acetate	50	53.198	6.4	30	106	70- 130
26 Diisopropyl ether (IPE)	50	50.817	1.6	30	101	70- 130
27 Chloroprene	50	51.751	3.5	30	103	70- 130
29 cis-1,2-Dichloroethene	50	49.25	-1.5	30	98.5	70- 130
30 2-Butanone (MEK)	100	94.303	-5.7	30	94.3	70- 130
31 2,2-Dichloropropane	50	45.545	-8.9	30	91.1	70- 130
32 Propionitrile	500	484.09	-3.2	30	96.8	70- 130
33 Ethyl Acetate	50	46.919	-6.2	30	93.8	70- 130
34 Methacrylonitrile	250	240.07	-4	30	96	70- 130
35 Bromochloromethane	50	47.528	-4.9	30	95.1	70- 130
36 Tetrahydrofuran	50	43.812	-12.4	30	87.6	70- 130
37 Chloroform	50	48.988	-2	30	98	70- 130
$ 39 dibromofluoromethane	50	47.64	-4.7	30	95.3	70- 130

Compound	Conc. Added	Conc. Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
40 1,1,1-Trichloroethane	50	49.19	-1.6	30	98.4	70- 130
42 Cyclohexane	50	50.903	1.8	30	101	70- 130
43 1,1-Dichloropropene	50	47.663	-4.7	30	95.3	70- 130
44 Carbon tetrachloride	50	48.958	-2.1	30	97.9	70- 130
45 Isobutyl alcohol	500	488.63	-2.3	30	97.7	70- 130
$ 46 1,2-Dichloroethane-d4	50	47.319	-5.4	30	94.6	70- 130
48 Benzene	50	49.445	-1.1	30	98.9	70- 130
49 Isopropyl Acetate	50	48.021	-4	30	96	70- 130
50 1,2-Dichloroethane	50	47.421	-5.2	30	94.8	70- 130
53 Trichloroethene	50	48.097	-3.8	30	96.2	70- 130
54 Methylcyclohexane	50	51.369	2.7	30	102	70- 130
55 1,2-Dichloropropane	50	48.48	-3	30	97	70- 130
56 Dibromomethane	50	47.393	-5.2	30	94.8	70- 130
57 Methyl methacrylate	50	48.456	-3.1	30	96.9	70- 130
58 1,4-Dioxane	500	494.01	-1.2	30	98.8	70- 130
59 Bromodichloromethane	50	50.006	0	30	100	70- 130
60 2-nitropropane	50	45.808	-8.4	30	91.6	70- 130
61 2-Chloroethylvinyl ether	50	50.769	1.5	30	101	70- 130
62 cis-1,3-Dichloropropene	50	50.431	0.9	30	100	70- 130
63 4-Methyl-2-pentanone	100	95.923	-4.1	30	95.9	70- 130
$ 64 Toluene-d8	50	50.672	1.3	30	101	70- 130
65 Toluene	50	48.684	-2.6	30	97.4	70- 130
66 trans-1,3-Dichloropropene	50	51.5	3	30	102	70- 130
67 Ethyl methacrylate	50	51.104	2.2	30	102	70- 130
68 1,1,2-Trichloroethane	50	48.761	-2.5	30	97.5	70- 130
69 Tetrachloroethene	50	49.701	-0.6	30	99.4	70- 130
70 1,3-Dichloropropane	50	49.03	-1.9	30	98.1	70- 130
71 2-Hexanone	100	97.763	-2.2	30	97.8	70- 130
72 Dibromochloromethane	50	49.572	-0.9	30	99.1	70- 130
73 n-Butyl acetate	50	48.235	-3.5	30	96.5	70- 130
75 1,2-Dibromoethane (EDB)	50	48.187	-3.6	30	96.4	70- 130
77 Chlorobenzene	50	47.751	-4.5	30	95.5	70- 130
78 1,1,1,2-Tetrachloroethane	50	48.459	-3.1	30	96.9	70- 130
79 Ethylbenzene	50	49.293	-1.4	30	98.6	70- 130
80 m+p-Xylenes	50	48.263	-3.5	0	96.5	70- 130
81 o-Xylene	50	48.781	-2.4	30	97.6	70- 130
82 Styrene	50	50.655	1.3	30	101	70- 130
83 Bromoform	50	50.47	0.9	30	100	70- 130
84 Isopropylbenzene	50	48.342	-3.3	30	96.7	70- 130
85 Cyclohexanone	500	504.49	0.9	30	100	70- 130
$ 86 Bromofluorobenzene	50	49.149	-1.7	30	98.3	70- 130
87 Bromobenzene	50	49.553	-0.9	30	99.1	70- 130
88 1,1,2,2-Tetrachloroethane	50	47.02	-6	30	94	70- 130
89 1,2,3-Trichloropropane	50	48.559	-2.9	30	97.1	70- 130
90 trans-1,4-Dichloro-2-butene	50	42.44	-15.1	30	84.9	70- 130
91 n-Propylbenzene	50	48.202	-3.6	30	96.4	70- 130
92 2-Chlorotoluene	50	49.312	-1.4	30	98.6	70- 130

Compound	Conc. Added	Conc. Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
93 1,3,5-Trimethylbenzene	50	49.624	-0.8	30	99.2	70- 130
94 4-Chlorotoluene	50	47.976	-4	30	96	70- 130
95 tert-Butylbenzene	50	47.342	-5.3	30	94.7	70- 130
96 1,2,4-Trimethylbenzene	50	50.165	0.3	30	100	70- 130
97 sec-Butylbenzene	50	47.219	-5.6	30	94.4	70- 130
98 1,3-Dichlorobenzene	50	48.449	-3.1	30	96.9	70- 130
99 p-Isopropyltoluene	50	48.281	-3.4	30	96.6	70- 130
101 1,4-Dichlorobenzene	50	48.17	-3.7	30	96.3	70- 130
102 Benzyl chloride	50	47.595	-4.8	30	95.2	70- 130
103 n-Butylbenzene	50	49.208	-1.6	30	98.4	70- 130
104 1,2-Dichlorobenzene	50	49.843	-0.3	30	99.7	70- 130
105 1,2-Dibromo-3-chloropropane	50	48.477	-3	30	97	70- 130
106 1,2,4-Trichlorobenzene	50	48.875	-2.3	30	97.7	70- 130
107 Hexachlorobutadiene	50	50.755	1.5	30	101	70- 130
108 Naphthalene	50	51.208	2.4	30	102	70- 130
109 1,2,3-Trichlorobenzene	50	48.083	-3.8	30	96.2	70- 130
S 110 Xylenes (total)	100	97.043	-3	30	97	70- 130
S 111 1,2-Dichloroethene (total)	100	100.53	0.5	30	100	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A14.D
Lab Sample ID: VICV050IK Client Sample ID: 50ul/100ml 15578/73
Injection Date: 04-Nov-2019 18:59:30 Dil. Factor: 1.0
Operator: ECB Inst. ID: msd18.i
Sample Info: 18110419, VICV050IK
Method: \\Organics\dd\chem\msd18.i\18110419.b\8260B-18.m
Method Date: 07-Nov-2019 09:09:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: LCS ALS Bottle: 14
Cpnd Sublist: std.sub Aim Limits File: ICV.txt
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: ecb Review Date: 05-Nov-2019 10:19:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.000	355769	44.093	44.093	M
2 Chloromethane	50.0	1.565	1.566	0.000	454072	46.203	46.203	
3 Vinyl chloride	62.0	1.686	1.686	0.000	611141	44.476	44.476	
4 Bromomethane	94.0	2.006	2.006	0.000	310383	39.738	39.738	
5 Chloroethane	64.0	2.132	2.137	-0.005	355634	51.866	51.866	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.000	381464	47.026	47.026	
8 Ethyl ether	59.0	2.771	2.771	0.000	471892	50.351	50.351	
9 Acrolein	56.0	2.934	2.934	0.000	1920059	403.97	403.97	
10 Acetone	43.0	3.128	3.128	0.000	1004852	91.160	91.160	
11 1,1-Dichloroethene	96.0	3.049	3.049	0.000	555063	55.264	55.264	
12 Freon 113	101.0	3.086	3.086	0.000	525937	49.545	49.545	
13 Methyl iodide	142.0	3.217	3.222	-0.005	1018605	49.234	49.234	
14 Carbon disulfide	76.0	3.290	3.290	0.000	1616413	48.264	48.264	
15 Acetonitrile	40.0	3.495	3.495	0.000	1265688	495.50	495.50	M
17 Allyl chloride	76.0	3.542	3.542	0.000	287776	57.516	57.516	
16 Methyl Acetate	43.0	3.552	3.553	0.000	1050729	45.273	45.273	
18 Methylene chloride	84.0	3.720	3.720	0.000	554594	48.027	48.027	
20 Acrylonitrile	53.0	4.035	4.035	0.000	1049741	95.578	95.578	
21 trans-1,2-Dichloroethene	96.0	4.072	4.072	0.000	561548	51.283	51.283	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.077	0.000	845058	47.115	47.115	
23 Hexane	57.0	4.454	4.454	0.000	662973	45.515	45.515	
24 1,1-Dichloroethane	63.0	4.648	4.648	0.000	959174	48.293	48.293	
25 Vinyl acetate	86.0	4.690	4.696	-0.004	163914	53.198	53.198	M
26 Diisopropyl ether (IPE)	87.0	4.737	4.738	0.000	448046	50.817	50.817	
27 Chloroprene	53.0	4.737	4.738	0.000	763838	51.751	51.751	
29 cis-1,2-Dichloroethene	96.0	5.398	5.398	0.000	630626	49.250	49.250	
30 2-Butanone (MEK)	72.0	5.403	5.403	0.000	423114	94.303	94.303	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.388	0.000	445365	45.545	45.545	
32 Propionitrile	54.0	5.482	5.482	0.000	2653096	484.09	484.09	
33 Ethyl Acetate	43.0	5.482	5.482	0.000	1329092	46.919	46.919	
34 Methacrylonitrile	67.0	5.671	5.671	0.000	2394138	240.07	240.07	
35 Bromochloromethane	128.0	5.692	5.692	0.000	346910	47.528	47.528	
36 Tetrahydrofuran	42.0	5.702	5.702	0.000	633928	43.812	43.812	
37 Chloroform	83.0	5.854	5.854	0.000	996435	48.988	48.988	
$ 39 dibromofluoromethane	111.0	6.053	6.054	0.000	635740	47.640	47.640	
40 1,1,1-Trichloroethane	97.0	6.027	6.027	0.000	753616	49.190	49.190	
* 41 Pentafluorobenzene	168.0	6.132	6.132	0.000	1376690	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.101	0.000	512101	50.903	50.903	
43 1,1-Dichloropropene	75.0	6.237	6.237	0.000	745370	47.663	47.663	
44 Carbon tetrachloride	119.0	6.216	6.216	0.000	737561	48.958	48.958	
45 Isobutyl alcohol	42.0	6.483	6.478	0.005	752500	488.63	488.63	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.468	0.000	670621	47.319	47.319	
48 Benzene	78.0	6.478	6.478	0.000	2185127	49.445	49.445	
49 Isopropyl Acetate	43.0	6.630	6.630	0.000	1667872	48.021	48.021	
50 1,2-Dichloroethane	62.0	6.567	6.567	0.000	779758	47.421	47.421	
* 52 1,4-Difluorobenzene	114.0	7.076	7.076	0.000	2040627	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.354	0.000	658074	48.097	48.097	
54 Methylcyclohexane	83.0	7.637	7.637	0.000	903924	51.369	51.369	
55 1,2-Dichloropropane	63.0	7.684	7.684	0.000	579787	48.480	48.480	
56 Dibromomethane	93.0	7.789	7.789	0.000	423332	47.393	47.393	
57 Methyl methacrylate	41.0	7.810	7.810	0.000	791674	48.456	48.456	
58 1,4-Dioxane	88.0	7.799	7.800	0.000	236348	494.01	494.01	
59 Bromodichloromethane	83.0	8.046	8.046	0.000	759027	50.006	50.006	
60 2-nitropropane	43.0	8.345	8.345	0.000	401235	45.808	45.808	
61 2-Chloroethylvinyl ether	63.0	8.450	8.450	0.000	519328	50.769	50.769	
62 cis-1,3-Dichloropropene	75.0	8.623	8.623	0.000	955204	50.431	50.431	
63 4-Methyl-2-pentanone	43.0	8.843	8.843	0.000	2455648	95.923	95.923	
$ 64 Toluene-d8	98.0	8.963	8.964	0.000	2237180	50.672	50.672	
65 Toluene	92.0	9.053	9.053	0.000	1406220	48.684	48.684	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	911777	51.500	51.500	
67 Ethyl methacrylate	69.0	9.503	9.504	0.000	1013821	51.104	51.104	
68 1,1,2-Trichloroethane	97.0	9.655	9.656	0.000	608599	48.761	48.761	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	551523	49.701	49.701	
70 1,3-Dichloropropane	76.0	9.855	9.855	0.000	998810	49.030	49.030	
71 2-Hexanone	43.0	9.954	9.954	0.000	2103342	97.763	97.763	
72 Dibromochloromethane	129.0	10.117	10.112	0.005	710853	49.572	49.572	
73 n-Butyl acetate	43.0	10.122	10.122	0.000	1481682	48.235	48.235	
75 1,2-Dibromoethane (EDB)	107.0	10.237	10.238	0.000	704178	48.187	48.187	
* 76 Chlorobenzene-d5	117.0	10.788	10.788	0.000	1957616	50.000	50.000	
77 Chlorobenzene	112.0	10.819	10.820	0.000	1658858	47.751	47.751	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.935	0.000	597621	48.459	48.459	
79 Ethylbenzene	106.0	10.945	10.945	0.000	864070	49.293	49.293	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	1053621	48.263	48.263	
81 o-Xylene	106.0	11.501	11.501	0.000	1026741	48.781	48.781	
82 Styrene	104.0	11.522	11.522	0.000	1769736	50.655	50.655	
83 Bromoform	173.0	11.700	11.700	0.000	603136	50.470	50.470	
84 Isopropylbenzene	105.0	11.884	11.884	0.000	2452032	48.342	48.342	
85 Cyclohexanone	55.0	11.962	11.963	0.000	787834	504.49	504.49	

Report Date: 07-Nov-2019 09:16:54 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A14.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	843980	49.149	49.149	
88 1,1,2,2-Tetrachloroethane	83.0	12.204	12.209	-0.005	1045599	47.020	47.020	
87 Bromobenzene	156.0	12.177	12.183	-0.004	790291	49.553	49.553	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.000	363419	48.559	48.559	
90 trans-1,4-Dichloro-2-butene	53.0	12.240	12.240	0.000	244878	42.440	42.440	
91 n-Propylbenzene	91.0	12.298	12.298	0.000	2988756	48.202	48.202	
92 2-Chlorotoluene	91.0	12.371	12.372	0.000	1846323	49.312	49.312	
93 1,3,5-Trimethylbenzene	105.0	12.476	12.476	0.000	1956682	49.624	49.624	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	694603	47.976	47.976	
95 tert-Butylbenzene	119.0	12.770	12.770	0.000	1678609	47.342	47.342	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.828	0.000	2003260	50.165	50.165	
97 sec-Butylbenzene	105.0	12.974	12.975	0.000	2288102	47.219	47.219	
98 1,3-Dichlorobenzene	146.0	13.074	13.074	0.000	1427752	48.449	48.449	
99 p-Isopropyltoluene	119.0	13.121	13.121	0.000	1950650	48.281	48.281	
* 100 1,4-Dichlorobenzene-d4	152.0	13.147	13.148	0.000	1088457	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.174	0.000	1452139	48.170	48.170	
102 Benzyl chloride	91.0	13.278	13.279	0.000	1579645	47.595	47.595	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	1862454	49.208	49.208	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	1398728	49.843	49.843	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	291579	48.477	48.477	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	957026	48.875	48.875	
107 Hexachlorobutadiene	225.0	14.982	14.983	0.000	391826	50.755	50.755	
108 Naphthalene	128.0	15.077	15.077	0.000	2719022	51.208	51.208	
109 1,2,3-Trichlorobenzene	180.0	15.260	15.261	0.000	818318	48.083	48.083	
S 110 Xylenes (total)	106.0	16.000		0.000		97.043	97.043	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.53	100.53	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

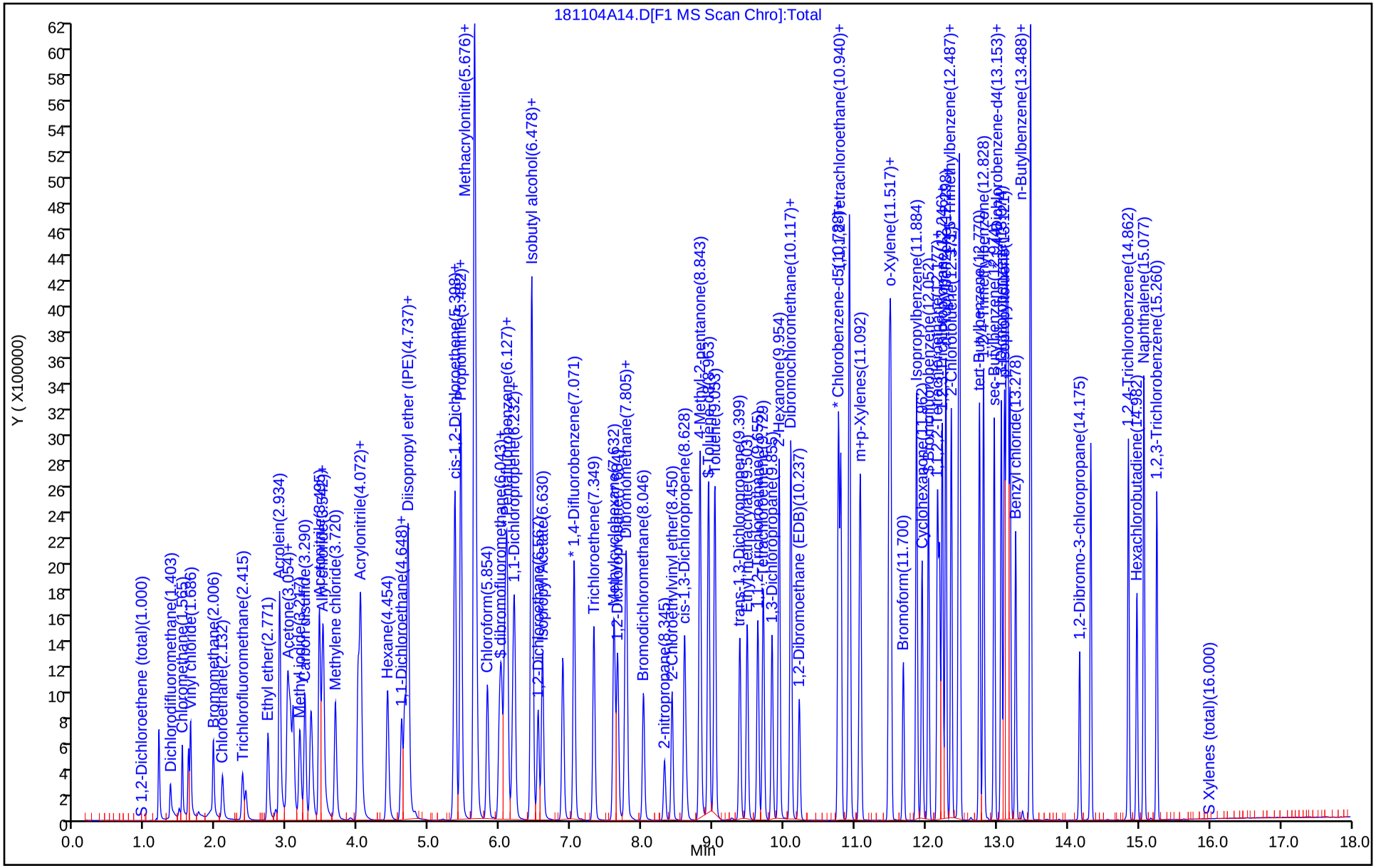
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 07-Nov-2019 09:16:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A14.D				
Injection Date:	04-Nov-2019 18:59:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	50ul/100ml 15578/73	Lab ID:	VICV050IK		
Sample Info:	18110419, VICV050IK				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 07-Nov-2019 09:16:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

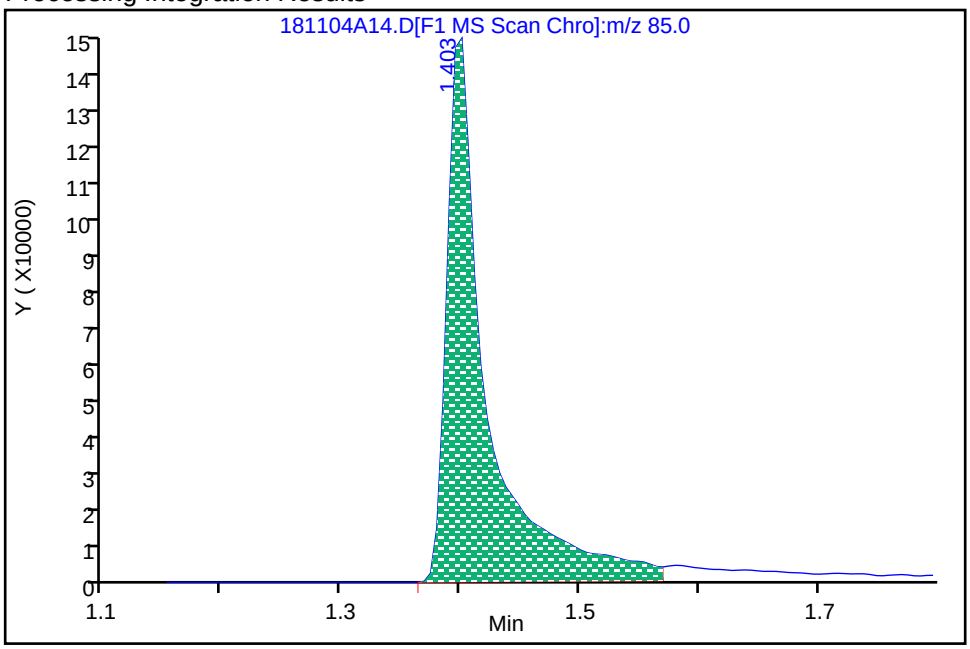
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A14.D		
Injection Date:	04-Nov-2019 18:59:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15578/73	Lab ID:	VICV050IK
Sample Info:	18110419, VICV050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

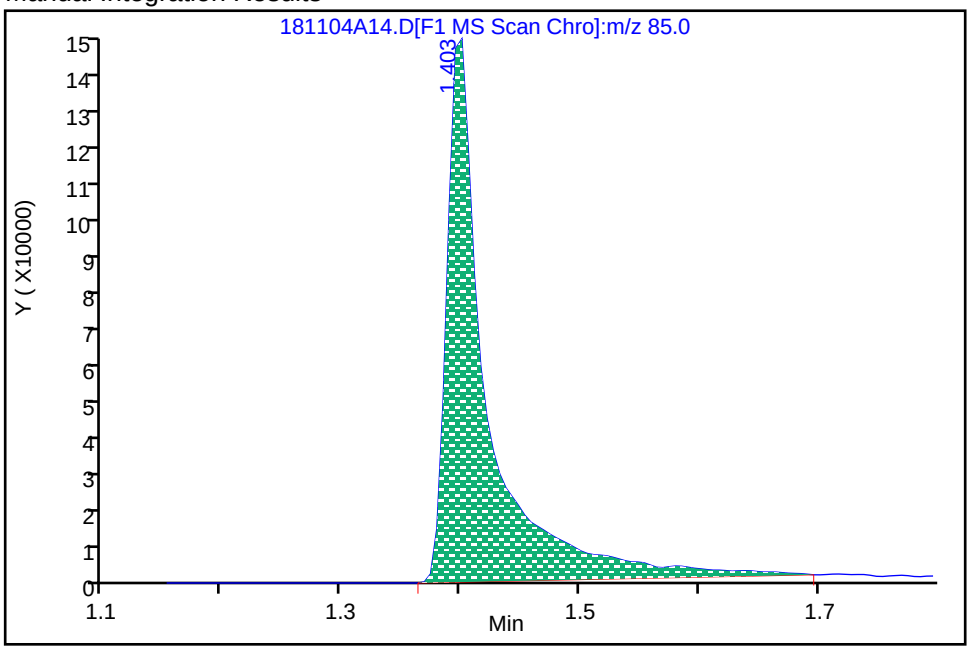
Processing Integration Results

RT: 1.403
Area: 350090
Conc: 43.389
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 355769
Conc: 44.093
Conc Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:19:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

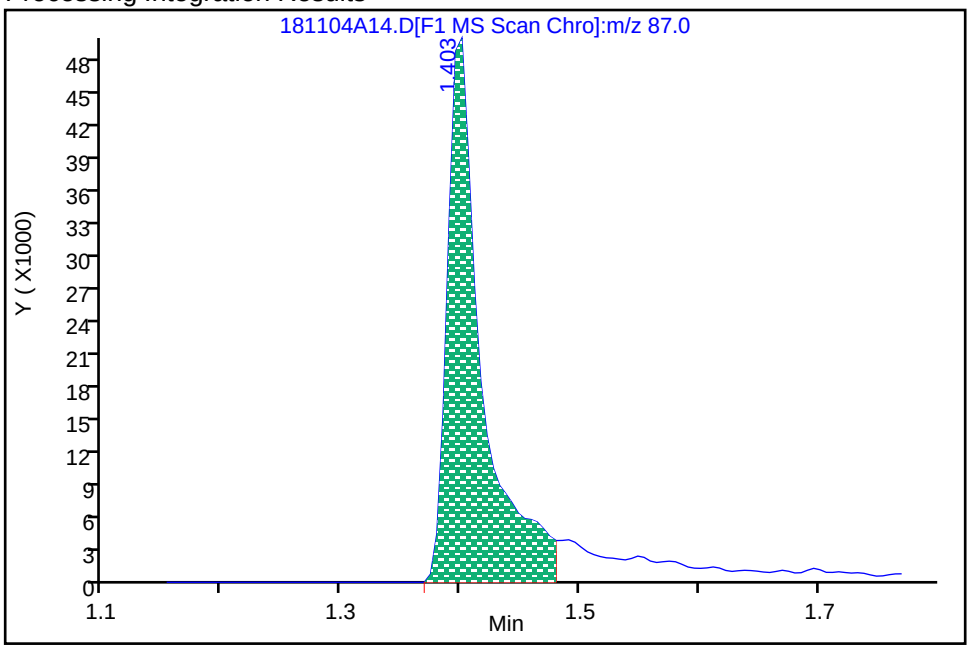
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A14.D		
Injection Date:	04-Nov-2019 18:59:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15578/73	Lab ID:	VICV050IK
Sample Info:	18110419, VICV050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

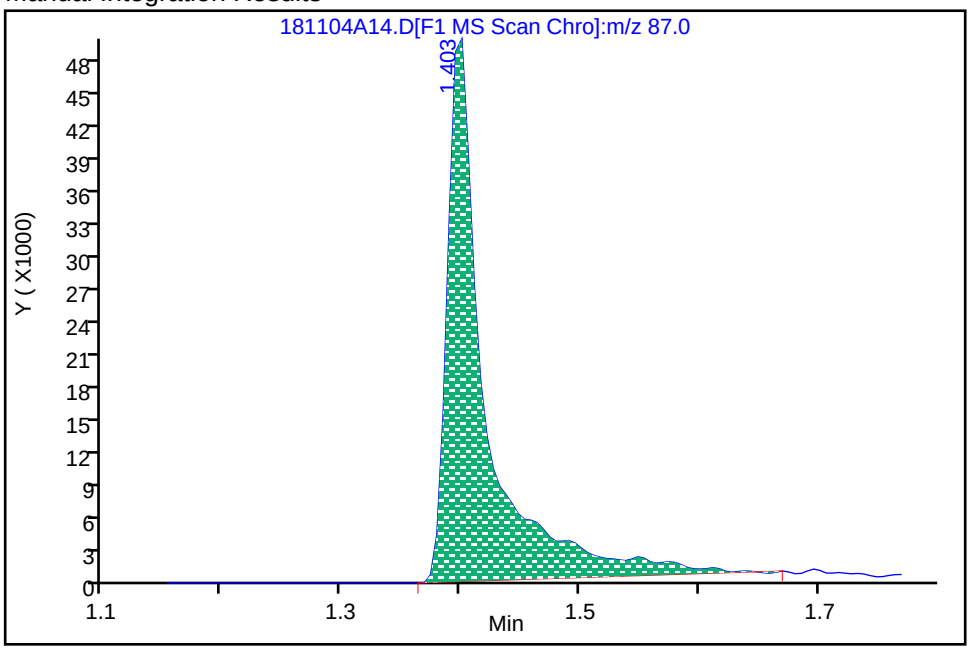
Processing Integration Results

RT: 1.403
Area: 99500
Conc: 43.389
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 110857
Conc: 44.093
Conc Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:19:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

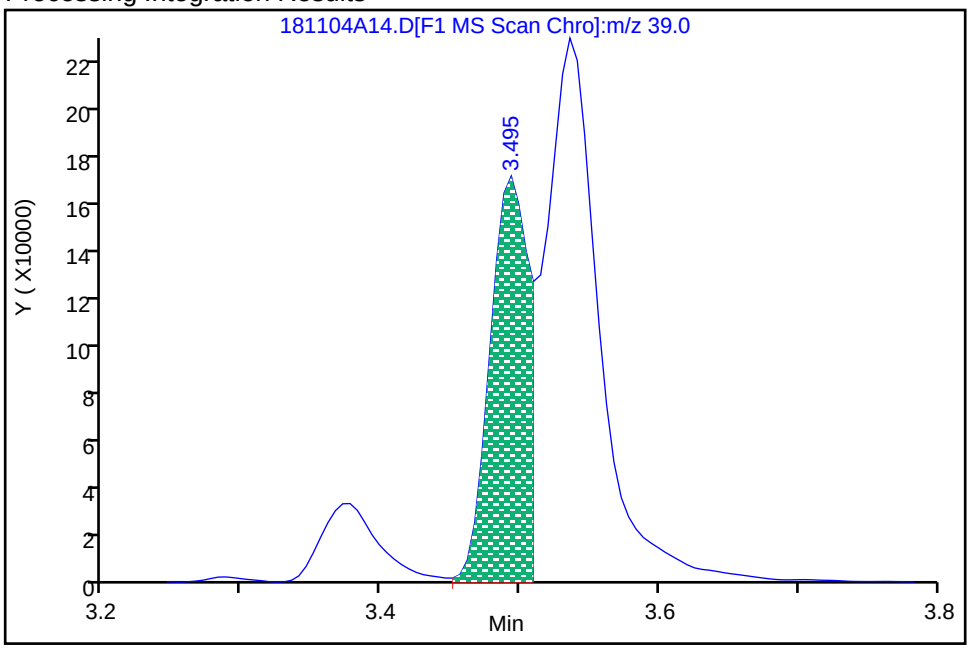
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A14.D		
Injection Date:	04-Nov-2019 18:59:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15578/73	Lab ID:	VICV050IK
Sample Info:	18110419, VICV050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

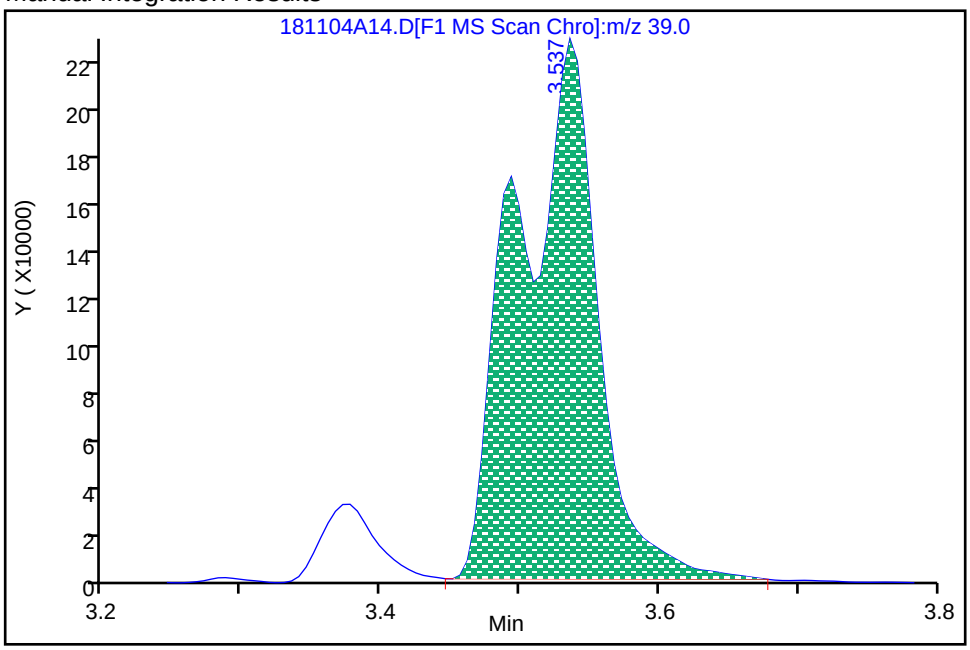
Processing Integration Results

RT: 3.495
Area: 317408
Conc: 495.50
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.537
Area: 909430
Conc: 495.50
Conc Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:19:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

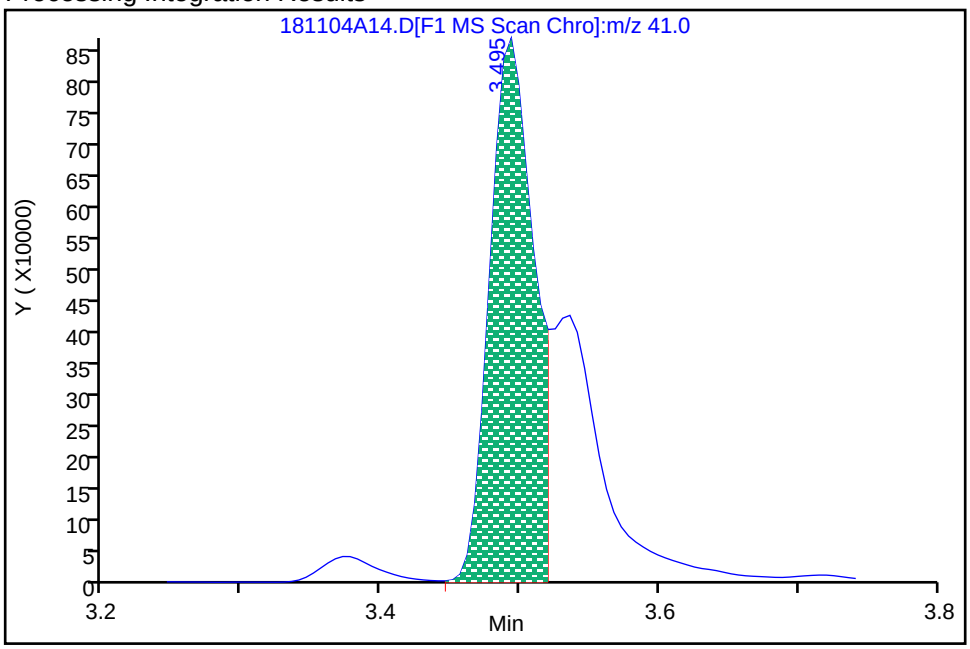
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A14.D		
Injection Date:	04-Nov-2019 18:59:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15578/73	Lab ID:	VICV050IK
Sample Info:	18110419, VICV050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

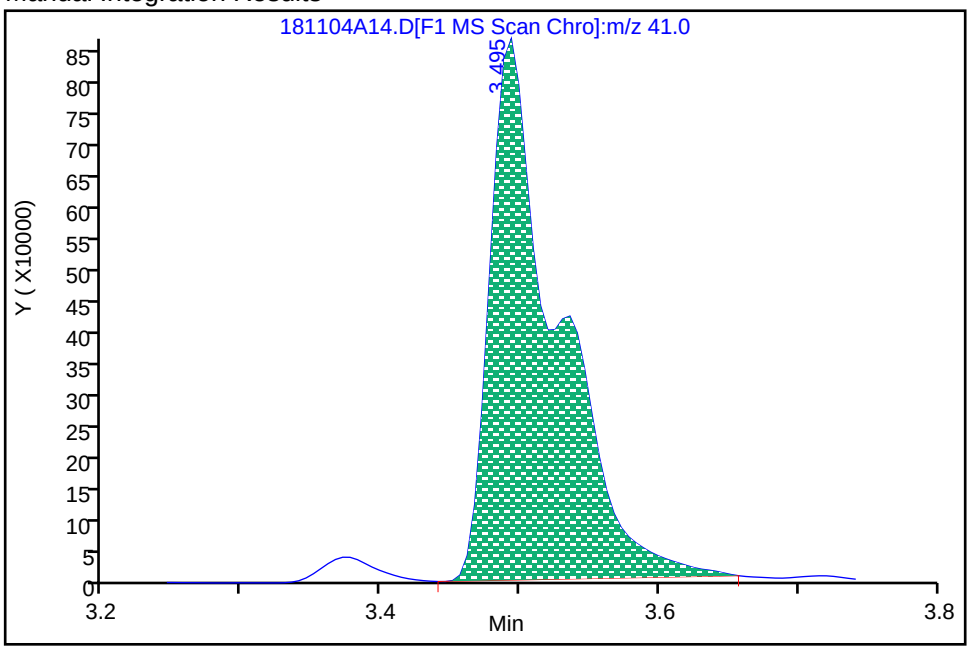
Processing Integration Results

RT: 3.495
Area: 1879931
Conc: 495.50
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.495
Area: 2908663
Conc: 495.50
Conc Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:19:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 07-Nov-2019 09:16:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

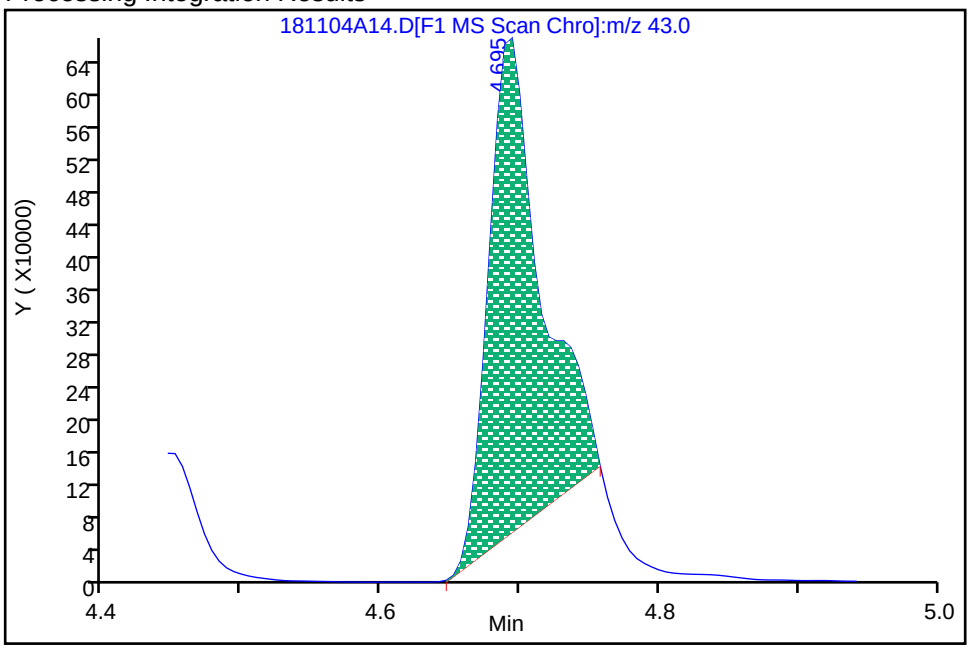
Manual Integration Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A14.D		
Injection Date:	04-Nov-2019 18:59:30	Inst. ID:	msd18.i
Client ID:	50ul/100ml 15578/73	Lab ID:	VICV050IK
Sample Info:	18110419, VICV050IK		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

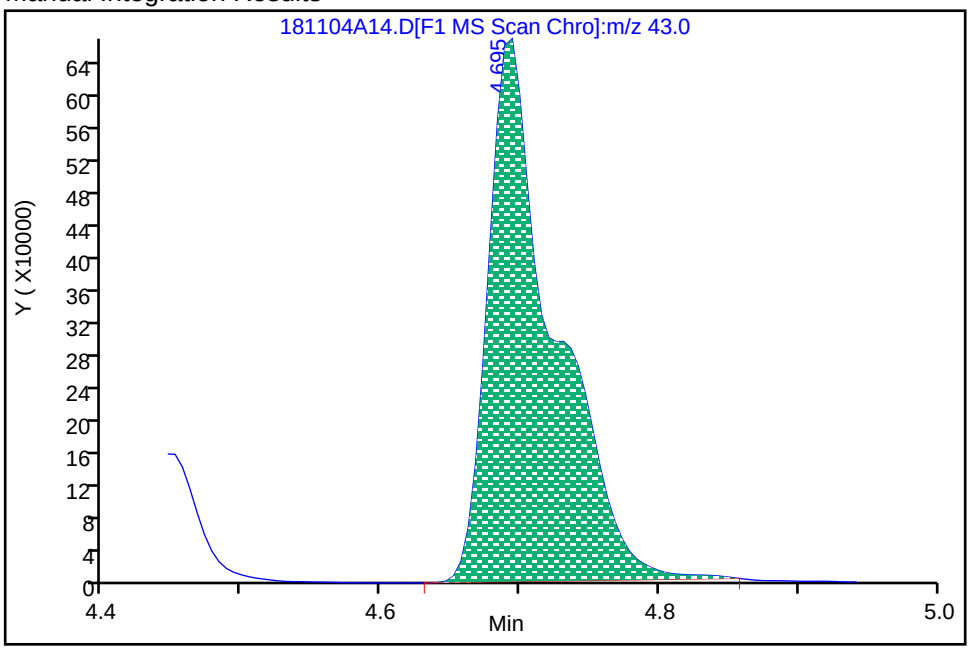
Processing Integration Results

RT: 4.695
Area: 1604304
Conc: 53.198
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 4.695
Area: 2205596
Conc: 53.198
Conc Units: ug/L



Data Editor: ecb, 05-Nov-2019 10:19:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A02.D
Lab Sample ID: VSTD050CV Client Sample ID: 50uL/100mL 15613/10
Injection Date: 05-Dec-2019 08:28:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120519, VSTD050CV
Method: \\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m
Method Date: 06-Dec-2019 10:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: CCV ALS Bottle: 2
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.18266		0.188651	0.01	3.3	20	103
2 Chloromethane	0.15376		0.162129	0.1	5.4	20	105
3 Vinyl chloride	0.180556		0.19067	0.01	5.6	20	106
4 Bromomethane	0.172822		0.176268	0.01	2	20	102
5 Chloroethane	0.128149		0.133432	0.01	4.1	20	104
6 Trichlorofluoromethane	0.388492		0.392953	0.01	1.1	20	101
8 Ethyl ether	0.260511		0.2778	0.01	6.6	20	107
9 Acrolein	0.073452		0.080531	0.001	9.6	20	110
10 Acetone	0.161734		0.164711	0.01	1.8	20	102
11 1,1-Dichloroethene	0.225832		0.239409	0.01	6	20	106
12 Freon 113	0.222552		0.234882	0.01	5.5	20	106
13 Methyl iodide	0.475172		0.47016	0.01	-1.1	20	99
14 Carbon disulfide	0.706162		0.763818	0.01	8.2	20	108
15 Acetonitrile	0.022946		0.024928	0.01	8.6	20	109
16 Methyl Acetate	0.411727		0.4363	0.01	6	20	106
17 Allyl chloride	0.142476		0.157431	0.01	10.5	20	110
18 Methylene chloride	0.292345		0.309743	0.01	6	20	106
20 Acrylonitrile	0.192677		0.200529	0.01	4.1	20	104
21 trans-1,2-Dichloroethene	0.325529		0.340464	0.01	4.6	20	105
22 tert-Butyl methyl ether(	0.816679		0.869034	0.01	6.4	20	106
23 Hexane	0.433333		0.470937	0.01	8.7	20	109
24 1,1-Dichloroethane	0.546966		0.579953	0.1	6	20	106
25 Vinyl acetate	0.093633		0.103588	0.001	10.6	20	111
26 Diisopropyl ether (IPE)	0.278094		0.288083	0.01	3.6	20	104
27 Chloroprene	0.423102		0.455323	0.01	7.6	20	108
29 cis-1,2-Dichloroethene	0.384369		0.394971	0.01	2.8	20	103
30 2-Butanone (MEK)	0.09136		0.093292	0.01	2.1	20	102
31 2,2-Dichloropropane	0.356868		0.387562	0.01	8.6	20	109
32 Propionitrile	0.078715		0.081443	0.01	3.5	20	103
33 Ethyl Acetate	0.609841		0.608582	0.01	-0.2	20	100
34 Methacrylonitrile	0.224146		0.23446	0.01	4.6	20	105
35 Bromochloromethane	0.215268		0.216313	0.01	0.5	20	100
36 Tetrahydrofuran	0.251036		0.250739	0.01	-0.1	20	100
37 Chloroform	0.604096		0.630781	0.01	4.4	20	104
$ 39 dibromofluoromethane	0.392608		0.393576	0.01	0.2	20	100

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 1,1,1-Trichloroethane	0.516982		0.533797	0.01	3.3	20	103
42 Cyclohexane	0.231303		0.238131	0.01	3	20	103
43 1,1-Dichloropropene	0.439843		0.466058	0.01	6	20	106
44 Carbon tetrachloride	0.480894		0.497072	0.01	3.4	20	103
45 Isobutyl alcohol	0.016913		0.017461	0.001	3.2	20	103
$ 46 1,2-Dichloroethane-d4	0.320166		0.308062	0.01	-3.8	20	96
48 Benzene	0.911106		0.941814	0.01	3.4	20	103
49 Isopropyl Acetate	0.601279		0.61005	0.01	1.5	20	101
50 1,2-Dichloroethane	0.354089		0.353984	0.01	0	20	100
53 Trichloroethene	0.299741		0.295515	0.01	-1.4	20	99
54 Methylcyclohexane	0.37665		0.390915	0.01	3.8	20	104
55 1,2-Dichloropropane	0.225851		0.229236	0.01	1.5	20	101
56 Dibromomethane	0.179932		0.181308	0.01	0.8	20	101
57 Methyl methacrylate	0.294055		0.295032	0.01	0.3	20	100
58 1,4-Dioxane	0.00306		0.003358		9.8	20	110
59 Bromodichloromethane	0.319726		0.332053	0.01	3.9	20	104
60 2-nitropropane	0.150238		0.147284	0.01	-2	20	98
61 2-Chloroethylvinyl ether	0.200456		0.202574	0.001	1.1	20	101
62 cis-1,3-Dichloropropene	0.370796		0.399494	0.01	7.7	20	108
63 4-Methyl-2-pentanone	0.396528		0.397262	0.01	0.2	20	100
$ 64 Toluene-d8	1.17489		1.113826	0.01	-5.2	20	95
65 Toluene	0.75993		0.749658	0.01	-1.4	20	99
66 trans-1,3-Dichloropropen	0.439225		0.468986	0.01	6.8	20	107
67 Ethyl methacrylate	0.482774		0.482861	0.01	0	20	100
68 1,1,2-Trichloroethane	0.308964		0.30195	0.01	-2.3	20	98
69 Tetrachloroethene	0.309429		0.286055	0.01	-7.6	20	92
70 1,3-Dichloropropane	0.484739		0.48431	0.01	-0.1	20	100
71 2-Hexanone	0.435129		0.42873	0.01	-1.5	20	99
72 Dibromochloromethane	0.339418		0.347349	0.01	2.3	20	102
73 n-Butyl acetate	0.644691		0.646162	0.01	0.2	20	100
75 1,2-Dibromoethane (EDB)	0.334377		0.33958	0.01	1.6	20	102
77 Chlorobenzene	0.804529		0.815297	0.3	1.3	20	101
78 1,1,1,2-Tetrachloroethan	0.290003		0.286984	0.01	-1	20	99
79 Ethylbenzene	0.425934		0.431264	0.01	1.3	20	101
80 m+p-Xylenes	0.508247		0.519879	0.01	2.3	20	102
81 o-Xylene	0.450812		0.461838	0.01	2.4	20	102
82 Styrene	0.762155		0.819053	0.01	7.5	20	107
83 Bromoform	50	45.681	0.226521	0.1	-8.6	20	91
84 Isopropylbenzene	1.101252		1.142891	0.01	3.8	20	104
85 Cyclohexanone	0.012523		0.013202	0.001	5.4	20	105
$ 86 Bromofluorobenzene	0.336176		0.343708	0.01	2.2	20	102
87 Bromobenzene	0.887841		0.917249	0.01	3.3	20	103
88 1,1,2,2-Tetrachloroethan	0.904552		0.983406	0.3	8.7	20	109
89 1,2,3-Trichloropropane	0.366002		0.385895	0.01	5.4	20	105
90 trans-1,4-Dichloro-2-but	50	43.105	0.226161	0.01	-13.8	20	86
91 n-Propylbenzene	3.434696		3.757222	0.01	9.4	20	109
92 2-Chlorotoluene	1.964784		2.079492	0.01	5.8	20	106

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
93 1,3,5-Trimethylbenzene	2.108844		2.242955	0.01	6.4	20	106
94 4-Chlorotoluene	0.736302		0.776533	0.01	5.5	20	105
95 tert-Butylbenzene	1.983407		2.028258	0.01	2.3	20	102
96 1,2,4-Trimethylbenzene	2.011674		2.135023	0.01	6.1	20	106
97 sec-Butylbenzene	2.684709		2.822215	0.01	5.1	20	105
98 1,3-Dichlorobenzene	1.271785		1.282253	0.01	0.8	20	101
99 p-Isopropyltoluene	2.122211		2.228577	0.01	5	20	105
101 1,4-Dichlorobenzene	1.255597		1.260775	0.01	0.4	20	100
102 Benzyl chloride	1.293064		1.572629	0.01	* 21.6	20	122
103 n-Butylbenzene	1.705712		1.846865	0.01	8.3	20	108
104 1,2-Dichlorobenzene	1.132644		1.112438	0.01	-1.8	20	98
105 1,2-Dibromo-3-chloroprop	0.189615		0.188811	0.001	-0.4	20	100
106 1,2,4-Trichlorobenzene	0.701497		0.675502	0.01	-3.7	20	96
107 Hexachlorobutadiene	0.34079		0.329021	0.01	-3.5	20	97
108 Naphthalene	1.99202		2.030316	0.01	1.9	20	102
109 1,2,3-Trichlorobenzene	0.653716		0.626593	0.01	-4.1	20	96
S 110 Xylenes (total)	0.47953		0.490859	0.01	2.4	20	102
S 111 1,2-Dichloroethene (tota	0.354949		0.367718	0.01	3.6	20	104

Report Date: 06-Dec-2019 10:05:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A02.D
Lab Sample ID: VSTD050CV Client Sample ID: 50uL/100mL 15613/10
Injection Date: 05-Dec-2019 08:28:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120519, VSTD050CV
Method: \\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m
Method Date: 06-Dec-2019 10:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: CCV ALS Bottle: 2
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 05-Dec-2019 08:49:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.393	1.393	0.000	561731	50.000	51.640	
2 Chloromethane	50.0	1.571	1.571	0.000	482758	50.000	52.721	
3 Vinyl chloride	62.0	1.691	1.691	0.000	567741	50.000	52.801	
4 Bromomethane	94.0	2.022	2.022	0.000	524859	50.000	50.997	
5 Chloroethane	64.0	2.137	2.137	0.000	397308	50.000	52.061	
6 Trichlorofluoromethane	101.0	2.420	2.420	0.000	1170062	50.000	50.574	
8 Ethyl ether	59.0	2.771	2.771	0.000	827180	50.000	53.318	
9 Acrolein	56.0	2.944	2.944	0.000	2397907	500.00	548.19	
10 Acetone	43.0	3.133	3.133	0.000	980890	100.00	101.84	
11 1,1-Dichloroethene	96.0	3.055	3.055	0.000	712867	50.000	53.006	
12 Freon 113	101.0	3.091	3.091	0.000	699388	50.000	52.770	
13 Methyl iodide	142.0	3.228	3.228	0.000	1399955	50.000	49.473	
14 Carbon disulfide	76.0	3.301	3.301	0.000	2274355	50.000	54.082	
15 Acetonitrile	40.0	3.516	3.516	0.000	742255	500.00	543.17	M
17 Allyl chloride	76.0	3.553	3.553	0.000	468768	50.000	55.248	
16 Methyl Acetate	43.0	3.563	3.563	0.000	1299134	50.000	52.984	
18 Methylene chloride	84.0	3.736	3.736	0.000	922294	50.000	52.975	
20 Acrylonitrile	53.0	4.061	4.061	0.000	1194193	100.00	104.07	
21 trans-1,2-Dichloroethene	96.0	4.087	4.087	0.000	1013770	50.000	52.294	
22 tert-Butyl methyl ether(MTBE)	73.0	4.093	4.093	0.000	2587649	50.000	53.205	
23 Hexane	57.0	4.470	4.470	0.000	1402268	50.000	54.339	
24 1,1-Dichloroethane	63.0	4.675	4.675	0.000	1726875	50.000	53.015	
25 Vinyl acetate	86.0	4.722	4.722	0.000	308444	50.000	55.316	
26 Diisopropyl ether (IPE)	87.0	4.759	4.759	0.000	857801	50.000	51.796	
27 Chloroprene	53.0	4.764	4.764	0.000	1355775	50.000	53.808	
29 cis-1,2-Dichloroethene	96.0	5.430	5.430	0.000	1176072	50.000	51.379	
30 2-Butanone (MEK)	72.0	5.440	5.440	0.000	555576	100.00	102.11	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.424	5.424	0.000	1154010	50.000	54.301	
32 Propionitrile	54.0	5.524	5.524	0.000	2425046	500.00	517.33	
33 Ethyl Acetate	43.0	5.514	5.514	0.000	1812121	50.000	49.897	
34 Methacrylonitrile	67.0	5.718	5.718	0.000	3490660	250.00	261.50	
35 Bromochloromethane	128.0	5.734	5.734	0.000	644097	50.000	50.243	
36 Tetrahydrofuran	42.0	5.734	5.734	0.000	746604	50.000	49.941	
37 Chloroform	83.0	5.891	5.891	0.000	1878221	50.000	52.209	
$ 39 dibromofluoromethane	111.0	6.090	6.090	0.000	1171918	50.000	50.123	
40 1,1,1-Trichloroethane	97.0	6.064	6.064	0.000	1589442	50.000	51.626	
* 41 Pentafluorobenzene	168.0	6.169	6.169	0.000	2977614	50.000	50.000	
42 Cyclohexane	41.0	6.132	6.132	0.000	709062	50.000	51.476	
43 1,1-Dichloropropene	75.0	6.274	6.274	0.000	1387740	50.000	52.980	
44 Carbon tetrachloride	119.0	6.253	6.253	0.000	1480089	50.000	51.682	
45 Isobutyl alcohol	42.0	6.520	6.520	0.000	519920	500.00	516.19	
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1302403	50.000	48.110	
48 Benzene	78.0	6.526	6.526	0.000	3981738	50.000	51.685	
49 Isopropyl Acetate	43.0	6.672	6.672	0.000	2579131	50.000	50.729	
50 1,2-Dichloroethane	62.0	6.615	6.615	0.000	1496552	50.000	49.985	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4227735	50.000	50.000	
53 Trichloroethene	130.0	7.401	7.401	0.000	1249361	50.000	49.295	
54 Methylcyclohexane	83.0	7.679	7.679	0.000	1652687	50.000	51.894	
55 1,2-Dichloropropane	63.0	7.742	7.742	0.000	969147	50.000	50.749	
56 Dibromomethane	93.0	7.847	7.847	0.000	766523	50.000	50.382	
57 Methyl methacrylate	41.0	7.868	7.868	0.000	1247319	50.000	50.166	
58 1,4-Dioxane	88.0	7.842	7.842	0.000	141986	500.00	548.76	
59 Bromodichloromethane	83.0	8.104	8.104	0.000	1403832	50.000	51.928	
60 2-nitropropane	43.0	8.413	8.413	0.000	622678	50.000	49.017	
61 2-Chloroethylvinyl ether	63.0	8.513	8.513	0.000	856429	50.000	50.528	
62 cis-1,3-Dichloropropene	75.0	8.686	8.686	0.000	1688953	50.000	53.870	
63 4-Methyl-2-pentanone	43.0	8.911	8.911	0.000	3359040	100.00	100.19	
$ 64 Toluene-d8	98.0	9.026	9.026	0.000	3878282	50.000	47.401	
65 Toluene	92.0	9.116	9.116	0.000	2610268	50.000	49.324	
66 trans-1,3-Dichloropropene	75.0	9.472	9.472	0.000	1632983	50.000	53.388	
67 Ethyl methacrylate	69.0	9.572	9.572	0.000	1681295	50.000	50.009	
68 1,1,2-Trichloroethane	97.0	9.724	9.724	0.000	1051374	50.000	48.865	
69 Tetrachloroethene	164.0	9.792	9.792	0.000	996028	50.000	46.223	
70 1,3-Dichloropropane	76.0	9.923	9.923	0.000	1686342	50.000	49.956	
71 2-Hexanone	43.0	10.023	10.023	0.000	2985627	100.00	98.529	
72 Dibromochloromethane	129.0	10.180	10.180	0.000	1209451	50.000	51.168	
73 n-Butyl acetate	43.0	10.185	10.185	0.000	2249901	50.000	50.114	
75 1,2-Dibromoethane (EDB)	107.0	10.306	10.306	0.000	1182399	50.000	50.778	
* 76 Chlorobenzene-d5	117.0	10.851	10.851	0.000	3481945	50.000	50.000	
77 Chlorobenzene	112.0	10.888	10.888	0.000	2838820	50.000	50.669	
78 1,1,1,2-Tetrachloroethane	131.0	10.998	10.998	0.000	999261	50.000	49.479	
79 Ethylbenzene	106.0	11.008	11.008	0.000	1501636	50.000	50.626	
80 m+p-Xylenes	106.0	11.160	11.160	0.000	1810191	50.000	51.144	
81 o-Xylene	106.0	11.564	11.564	0.000	1608095	50.000	51.223	
82 Styrene	104.0	11.590	11.590	0.000	2851899	50.000	53.733	
83 Bromoform	173.0	11.769	11.769	0.000	788733	50.000	45.681	
84 Isopropylbenzene	105.0	11.952	11.952	0.000	3979482	50.000	51.891	
85 Cyclohexanone	55.0	12.036	12.036	0.000	459675	500.00	527.08	

Report Date: 06-Dec-2019 10:05:51 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1196774	50.000	51.120	
88 1,1,2,2-Tetrachloroethane	83.0	12.277	12.277	0.000	1153573	50.000	54.359	
87 Bromobenzene	156.0	12.251	12.251	0.000	1075968	50.000	51.656	
89 1,2,3-Trichloropropane	110.0	12.324	12.324	0.000	452670	50.000	52.718	
90 trans-1,4-Dichloro-2-butene	53.0	12.314	12.314	0.000	265295	50.000	43.105	
91 n-Propylbenzene	91.0	12.366	12.366	0.000	4407364	50.000	54.695	
92 2-Chlorotoluene	91.0	12.445	12.445	0.000	2439323	50.000	52.919	
93 1,3,5-Trimethylbenzene	105.0	12.545	12.545	0.000	2631071	50.000	53.180	
94 4-Chlorotoluene	126.0	12.566	12.566	0.000	910903	50.000	52.732	
95 tert-Butylbenzene	119.0	12.838	12.838	0.000	2379224	50.000	51.131	
96 1,2,4-Trimethylbenzene	105.0	12.896	12.896	0.000	2504463	50.000	53.066	
97 sec-Butylbenzene	105.0	13.048	13.048	0.000	3310565	50.000	52.561	
98 1,3-Dichlorobenzene	146.0	13.153	13.153	0.000	1504131	50.000	50.412	
99 p-Isopropyltoluene	119.0	13.190	13.190	0.000	2614206	50.000	52.506	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.000	1173038	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.247	13.247	0.000	1478937	50.000	50.206	
102 Benzyl chloride	91.0	13.352	13.352	0.000	1844754	50.000	60.810	
103 n-Butylbenzene	91.0	13.557	13.557	0.000	2166443	50.000	54.138	
104 1,2-Dichlorobenzene	146.0	13.567	13.567	0.000	1304932	50.000	49.108	
105 1,2-Dibromo-3-chloropropane	75.0	14.254	14.254	0.000	221483	50.000	49.788	
106 1,2,4-Trichlorobenzene	180.0	14.946	14.946	0.000	792390	50.000	48.147	
107 Hexachlorobutadiene	225.0	15.061	15.061	0.000	385954	50.000	48.273	
108 Naphthalene	128.0	15.166	15.166	0.000	2381638	50.000	50.961	
109 1,2,3-Trichlorobenzene	180.0	15.344	15.344	0.000	735017	50.000	47.925	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	102.37	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	103.67	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

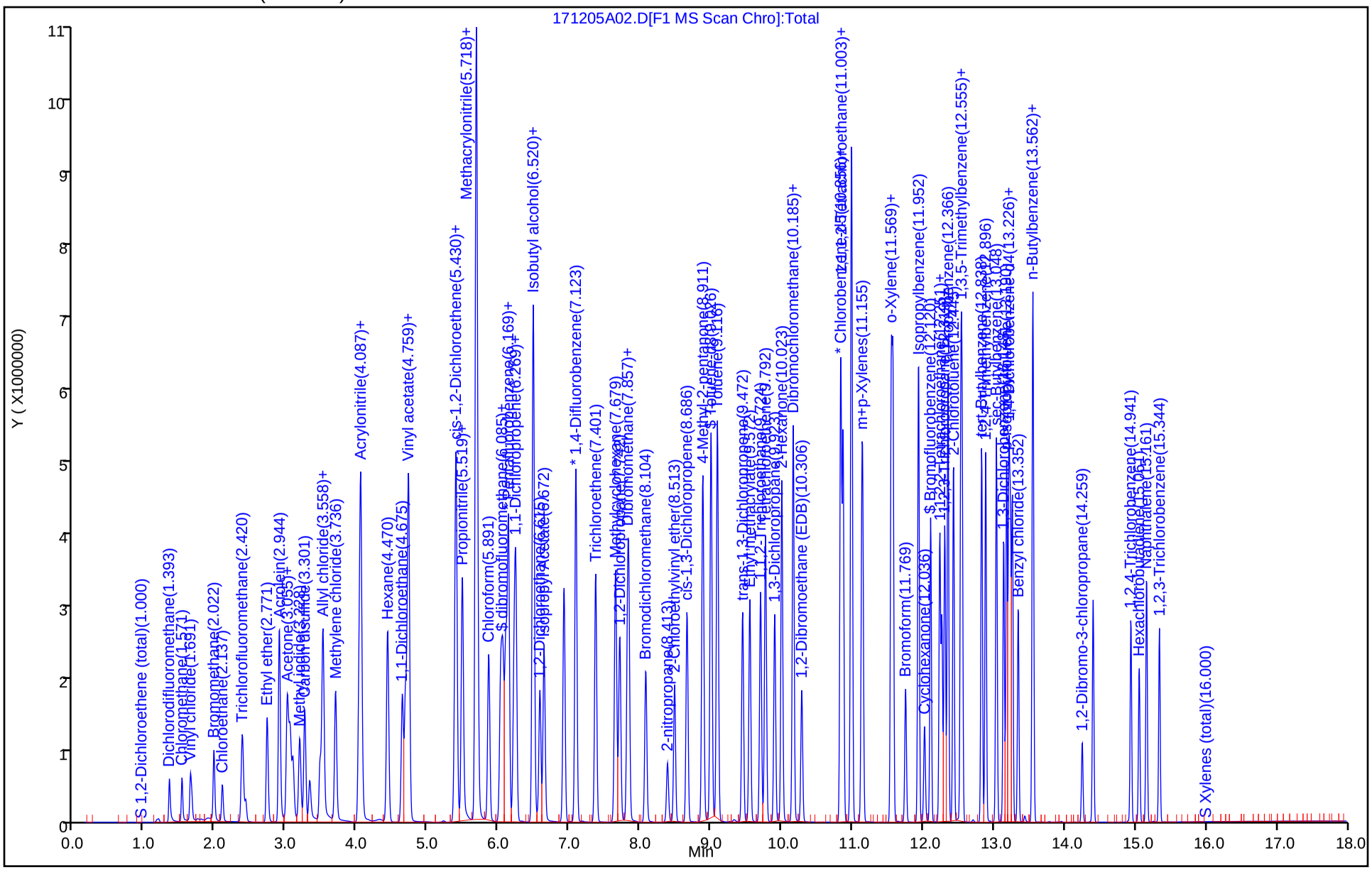
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 10:05:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A02.D				
Injection Date:	05-Dec-2019 08:28:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050CV		
Sample Info:	17120519, VSTD050CV				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 06-Dec-2019 10:05:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

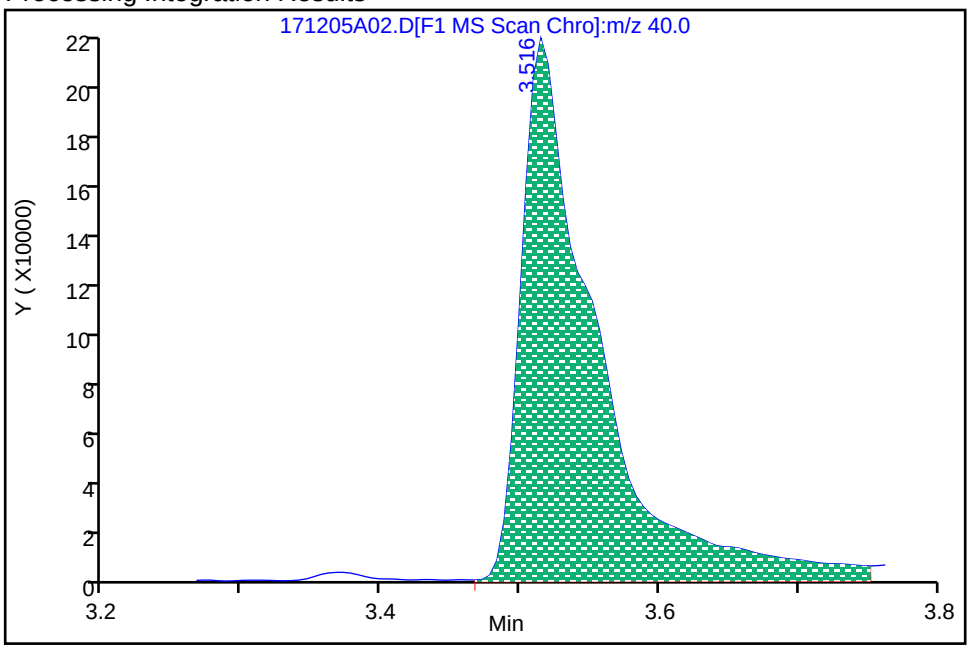
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A02.D		
Injection Date:	05-Dec-2019 08:28:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050CV
Sample Info:	17120519, VSTD050CV		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

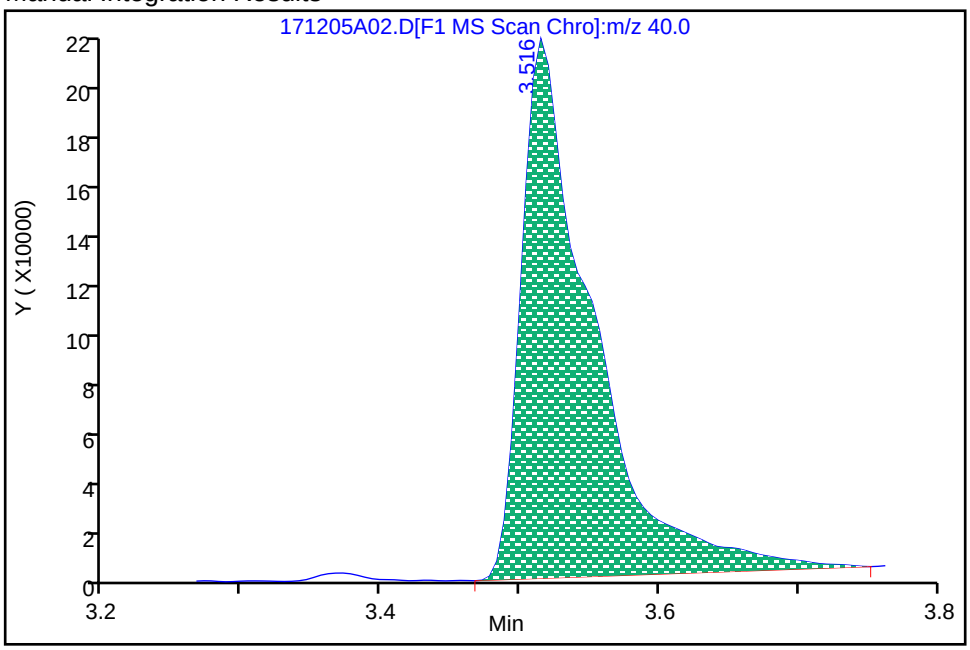
Processing Integration Results

RT: 3.516
Area: 799072
Amount: 584.75
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.516
Area: 742255
Amount: 543.17
Amount Units: ug/L



Data Editor: tml, 05-Dec-2019 08:49:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 10:05:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

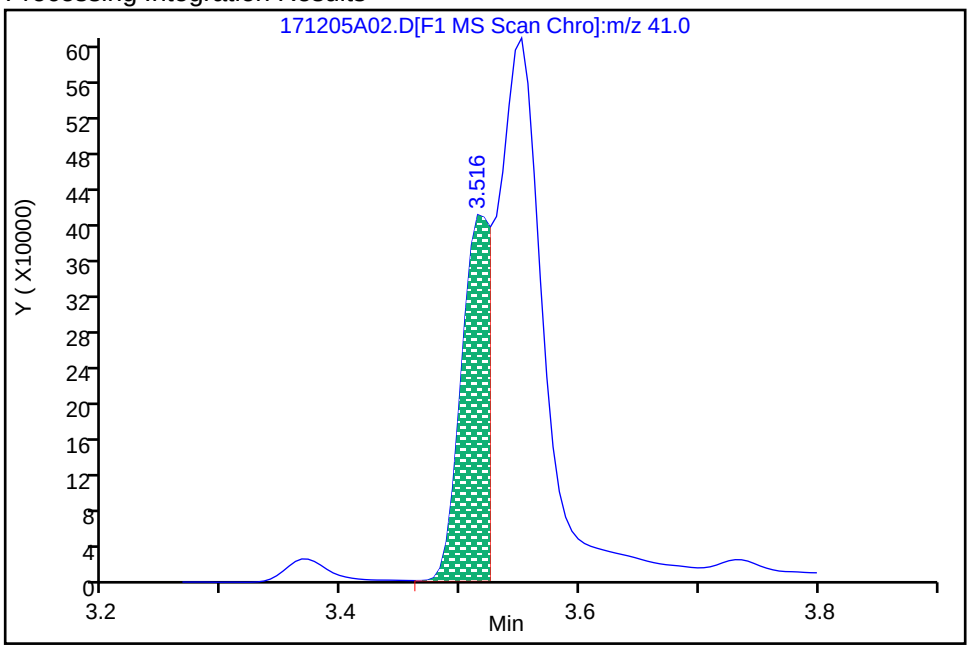
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A02.D		
Injection Date:	05-Dec-2019 08:28:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050CV
Sample Info:	17120519, VSTD050CV		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

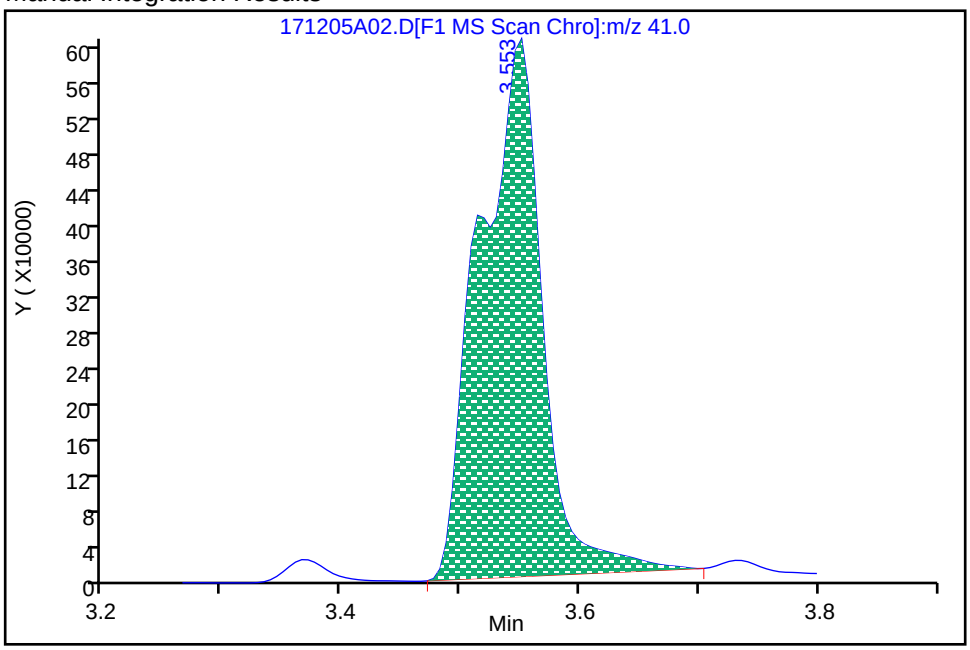
Processing Integration Results

RT: 3.516
Area: 636786
Amount: 584.75
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 3.553
Area: 2175649
Amount: 543.17
Amount Units: ug/L



Data Editor: tml, 05-Dec-2019 08:49:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A02.D
Lab Sample ID: VSTD050DM Client Sample ID: 50uL/100mL 15613/10
Injection Date: 06-Dec-2019 08:42:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd18.i
Sample Info: 18120619, VSTD050DM
Method: \\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m
Method Date: 06-Dec-2019 09:40:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: CCV ALS Bottle: 2
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
1 Dichlorodifluoromethane	0.293045		0.209507	0.01	-28.5	40	71
2 Chloromethane	0.356933		0.310449	0.1	-13	40	87
3 Vinyl chloride	0.499055		0.486148	0.01	-2.6	20	97
4 Bromomethane	0.283677		0.315488	0.01	11.2	30	111
5 Chloroethane	0.249029		0.237433	0.01	-4.7	30	95
6 Trichlorofluoromethane	50	45.438	0.26767	0.01	-9.1	30	91
8 Ethyl ether	0.340385		0.321043	0.01	-5.7	30	94
9 Acrolein	0.172622		0.150167	0.001	-13	40	87
10 Acetone	0.400341		0.553907	0.01	38.4	40	138
11 1,1-Dichloroethene	0.364781		0.342646	0.01	-6.1	20	94
12 Freon 113	0.385537		0.3846	0.01	-0.2	30	100
13 Methyl iodide	0.751408		0.739908	0.01	-1.5	30	98
14 Carbon disulfide	1.216361		1.129156	0.01	-7.2	30	93
15 Acetonitrile	0.092773		0.091825	0.01	-1	40	99
16 Methyl Acetate	0.842927		0.764041	0.01	-9.4	30	91
17 Allyl chloride	50	45.994	0.167247	0.01	-8	30	92
18 Methylene chloride	50	50.123	0.420327	0.01	0.2	30	100
20 Acrylonitrile	0.398893		0.381938	0.01	-4.3	40	96
21 trans-1,2-Dichloroethene	0.397692		0.370171	0.01	-6.9	20	93
22 tert-Butyl methyl ether(	0.651413		0.710997	0.01	9.1	30	109
23 Hexane	0.529024		0.535236	0.01	1.2	30	101
24 1,1-Dichloroethane	0.721346		0.688904	0.1	-4.5	20	96
25 Vinyl acetate	0.111906		0.114828	0.001	2.6	40	103
26 Diisopropyl ether (IPE)	0.320217		0.321392	0.01	0.4	30	100
27 Chloroprene	0.536061		0.524682	0.01	-2.1	30	98
29 cis-1,2-Dichloroethene	0.465054		0.450559	0.01	-3.1	20	97
30 2-Butanone (MEK)	0.162954		0.180597	0.01	10.8	30	111
31 2,2-Dichloropropane	0.355148		0.377092	0.01	6.2	40	106
32 Propionitrile	0.199048		0.192	0.01	-3.5	30	96
33 Ethyl Acetate	50	47.119	0.969471	0.01	-5.8	30	94
34 Methacrylonitrile	0.362196		0.3521	0.01	-2.8	30	97
35 Bromochloromethane	0.265097		0.252386	0.01	-4.8	30	95
36 Tetrahydrofuran	0.525507		0.487596	0.01	-7.2	30	93
37 Chloroform	0.738743		0.723004	0.01	-2.1	20	98
$ 39 dibromofluoromethane	0.484665		0.451937	0.01	-6.8	30	93

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
40 1,1,1-Trichloroethane	0.55643		0.563037	0.01	1.2	20	101
42 Cyclohexane	0.365384		0.372728	0.01	2	30	102
43 1,1-Dichloropropene	0.567964		0.538382	0.01	-5.2	30	95
44 Carbon tetrachloride	0.547153		0.54623	0.01	-0.2	30	100
45 Isobutyl alcohol	0.055932		0.053247	0.001	-4.8	40	95
$ 46 1,2-Dichloroethane-d4	0.347257		0.343638	0.01	-1	30	99
48 Benzene	1.082827		1.089913	0.01	0.7	20	101
49 Isopropyl Acetate	0.851015		0.838446	0.01	-1.5	30	99
50 1,2-Dichloroethane	0.402902		0.401788	0.01	-0.3	20	100
53 Trichloroethene	0.335243		0.329144	0.01	-1.8	20	98
54 Methylcyclohexane	0.431157		0.433882	0.01	0.6	30	101
55 1,2-Dichloropropane	0.293031		0.280945	0.01	-4.1	20	96
56 Dibromomethane	0.218864		0.213795	0.01	-2.3	30	98
57 Methyl methacrylate	0.40032		0.390827	0.01	-2.4	30	98
58 1,4-Dioxane	0.011722		0.011239		-4.1	40	96
59 Bromodichloromethane	0.371917		0.36568	0.01	-1.7	30	98
60 2-nitropropane	0.214619		0.193187	0.01	-10	30	90
61 2-Chloroethylvinyl ether	0.25064		0.244616	0.001	-2.4	30	98
62 cis-1,3-Dichloropropene	0.464091		0.448457	0.01	-3.4	30	97
63 4-Methyl-2-pentanone	0.627262		0.648864	0.01	3.4	40	103
$ 64 Toluene-d8	1.127647		1.114461	0.01	-1.2	30	99
65 Toluene	0.737755		0.738043	0.01	0	20	100
66 trans-1,3-Dichloropropen	0.452195		0.458479	0.01	1.4	30	101
67 Ethyl methacrylate	0.506694		0.512803	0.01	1.2	30	101
68 1,1,2-Trichloroethane	0.318786		0.321453	0.01	0.8	20	101
69 Tetrachloroethene	0.283426		0.284058	0.01	0.2	30	100
70 1,3-Dichloropropane	0.520312		0.512222	0.01	-1.6	30	98
71 2-Hexanone	0.549514		0.560741	0.01	2	40	102
72 Dibromochloromethane	0.366259		0.359795	0.01	-1.8	30	98
73 n-Butyl acetate	0.784575		0.785487	0.01	0.1	30	100
75 1,2-Dibromoethane (EDB)	0.373243		0.373963	0.01	0.2	30	100
77 Chlorobenzene	0.887306		0.870841	0.3	-1.9	20	98
78 1,1,1,2-Tetrachloroethan	0.314985		0.315129	0.01	0	30	100
79 Ethylbenzene	0.447717		0.450316	0.01	0.6	20	101
80 m+p-Xylenes	0.557592		0.549838	0.01	-1.4	30	99
81 o-Xylene	0.537597		0.536137	0.01	-0.3	30	100
82 Styrene	0.892332		0.917665	0.01	2.8	30	103
83 Bromoform	0.30523		0.296747	0.1	-2.8	30	97
84 Isopropylbenzene	1.295518		1.345933	0.01	3.9	30	104
85 Cyclohexanone	0.039887		0.041798	0.001	4.8	40	105
$ 86 Bromofluorobenzene	0.438589		0.414071	0.01	-5.6	30	94
87 Bromobenzene	0.732609		0.819615	0.01	11.9	30	112
88 1,1,2,2-Tetrachloroethan	1.021514		1.098619	0.3	7.5	30	108
89 1,2,3-Trichloropropane	0.34379		0.372596	0.01	8.4	30	108
90 trans-1,4-Dichloro-2-but	0.26505		0.270976	0.01	2.2	30	102
91 n-Propylbenzene	2.848284		3.316318	0.01	16.4	30	116
92 2-Chlorotoluene	1.719928		1.916316	0.01	11.4	30	111

Compound	Standard RRF/Amt	Ccal Amt	Ccal RF	Min. RRF	%D	Max. %D	%Rec
93 1,3,5-Trimethylbenzene	1.811293		2.10794	0.01	16.4	30	116
94 4-Chlorotoluene	0.665075		0.715044	0.01	7.5	30	108
95 tert-Butylbenzene	1.628782		1.824236	0.01	12	30	112
96 1,2,4-Trimethylbenzene	1.834395		2.191472	0.01	19.5	30	119
97 sec-Butylbenzene	2.225946		2.642012	0.01	18.7	30	119
98 1,3-Dichlorobenzene	1.353718		1.48454	0.01	9.7	30	110
99 p-Isopropyltoluene	1.855916		2.190128	0.01	18	30	118
101 1,4-Dichlorobenzene	1.384805		1.475785	0.01	6.6	30	107
102 Benzyl chloride	1.52459		1.897355	0.01	24.5	30	124
103 n-Butylbenzene	1.738621		2.03635	0.01	17.1	30	117
104 1,2-Dichlorobenzene	1.289096		1.419793	0.01	10.1	30	110
105 1,2-Dibromo-3-chloroprop	0.276297		0.283072	0.001	2.5	30	102
106 1,2,4-Trichlorobenzene	0.899495		0.855694	0.01	-4.9	30	95
107 Hexachlorobutadiene	50	59.034	0.418251	0.01	18.1	40	118
108 Naphthalene	2.439127		2.168667	0.01	-11.1	40	89
109 1,2,3-Trichlorobenzene	0.781786		0.70952	0.01	-9.2	30	91
S 110 Xylenes (total)	0.547594		0.542988	0.01	-0.8	30	99
S 111 1,2-Dichloroethene (tota	0.431373		0.410365	0.01	-4.9	20	95

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A02.D		
Lab Sample ID:	VSTD050DM	Client Sample ID:	50uL/100mL 15613/10
Injection Date:	06-Dec-2019 08:42:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd18.i
Sample Info:	18120619, VSTD050DM		
Method:	\\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m		
Method Date:	06-Dec-2019 09:40:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	CCV	ALS Bottle:	2
Cpnd Sublist:	std.sub		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	tml	Review Date:	06-Dec-2019 09:33:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.000	164303	50.000	35.747	M
2 Chloromethane	50.0	1.566	1.566	0.000	243465	50.000	43.488	
3 Vinyl chloride	62.0	1.681	1.681	0.000	381254	50.000	48.707	
4 Bromomethane	94.0	2.001	2.001	0.000	247417	50.000	55.607	
5 Chloroethane	64.0	2.132	2.132	0.000	186203	50.000	47.672	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.000	209916	50.000	45.438	
8 Ethyl ether	59.0	2.771	2.771	0.000	251773	50.000	47.159	
9 Acrolein	56.0	2.934	2.934	0.000	1177661	500.00	434.96	
10 Acetone	43.0	3.123	3.123	0.000	868786	100.00	138.36	
11 1,1-Dichloroethene	96.0	3.044	3.044	0.000	268715	50.000	46.966	
12 Freon 113	101.0	3.081	3.081	0.000	301617	50.000	49.878	
13 Methyl iodide	142.0	3.217	3.217	0.000	580262	50.000	49.235	
14 Carbon disulfide	76.0	3.285	3.285	0.000	885524	50.000	46.415	
15 Acetonitrile	40.0	3.484	3.484	0.000	720126	500.00	494.89	
17 Allyl chloride	76.0	3.537	3.537	0.000	131161	50.000	45.994	
16 Methyl Acetate	43.0	3.547	3.547	0.000	599188	50.000	45.321	
18 Methylene chloride	84.0	3.715	3.715	0.000	329635	50.000	50.123	
20 Acrylonitrile	53.0	4.030	4.030	0.000	599058	100.00	95.749	
21 trans-1,2-Dichloroethene	96.0	4.066	4.066	0.000	290301	50.000	46.540	
22 tert-Butyl methyl ether(MTBE)	73.0	4.072	4.072	0.000	557589	50.000	54.573	
23 Hexane	57.0	4.449	4.449	0.000	419751	50.000	50.587	
24 1,1-Dichloroethane	63.0	4.643	4.643	0.000	540263	50.000	47.751	
25 Vinyl acetate	86.0	4.690	4.690	0.000	90052	50.000	51.305	M
26 Diisopropyl ether (IPE)	87.0	4.732	4.732	0.000	252047	50.000	50.184	
27 Chloroprene	53.0	4.738	4.738	0.000	411474	50.000	48.939	
29 cis-1,2-Dichloroethene	96.0	5.393	5.393	0.000	353344	50.000	48.442	
30 2-Butanone (MEK)	72.0	5.398	5.398	0.000	283261	100.00	110.83	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
31 2,2-Dichloropropane	77.0	5.382	5.382	0.000	295729	50.000	53.090	
32 Propionitrile	54.0	5.477	5.477	0.000	1505729	500.00	482.29	
33 Ethyl Acetate	43.0	5.477	5.477	0.000	760293	50.000	47.119	
34 Methacrylonitrile	67.0	5.666	5.666	0.000	1380645	250.00	243.03	
35 Bromochloromethane	128.0	5.687	5.687	0.000	197930	50.000	47.603	
36 Tetrahydrofuran	42.0	5.697	5.697	0.000	382390	50.000	46.393	
37 Chloroform	83.0	5.849	5.849	0.000	567005	50.000	48.935	
$ 39 dibromofluoromethane	111.0	6.048	6.048	0.000	354425	50.000	46.624	
40 1,1,1-Trichloroethane	97.0	6.022	6.022	0.000	441553	50.000	50.594	
* 41 Pentafluorobenzene	168.0	6.127	6.127	0.000	784235	50.000	50.000	
42 Cyclohexane	41.0	6.096	6.096	0.000	292306	50.000	51.005	
43 1,1-Dichloropropene	75.0	6.232	6.232	0.000	422218	50.000	47.396	
44 Carbon tetrachloride	119.0	6.211	6.211	0.000	428373	50.000	49.916	
45 Isobutyl alcohol	42.0	6.473	6.473	0.000	417578	500.00	476.00	
$ 46 1,2-Dichloroethane-d4	65.0	6.463	6.463	0.000	396726	50.000	49.479	
48 Benzene	78.0	6.473	6.473	0.000	1258293	50.000	50.327	
49 Isopropyl Acetate	43.0	6.625	6.625	0.000	967977	50.000	49.262	
50 1,2-Dichloroethane	62.0	6.562	6.562	0.000	463860	50.000	49.862	
* 52 1,4-Difluorobenzene	114.0	7.071	7.071	0.000	1154489	50.000	50.000	
53 Trichloroethene	130.0	7.349	7.349	0.000	379993	50.000	49.090	
54 Methylcyclohexane	83.0	7.632	7.632	0.000	500912	50.000	50.316	
55 1,2-Dichloropropane	63.0	7.679	7.679	0.000	324348	50.000	47.938	
56 Dibromomethane	93.0	7.784	7.784	0.000	246824	50.000	48.842	
57 Methyl methacrylate	41.0	7.805	7.805	0.000	451206	50.000	48.814	
58 1,4-Dioxane	88.0	7.789	7.789	0.000	129758	500.00	479.40	
59 Bromodichloromethane	83.0	8.041	8.041	0.000	422174	50.000	49.162	
60 2-nitropropane	43.0	8.340	8.340	0.000	223032	50.000	45.007	
61 2-Chloroethylvinyl ether	63.0	8.444	8.444	0.000	282406	50.000	48.798	
62 cis-1,3-Dichloropropene	75.0	8.617	8.617	0.000	517739	50.000	48.316	
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	1498213	100.00	103.44	
$ 64 Toluene-d8	98.0	8.958	8.958	0.000	1205651	50.000	49.415	
65 Toluene	92.0	9.047	9.047	0.000	798433	50.000	50.020	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	495994	50.000	50.695	
67 Ethyl methacrylate	69.0	9.498	9.498	0.000	554763	50.000	50.603	
68 1,1,2-Trichloroethane	97.0	9.650	9.650	0.000	347756	50.000	50.418	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	307301	50.000	50.112	
70 1,3-Dichloropropane	76.0	9.850	9.850	0.000	554134	50.000	49.223	
71 2-Hexanone	43.0	9.949	9.949	0.000	1213247	100.00	102.04	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	389235	50.000	49.118	
73 n-Butyl acetate	43.0	10.117	10.117	0.000	849759	50.000	50.058	
75 1,2-Dibromoethane (EDB)	107.0	10.232	10.232	0.000	404562	50.000	50.096	
* 76 Chlorobenzene-d5	117.0	10.783	10.783	0.000	1081824	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	942097	50.000	49.072	
78 1,1,1,2-Tetrachloroethane	131.0	10.930	10.930	0.000	340914	50.000	50.023	
79 Ethylbenzene	106.0	10.940	10.940	0.000	487163	50.000	50.290	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	594828	50.000	49.305	
81 o-Xylene	106.0	11.496	11.496	0.000	580006	50.000	49.864	
82 Styrene	104.0	11.522	11.522	0.000	992752	50.000	51.420	
83 Bromoform	173.0	11.695	11.695	0.000	321028	50.000	48.610	
84 Isopropylbenzene	105.0	11.884	11.884	0.000	1456063	50.000	51.946	
85 Cyclohexanone	55.0	11.957	11.957	0.000	452176	500.00	523.96	

Report Date: 06-Dec-2019 14:12:53 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A02.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/L	OnCol Amt ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	447952	50.000	47.205	
88 1,1,2,2-Tetrachloroethane	83.0	12.204	12.204	0.000	598420	50.000	53.774	
87 Bromobenzene	156.0	12.178	12.178	0.000	446446	50.000	55.938	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.000	202954	50.000	54.189	
90 trans-1,4-Dichloro-2-butene	53.0	12.240	12.240	0.000	147601	50.000	51.118	
91 n-Propylbenzene	91.0	12.293	12.293	0.000	1806405	50.000	58.216	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	1043821	50.000	55.709	
93 1,3,5-Trimethylbenzene	105.0	12.476	12.476	0.000	1148199	50.000	58.189	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	389486	50.000	53.757	
95 tert-Butylbenzene	119.0	12.765	12.765	0.000	993665	50.000	56.000	
96 1,2,4-Trimethylbenzene	105.0	12.822	12.822	0.000	1193699	50.000	59.733	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	1439109	50.000	59.346	
98 1,3-Dichlorobenzene	146.0	13.074	13.074	0.000	808632	50.000	54.832	
99 p-Isopropyltoluene	119.0	13.116	13.116	0.000	1192967	50.000	59.004	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	544702	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.169	13.169	0.000	803863	50.000	53.285	
102 Benzyl chloride	91.0	13.279	13.279	0.000	1033493	50.000	62.225	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	1109204	50.000	58.562	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	773364	50.000	55.069	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	154190	50.000	51.226	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	466098	50.000	47.565	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	227822	50.000	59.034	
108 Naphthalene	128.0	15.082	15.082	0.000	1181277	50.000	44.456	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	386477	50.000	45.378	
S 110 Xylenes (total)	106.0	16.000		0.000		100.00	99.169	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		100.00	94.981	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

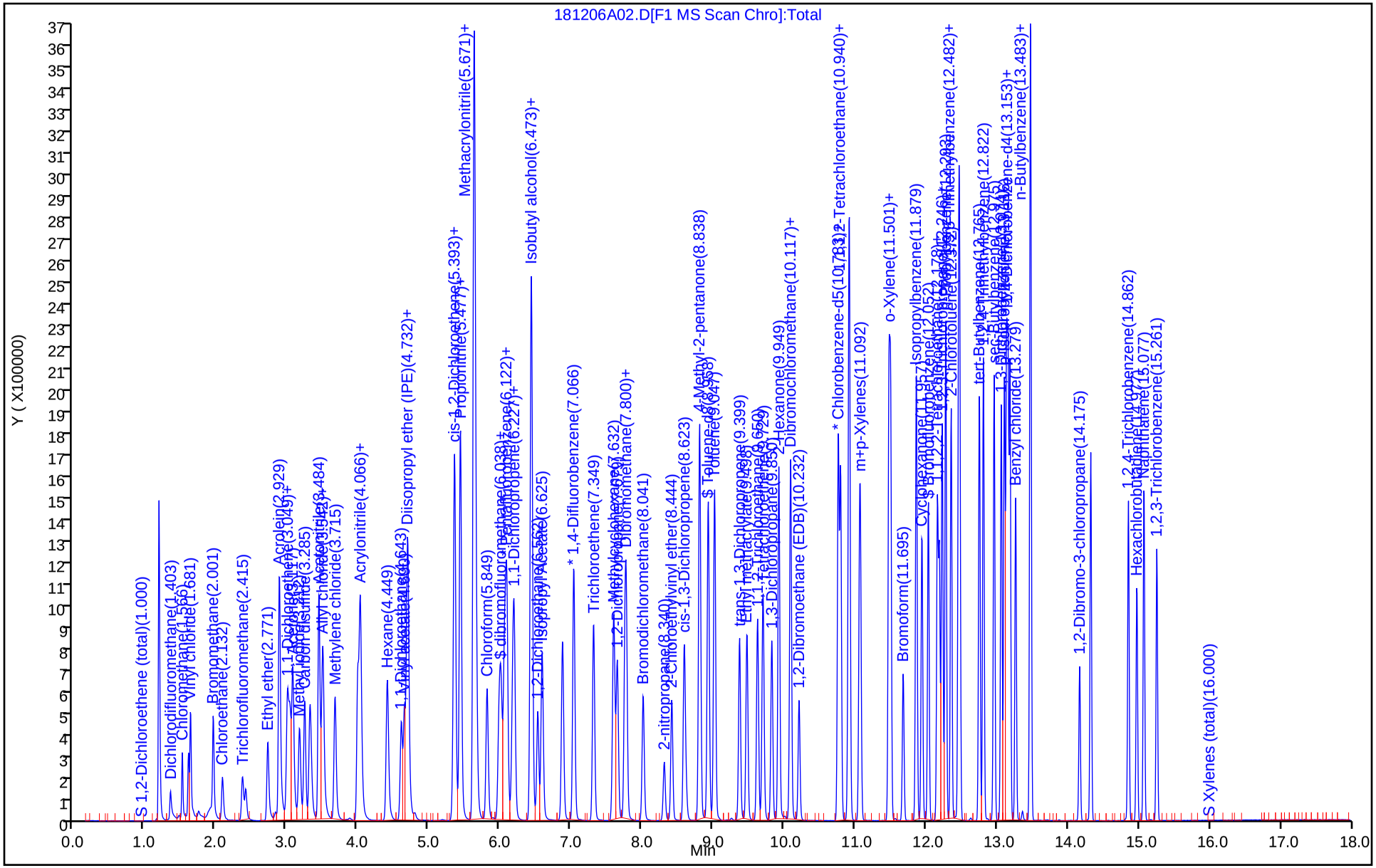
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 14:12:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A02.D				
Injection Date:	06-Dec-2019 08:42:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050DM		
Sample Info:	18120619, VSTD050DM				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 06-Dec-2019 14:12:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

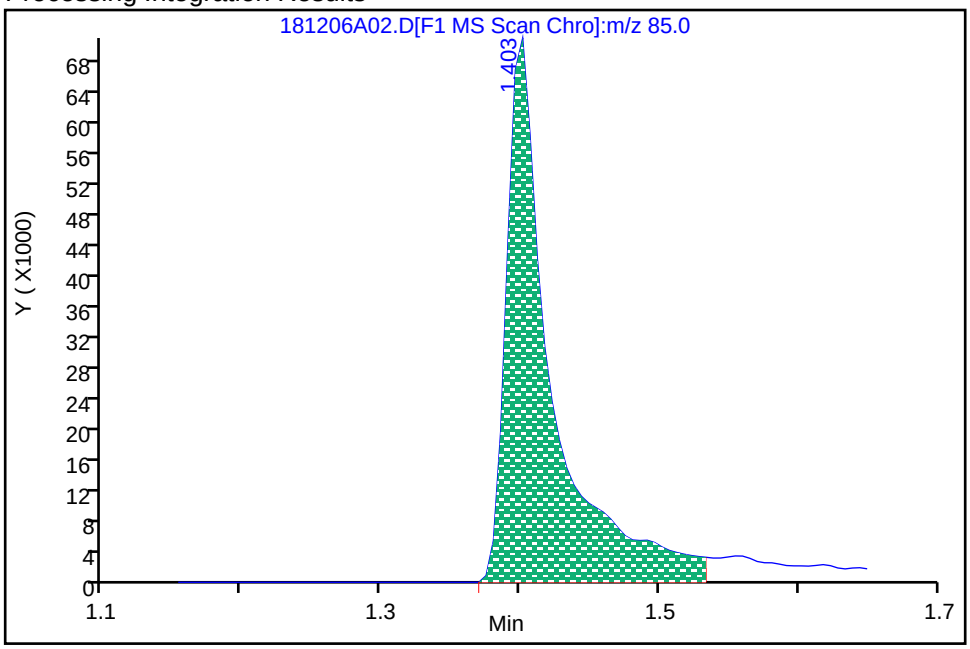
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A02.D		
Injection Date:	06-Dec-2019 08:42:30	Inst. ID:	msd18.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050DM
Sample Info:	18120619, VSTD050DM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

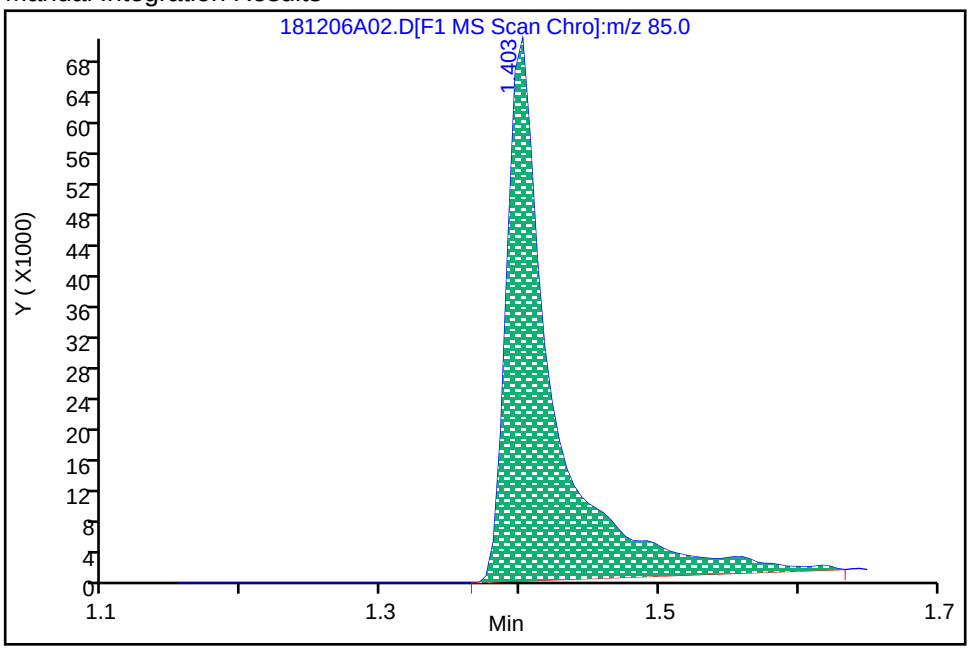
Processing Integration Results

RT: 1.403
Area: 162778
Amount: 35.415
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 164303
Amount: 35.747
Amount Units: ug/L



Data Editor: tml, 06-Dec-2019 09:38:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:12:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

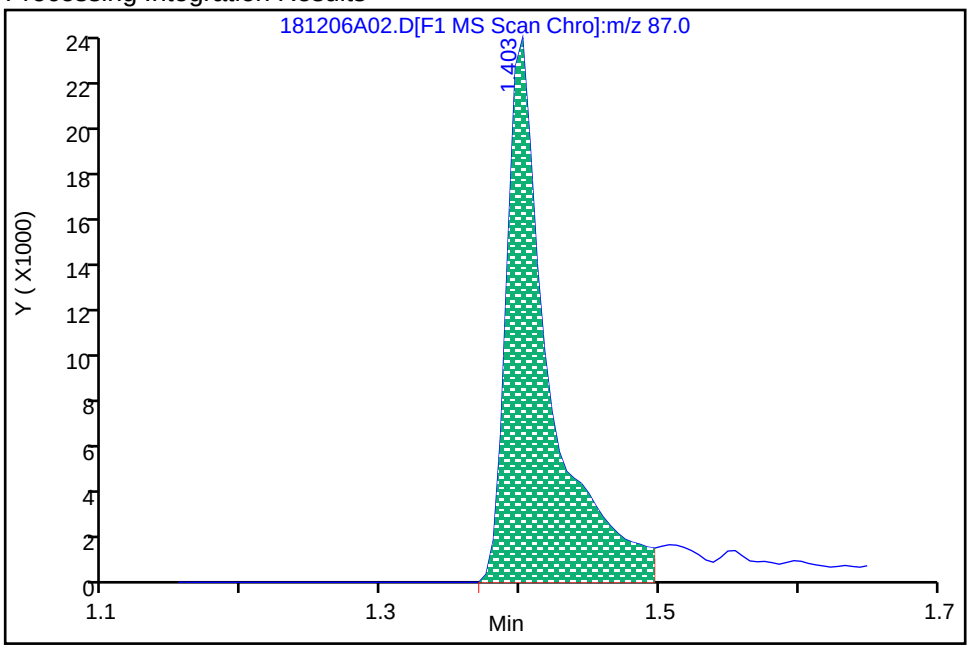
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A02.D		
Injection Date:	06-Dec-2019 08:42:30	Inst. ID:	msd18.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050DM
Sample Info:	18120619, VSTD050DM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

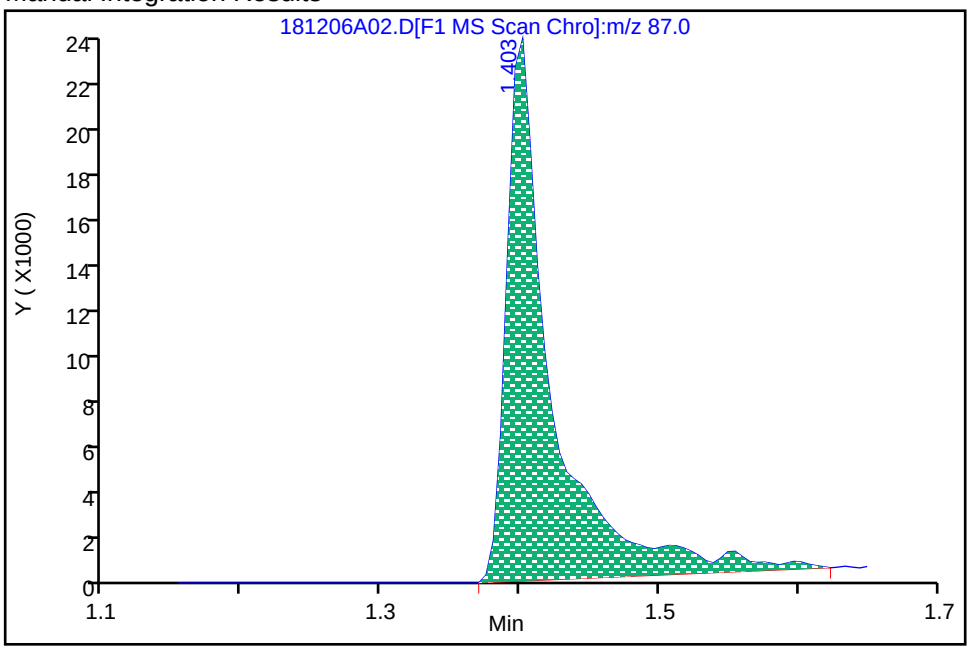
Processing Integration Results

RT: 1.403
Area: 50984
Amount: 35.415
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 54244
Amount: 35.747
Amount Units: ug/L



Data Editor: tml, 06-Dec-2019 09:38:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:12:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

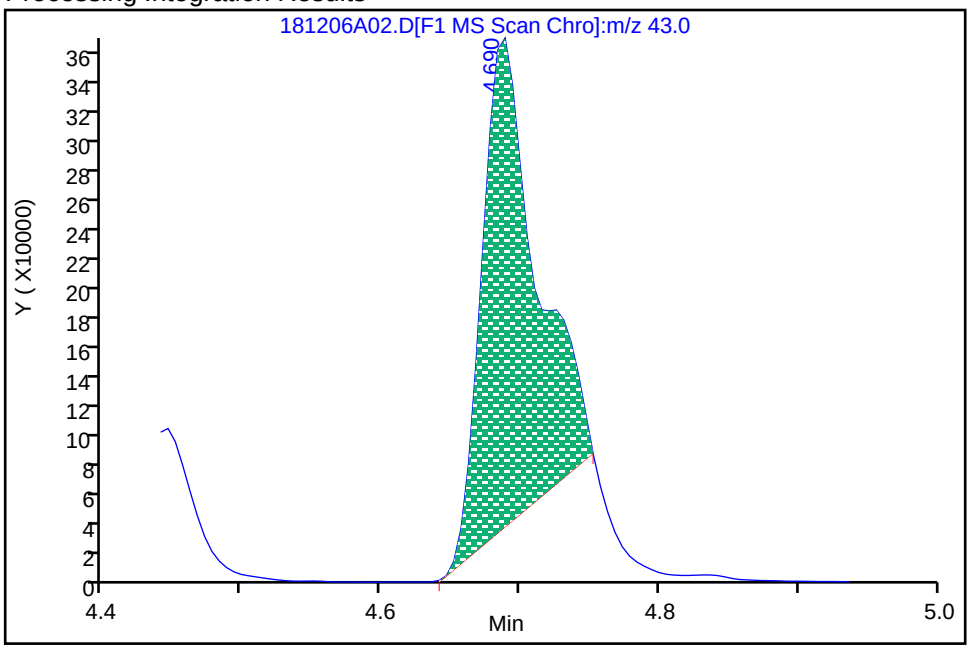
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A02.D		
Injection Date:	06-Dec-2019 08:42:30	Inst. ID:	msd18.i
Client ID:	50uL/100mL 15613/10	Lab ID:	VSTD050DM
Sample Info:	18120619, VSTD050DM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

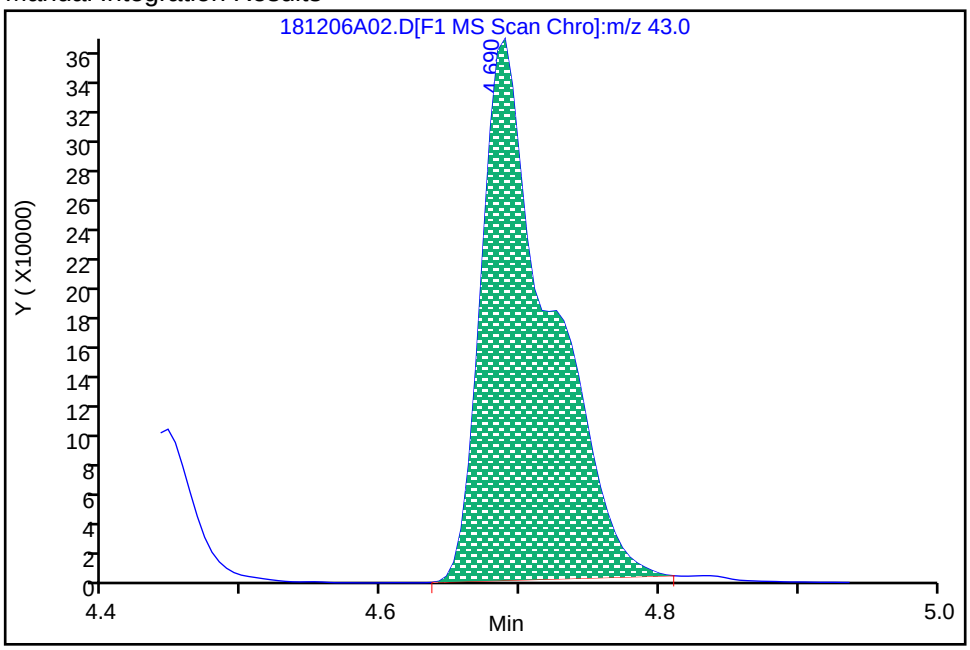
Processing Integration Results

RT: 4.690
Area: 888235
Amount: 51.305
Amount Units: ug/L
Conc:



Manual Integration Results

RT: 4.690
Area: 1231185
Amount: 51.305
Amount Units: ug/L



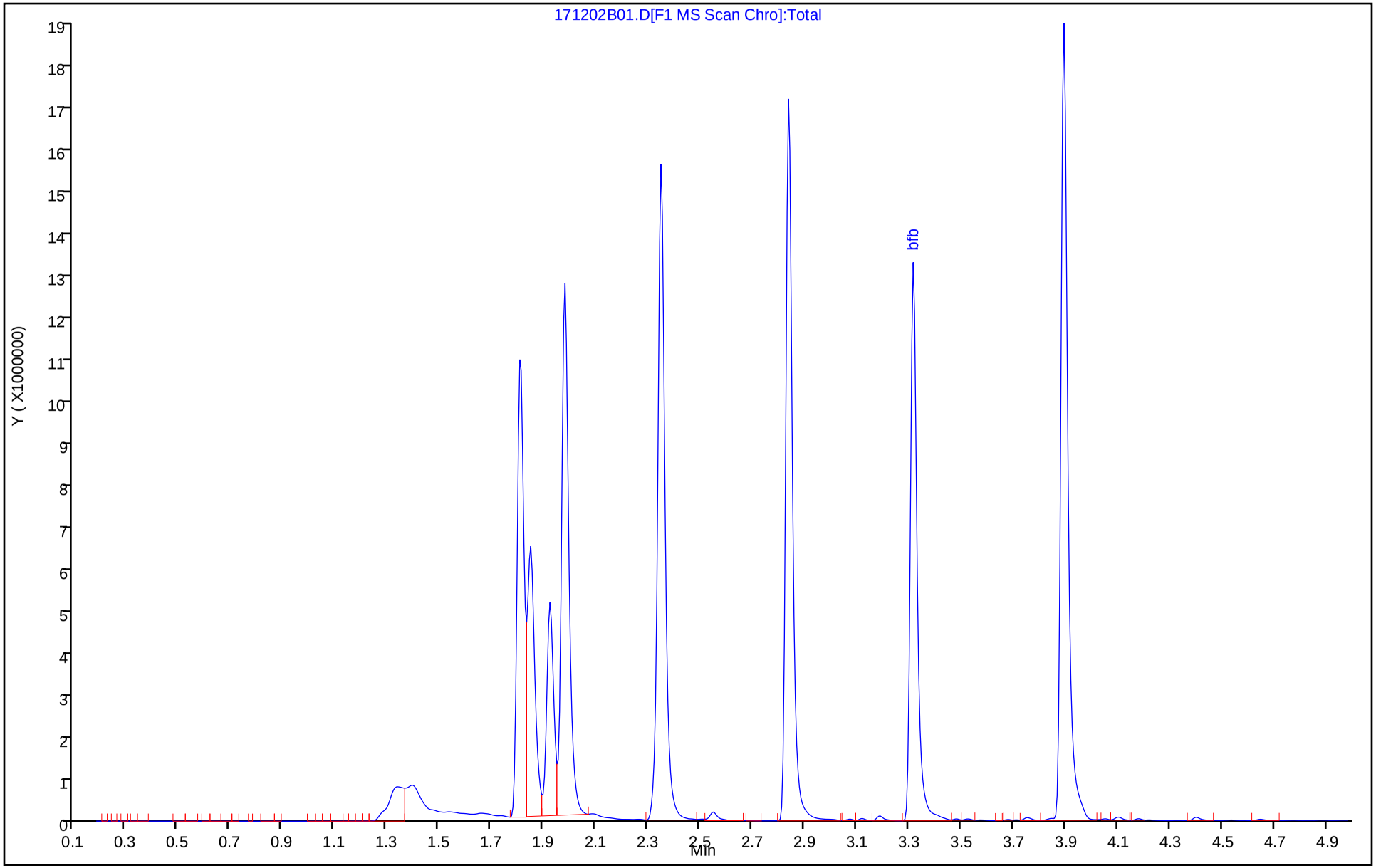
Data Editor: tml, 06-Dec-2019 09:33:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

RAW QC DATA

Report Date: 04-Dec-2019 13:03:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B01.D				
Injection Date:	02-Dec-2019 23:45:30	Inst. ID:	msd17.i	Operator:	JTH
Client ID:	15547	Lab ID:	BFBBQ		
Sample Info:	17120219B, BFBBQ				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



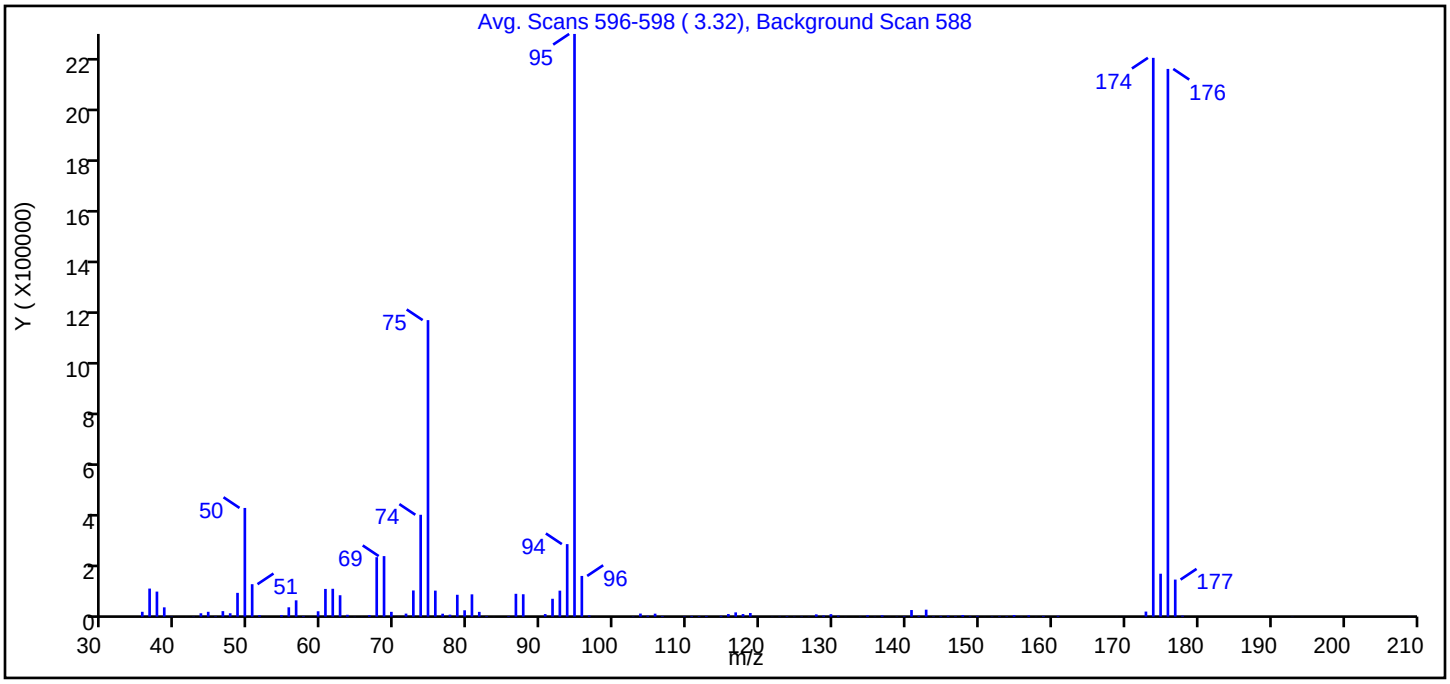
Report Date: 04-Dec-2019 13:03:59 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120219B.b\171202B01.D		
Injection Date:	02-Dec-2019 23:45:30	Inst. ID:	msd17.i
Client ID:	15547	Lab ID:	BFBBQ
Sample Info:	17120219B, BFBBQ		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	JTH		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.6
75	30.00 - 60.00% of mass 95	50.9
96	5.00 - 9.00% of mass 95	7.0
173	Less than 2.00% of mass 174	0.9 (0.9) 1
174	50.00 - 150.00% of mass 95	95.9
175	5.00 - 9.00% of mass 174	7.4 (7.7) 1
176	95.00 - 101.00% of mass 174	94.0 (98.0) 1
177	5.00 - 9.00% of mass 176	6.4 (6.8) 2

1-Value is % Mass 174 2-Value is % Mass 176

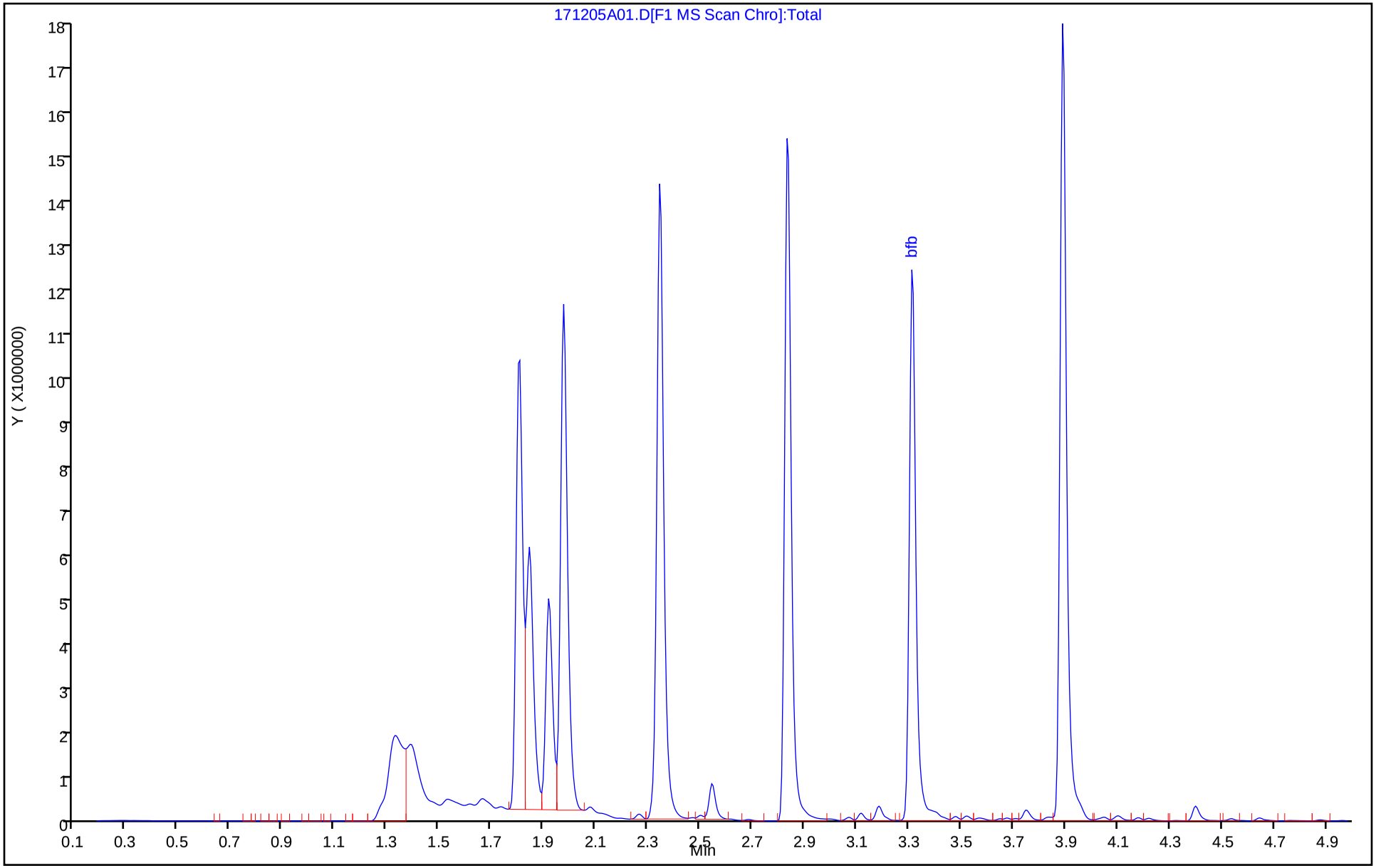
Data File: \\Organics\DD\chem\msd17.i\17120219B.b\171202B01.D
Injection Date: 02-Dec-2019 23:45:45
Spectrum: Avg. Scans 596-598 (3.32), Background Scan 588
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	150	68.00	227776	106.00	11246	142.00	2990
36.00	18416	69.00	231936	107.00	2466	143.00	26576
37.00	107448	70.00	18304	110.00	1611	144.00	1562
38.00	95888	71.00	592	111.00	2550	145.00	2176
39.00	35512	72.00	11455	112.00	1918	146.00	3499
40.00	1062	73.00	100248	113.00	2632	147.00	1773
41.00	188	74.00	390400	115.00	2752	148.00	6099
42.00	186	75.00	1136640	116.00	9803	149.00	1634
43.00	983	76.00	99600	117.00	16208	150.00	2636
44.00	12817	77.00	11104	118.00	9758	151.00	298
45.00	18400	78.00	7420	119.00	13787	152.00	1093
46.00	1770	79.00	83680	120.00	552	153.00	1687
47.00	20944	80.00	24248	122.00	482	154.00	1572
48.00	12867	81.00	85368	123.00	850	155.00	5936
49.00	91024	82.00	18160	124.00	1756	156.00	715
50.00	416576	83.00	1997	125.00	826	157.00	4390
51.00	124264	84.00	242	126.00	1130	158.00	417
52.00	5420	85.00	84	127.00	743	159.00	2658
53.00	169	86.00	2020	128.00	8545	160.00	145
55.00	5903	87.00	87416	129.00	4055	161.00	2857
56.00	35656	88.00	85712	130.00	9465	169.00	259
57.00	62376	91.00	9714	131.00	3614	170.00	298
58.00	2520	92.00	68368	132.00	371	173.00	19312
59.00	406	93.00	99488	133.00	122	174.00	2142208
60.00	20472	94.00	277888	134.00	739	175.00	164416
61.00	106112	95.00	2233856	135.00	4912	176.00	2099712
62.00	106664	96.00	155904	136.00	729	177.00	141952
63.00	81888	97.00	4485	137.00	4868	178.00	3771
64.00	7031	98.00	172	138.00	245	193.00	478
65.00	601	103.00	1159	139.00	923	207.00	55
66.00	312	104.00	11662	140.00	1937	209.00	321
67.00	5515	105.00	3501	141.00	25200		

Report Date: 06-Dec-2019 10:05:47 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A01.D				
Injection Date:	05-Dec-2019 08:04:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	15547	Lab ID:	BFBCV		
Sample Info:	17120519, BFBCV				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



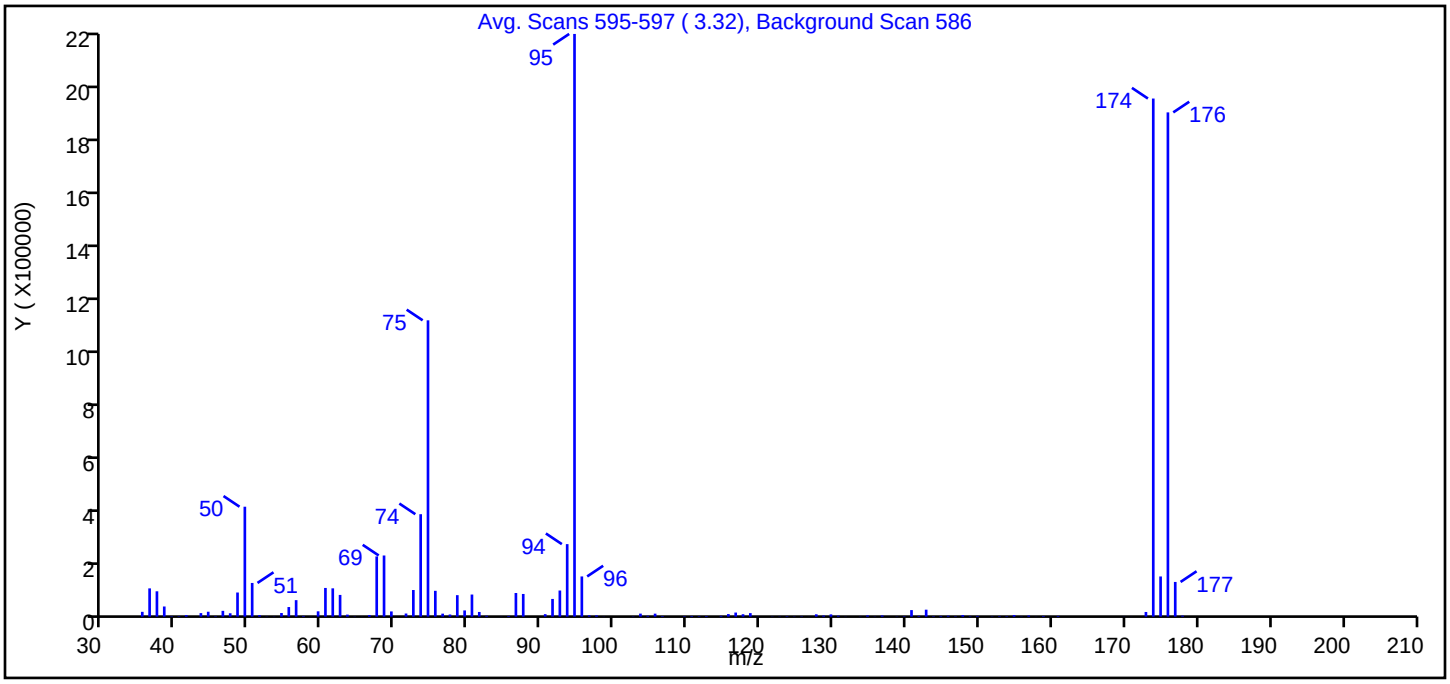
Report Date: 06-Dec-2019 10:05:48 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A01.D		
Injection Date:	05-Dec-2019 08:04:30	Inst. ID:	msd17.i
Client ID:	15547	Lab ID:	BFBCV
Sample Info:	17120519, BFBCV		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.9
75	30.00 - 60.00% of mass 95	50.9
96	5.00 - 9.00% of mass 95	6.9
173	Less than 2.00% of mass 174	0.8 (0.9) 1
174	50.00 - 150.00% of mass 95	88.9
175	5.00 - 9.00% of mass 174	6.9 (7.7) 1
176	95.00 - 101.00% of mass 174	86.5 (97.3) 1
177	5.00 - 9.00% of mass 176	5.9 (6.9) 2

1-Value is % Mass 174 2-Value is % Mass 176

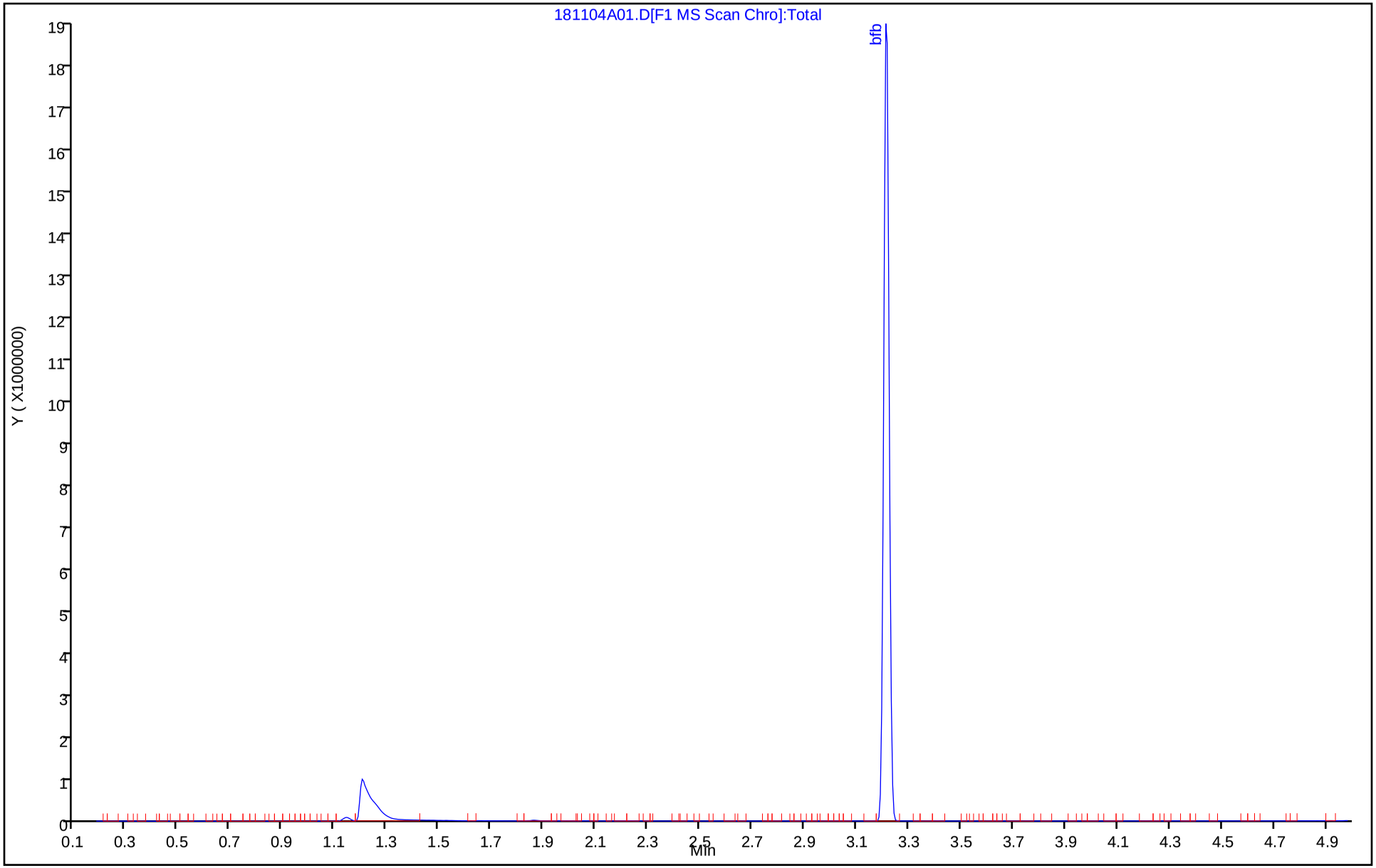
Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A01.D
Injection Date: 05-Dec-2019 08:04:20
Spectrum: Avg. Scans 595-597 (3.32), Background Scan 586
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 125

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	104	68.00	227008	107.00	2231	143.00	26120
36.00	17984	69.00	230528	110.00	1685	144.00	1671
37.00	106464	70.00	19520	111.00	2337	145.00	2185
38.00	95488	72.00	11625	112.00	1607	146.00	3247
39.00	38128	73.00	100296	113.00	2204	147.00	1446
40.00	1676	74.00	386304	115.00	2636	148.00	5811
41.00	1565	75.00	1117696	116.00	9574	149.00	1494
42.00	5590	76.00	97280	117.00	15258	150.00	2549
44.00	13244	77.00	11163	118.00	8951	151.00	69
45.00	18352	78.00	7882	119.00	13186	152.00	934
46.00	1651	79.00	80888	120.00	509	153.00	1741
47.00	21720	80.00	23336	122.00	698	154.00	1647
48.00	12603	81.00	83240	123.00	694	155.00	5715
49.00	90896	82.00	17488	124.00	1642	156.00	751
50.00	414528	83.00	3110	125.00	833	157.00	3919
51.00	126952	85.00	412	126.00	1251	158.00	351
52.00	5511	86.00	2391	127.00	234	159.00	2440
53.00	685	87.00	89016	128.00	8729	160.00	149
54.00	674	88.00	85416	129.00	3923	161.00	2453
55.00	13565	91.00	9246	130.00	8446	170.00	376
56.00	36056	92.00	66624	131.00	3414	171.00	162
57.00	62048	93.00	98400	132.00	463	173.00	17472
58.00	2624	94.00	273408	133.00	79	174.00	1954304
59.00	408	95.00	2198016	134.00	621	175.00	151424
60.00	19936	96.00	151488	135.00	4489	176.00	1902080
61.00	108096	97.00	4642	136.00	714	177.00	130752
62.00	106624	98.00	4586	137.00	4303	178.00	3624
63.00	81776	99.00	464	138.00	74	193.00	67
64.00	7549	103.00	1022	139.00	798	209.00	71
65.00	749	104.00	11272	140.00	1635		
66.00	321	105.00	3056	141.00	24560		
67.00	5765	106.00	11134	142.00	2818		

Report Date: 07-Nov-2019 09:16:42 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A01.D				
Injection Date:	04-Nov-2019 13:33:30	Inst. ID:	msd18.i	Operator:	ECB
Client ID:	15567	Lab ID:	BFBIK		
Sample Info:	18110419, BFBIK				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



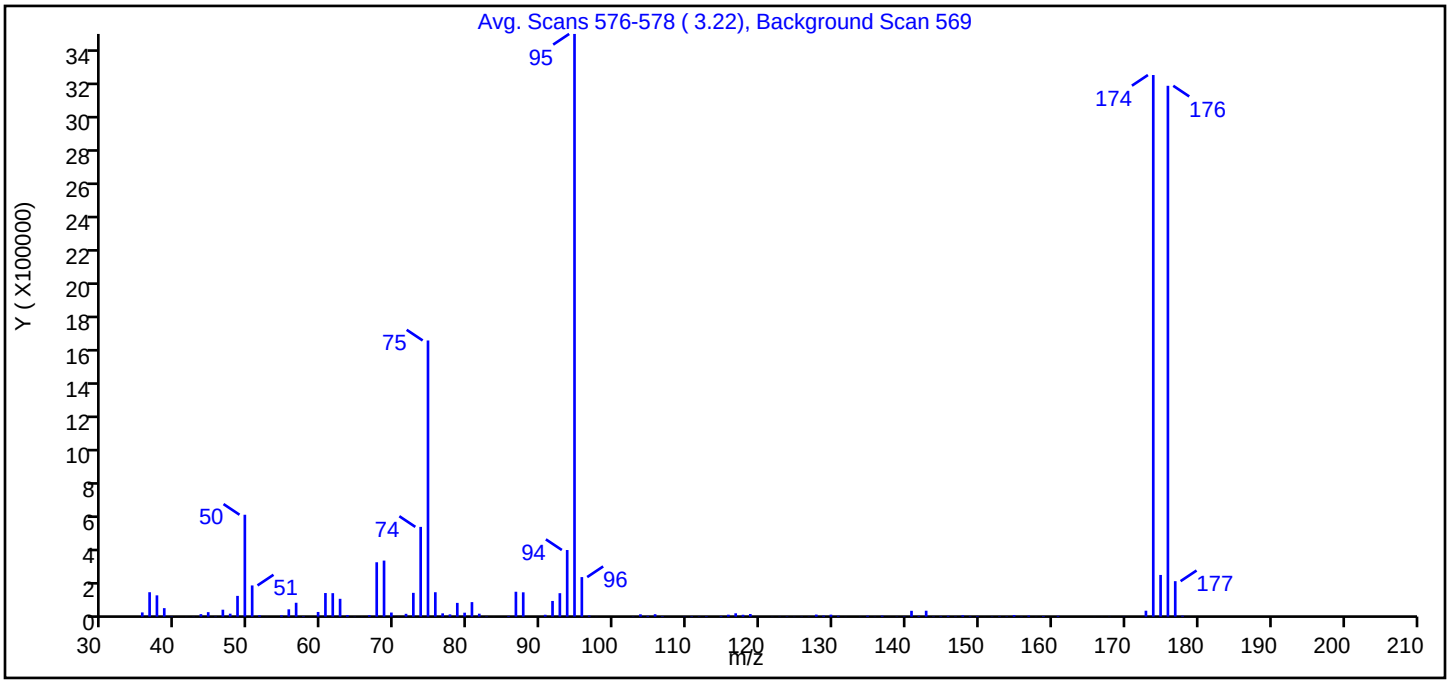
Report Date: 07-Nov-2019 09:16:42 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\dd\chem\msd18.i\18110419.b\181104A01.D		
Injection Date:	04-Nov-2019 13:33:30	Inst. ID:	msd18.i
Client ID:	15567	Lab ID:	BFBIK
Sample Info:	18110419, BFBIK		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	ECB		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	17.5
75	30.00 - 60.00% of mass 95	47.4
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	1.0 (1.1) 1
174	50.00 - 150.00% of mass 95	92.9
175	5.00 - 9.00% of mass 174	7.1 (7.7) 1
176	95.00 - 101.00% of mass 174	91.1 (98.0) 1
177	5.00 - 9.00% of mass 176	6.1 (6.7) 2

1-Value is % Mass 174 2-Value is % Mass 176

Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A01.D
Injection Date: 04-Nov-2019 13:33:03
Spectrum: Avg. Scans 576-578 (3.22), Background Scan 569
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	24848	70.00	24136	108.00	152	146.00	4686
37.00	144960	71.00	982	110.00	1420	147.00	1833
38.00	126376	72.00	16576	111.00	2534	148.00	7794
39.00	50328	73.00	141248	112.00	1592	149.00	2517
40.00	1774	74.00	533312	113.00	2770	150.00	3363
41.00	268	75.00	1641472	115.00	3403	151.00	421
42.00	419	76.00	144896	116.00	11305	152.00	1517
43.00	1003	77.00	19424	117.00	19672	153.00	2413
44.00	14566	78.00	13131	118.00	10944	154.00	1799
45.00	26432	79.00	81528	119.00	15337	155.00	9002
46.00	1793	80.00	23256	120.00	682	156.00	1299
47.00	41016	81.00	86128	122.00	591	157.00	5784
48.00	17408	82.00	17320	123.00	950	158.00	629
49.00	123168	83.00	1863	124.00	1748	159.00	3677
50.00	605504	84.00	278	125.00	787	160.00	75
51.00	185280	85.00	199	126.00	1192	161.00	4248
52.00	8041	86.00	3892	127.00	1156	162.00	157
53.00	391	87.00	147776	128.00	11972	165.00	67
54.00	73	88.00	144384	129.00	5798	166.00	356
55.00	7667	89.00	71	130.00	11674	167.00	310
56.00	43336	90.00	439	131.00	4837	168.00	787
57.00	82288	91.00	11013	132.00	478	170.00	1030
58.00	3120	92.00	92944	134.00	703	173.00	35048
59.00	471	93.00	139200	135.00	5199	174.00	3219456
60.00	27552	94.00	395840	136.00	956	175.00	247616
61.00	140096	95.00	3463680	137.00	5536	176.00	3155456
62.00	139328	96.00	234880	138.00	275	177.00	210624
63.00	105768	97.00	6259	139.00	1368	178.00	5553
64.00	9397	98.00	395	140.00	2207	179.00	160
65.00	1028	103.00	1436	141.00	34480	193.00	92
66.00	508	104.00	13650	142.00	4167	207.00	29
67.00	8224	105.00	4462	143.00	34944		
68.00	323072	106.00	14175	144.00	1998		

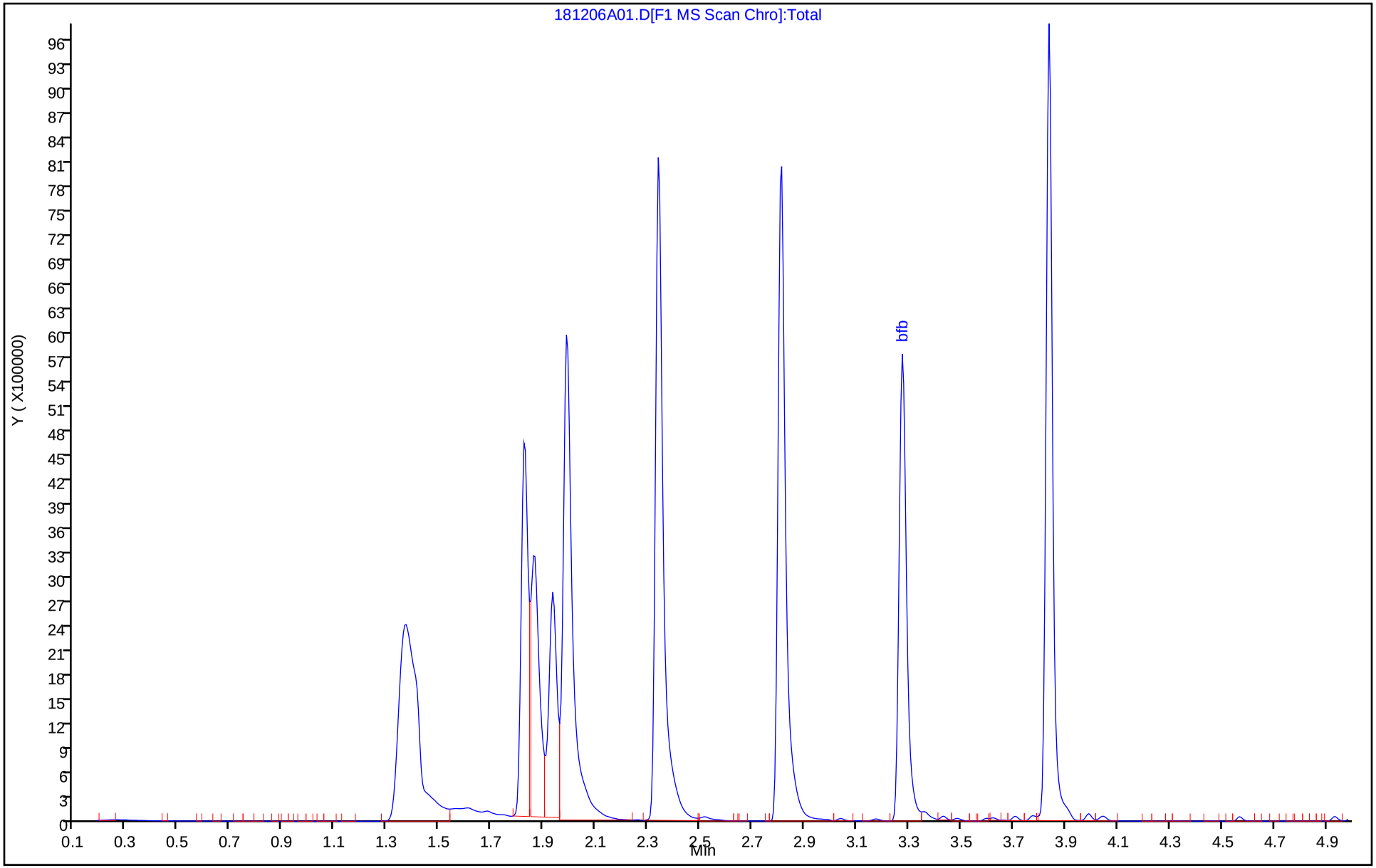
Report Date: 07-Nov-2019 09:16:42 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\dd\chem\msd18.i\18110419.b\181104A01.D
Injection Date: 04-Nov-2019 13:33:03
Spectrum: Avg. Scans 576-578 (3.22), Background Scan 569
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
69.00	332992	107.00	3057	145.00	2722		

Report Date: 06-Dec-2019 14:12:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A01.D				
Injection Date:	06-Dec-2019 08:16:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	15588	Lab ID:	BFBDM		
Sample Info:	18120619, BFBDM				
Injection Vol.	1.00	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



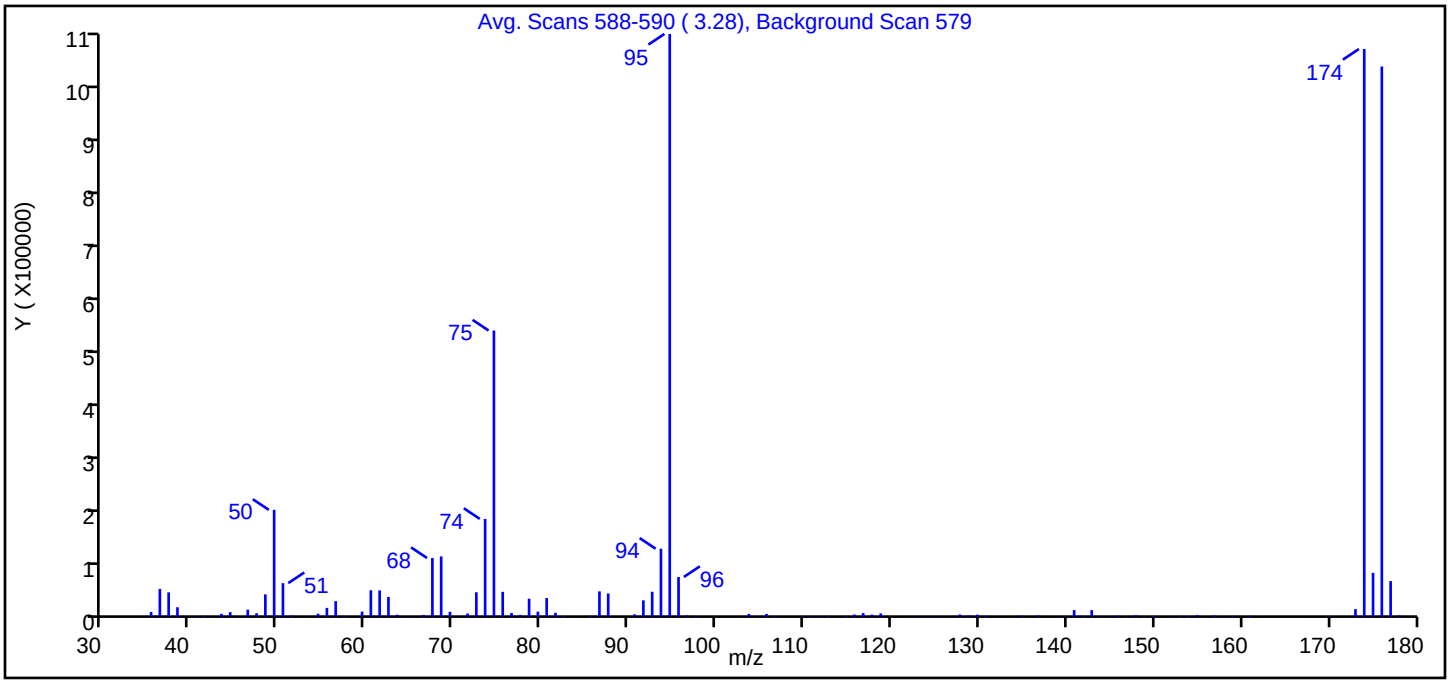
Report Date: 06-Dec-2019 14:12:49 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

MS Tune Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A01.D		
Injection Date:	06-Dec-2019 08:16:30	Inst. ID:	msd18.i
Client ID:	15588	Lab ID:	BFBDM
Sample Info:	18120619, BFBDM		
Injection Vol.	1.00	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 bfb



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base Peak, 100% relative abundance	100.0
50	15.00 - 40.00% of mass 95	18.3
75	30.00 - 60.00% of mass 95	49.1
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	1.3 (1.3) 1
174	50.00 - 150.00% of mass 95	97.4
175	5.00 - 9.00% of mass 174	7.5 (7.7) 1
176	95.00 - 101.00% of mass 174	94.4 (96.9) 1
177	5.00 - 9.00% of mass 176	6.1 (6.5) 2

1-Value is % Mass 174 2-Value is % Mass 176

Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A01.D
Injection Date: 06-Dec-2019 08:17:01
Spectrum: Avg. Scans 588-590 (3.28), Background Scan 579
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	8294	67.00	2982	105.00	525	142.00	1516
37.00	49568	68.00	104792	106.00	4827	143.00	11619
38.00	43376	69.00	107680	107.00	1141	144.00	609
39.00	16768	70.00	8583	110.00	631	145.00	912
40.00	515	71.00	400	111.00	901	146.00	1567
41.00	610	72.00	5492	112.00	722	147.00	670
42.00	1528	73.00	43536	113.00	1128	148.00	2440
43.00	469	74.00	174784	115.00	1105	149.00	861
44.00	5032	75.00	511872	116.00	3662	150.00	1085
45.00	7976	76.00	44328	117.00	6357	152.00	485
46.00	665	77.00	6374	118.00	3495	153.00	876
47.00	12471	78.00	3026	119.00	5631	154.00	844
48.00	6055	79.00	32032	122.00	301	155.00	2653
49.00	39808	80.00	8909	123.00	309	156.00	363
50.00	190976	81.00	33192	124.00	553	157.00	1893
51.00	59880	82.00	6824	125.00	331	158.00	280
52.00	2019	83.00	1040	126.00	444	159.00	1396
53.00	74	86.00	1376	127.00	290	161.00	1243
54.00	369	87.00	45192	128.00	3754	167.00	71
55.00	5120	88.00	41328	129.00	1910	168.00	153
56.00	15566	91.00	4149	130.00	3508	169.00	272
57.00	27664	92.00	29088	131.00	1467	170.00	679
58.00	1309	93.00	44472	132.00	67	173.00	13433
60.00	8960	94.00	121472	134.00	288	174.00	1015616
61.00	47128	95.00	1042560	135.00	1684	175.00	78288
62.00	46808	96.00	70912	136.00	337	176.00	984320
63.00	35144	97.00	2409	137.00	1865	177.00	63520
64.00	3440	98.00	1030	139.00	539	178.00	2093
65.00	637	103.00	678	140.00	736		
66.00	216	104.00	4846	141.00	11620		

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38003-001
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	5.0	ug/L	12/05/2019 0951
Benzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Bromodichloromethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Bromoform	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	12/05/2019 0951
2-Butanone (MEK)	ND		1	10	2.0	ug/L	12/05/2019 0951
Carbon disulfide	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Chlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Chloroethane	ND		1	2.0	0.40	ug/L	12/05/2019 0951
Chloroform	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Chloromethane (Methyl chloride)	ND		1	1.0	0.50	ug/L	12/05/2019 0951
Cyclohexane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Dibromochloromethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Dichlorodifluoromethane	ND		1	2.0	0.60	ug/L	12/05/2019 0951
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Ethylbenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
2-Hexanone	ND		1	10	2.0	ug/L	12/05/2019 0951
Isopropylbenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Methyl acetate	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	12/05/2019 0951
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	12/05/2019 0951
Methylcyclohexane	ND		1	5.0	0.40	ug/L	12/05/2019 0951
Methylene chloride	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Styrene	ND		1	1.0	0.41	ug/L	12/05/2019 0951
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Tetrachloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Toluene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	12/05/2019 0951
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38003-001
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Vinyl chloride	ND		1	1.0	0.40	ug/L	12/05/2019 0951
Xylenes (total)	ND		1	1.0	0.40	ug/L	12/05/2019 0951

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A05.D		
Lab Sample ID:	VBLKCV	Client Sample ID:	VBLKCV
Injection Date:	05-Dec-2019 09:51:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, VBLKCV		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	BLANK	ALS Bottle:	5
Cpnd Sublist:	std.sub		
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	pap	Review Date:	06-Dec-2019 10:03:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.393		ND			
2 Chloromethane	50.0		1.571		ND			
3 Vinyl chloride	62.0		1.691		ND			
4 Bromomethane	94.0		2.022		ND			
5 Chloroethane	64.0		2.137		ND			
6 Trichlorofluoromethane	101.0		2.420		ND			
8 Ethyl ether	59.0		2.771		ND			
9 Acrolein	56.0		2.944		ND			
10 Acetone	43.0		3.133		ND			
11 1,1-Dichloroethene	96.0		3.055		ND			
12 Freon 113	101.0		3.091		ND			
13 Methyl iodide	142.0		3.228		ND			
14 Carbon disulfide	76.0		3.301		ND			
15 Acetonitrile	40.0		3.516		ND			
17 Allyl chloride	76.0		3.553		ND			
16 Methyl Acetate	43.0		3.563		ND			
18 Methylene chloride	84.0		3.736		ND			
20 Acrylonitrile	53.0		4.061		ND			
21 trans-1,2-Dichloroethene	96.0		4.087		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.093		ND			
23 Hexane	57.0		4.470		ND			
24 1,1-Dichloroethane	63.0		4.675		ND			
25 Vinyl acetate	86.0		4.722		ND			
26 Diisopropyl ether (IPE)	87.0		4.759		ND			
27 Chloroprene	53.0		4.764		ND			
29 cis-1,2-Dichloroethene	96.0		5.430		ND			
30 2-Butanone (MEK)	72.0		5.440		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0		5.424		ND			
32 Propionitrile	54.0		5.524		ND			
33 Ethyl Acetate	43.0		5.514		ND			
34 Methacrylonitrile	67.0		5.718		ND			
35 Bromochloromethane	128.0		5.734		ND			
36 Tetrahydrofuran	42.0		5.734		ND			
37 Chloroform	83.0		5.891		ND			
$ 39 dibromofluoromethane	111.0	6.096	6.090	0.005	1180779	48.335	48.335	
40 1,1,1-Trichloroethane	97.0		6.064		ND			
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	3111126	50.000	50.000	
42 Cyclohexane	41.0		6.132		ND			
43 1,1-Dichloropropene	75.0		6.274		ND			
44 Carbon tetrachloride	119.0		6.253		ND			
45 Isobutyl alcohol	42.0		6.520		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1347835	49.015	49.015	
48 Benzene	78.0		6.526		ND			
49 Isopropyl Acetate	43.0		6.672		ND			
50 1,2-Dichloroethane	62.0		6.615		ND			
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4294363	50.000	50.000	
53 Trichloroethene	130.0		7.401		ND			
54 Methylcyclohexane	83.0		7.679		ND			
55 1,2-Dichloropropane	63.0		7.742		ND			
56 Dibromomethane	93.0		7.847		ND			
57 Methyl methacrylate	41.0		7.868		ND			
58 1,4-Dioxane	88.0		7.842		ND			
59 Bromodichloromethane	83.0		8.104		ND			
60 2-nitropropane	43.0		8.413		ND			
61 2-Chloroethylvinyl ether	63.0		8.513		ND			
62 cis-1,3-Dichloropropene	75.0		8.686		ND			
63 4-Methyl-2-pentanone	43.0		8.911		ND			
$ 64 Toluene-d8	98.0	9.026	9.026	0.000	4181723	53.074	53.074	
65 Toluene	92.0		9.116		ND			
66 trans-1,3-Dichloropropene	75.0		9.472		ND			
67 Ethyl methacrylate	69.0		9.572		ND			
68 1,1,2-Trichloroethane	97.0		9.724		ND			
69 Tetrachloroethene	164.0		9.792		ND			
70 1,3-Dichloropropane	76.0		9.923		ND			
71 2-Hexanone	43.0		10.023		ND			
72 Dibromochloromethane	129.0		10.180		ND			
73 n-Butyl acetate	43.0		10.185		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.306		ND			
* 76 Chlorobenzene-d5	117.0	10.856	10.851	0.005	3353116	50.000	50.000	
77 Chlorobenzene	112.0		10.888		ND			
78 1,1,1,2-Tetrachloroethane	131.0		10.998		ND			
79 Ethylbenzene	106.0		11.008		ND			
80 m+p-Xylenes	106.0		11.160		ND			
81 o-Xylene	106.0		11.564		ND			
82 Styrene	104.0		11.590		ND			
83 Bromoform	173.0		11.769		ND			
84 Isopropylbenzene	105.0		11.952		ND			
85 Cyclohexanone	55.0		12.036		ND			

Report Date: 06-Dec-2019 10:05:55 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A05.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1184964	52.561	52.561	
88 1,1,2,2-Tetrachloroethane	83.0		12.277		ND			
87 Bromobenzene	156.0		12.251		ND			
89 1,2,3-Trichloropropane	110.0		12.324		ND			
90 trans-1,4-Dichloro-2-butene	53.0		12.314		ND			
91 n-Propylbenzene	91.0		12.366		ND			
92 2-Chlorotoluene	91.0		12.445		ND			
93 1,3,5-Trimethylbenzene	105.0		12.545		ND			
94 4-Chlorotoluene	126.0		12.566		ND			
95 tert-Butylbenzene	119.0		12.838		ND			
96 1,2,4-Trimethylbenzene	105.0		12.896		ND			
97 sec-Butylbenzene	105.0		13.048		ND			
98 1,3-Dichlorobenzene	146.0		13.153		ND			
99 p-Isopropyltoluene	119.0		13.190		ND			
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.000	1118958	50.000	50.000	
101 1,4-Dichlorobenzene	146.0		13.247		ND			
102 Benzyl chloride	91.0		13.352		ND			
103 n-Butylbenzene	91.0		13.557		ND			
104 1,2-Dichlorobenzene	146.0		13.567		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.254		ND			
106 1,2,4-Trichlorobenzene	180.0		14.946		ND			
107 Hexachlorobutadiene	225.0		15.061		ND			
108 Naphthalene	128.0		15.166		ND			
109 1,2,3-Trichlorobenzene	180.0		15.344		ND			
S 110 Xylenes (total)	106.0				ND			
S 111 1,2-Dichloroethene (total)	96.0				ND			

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

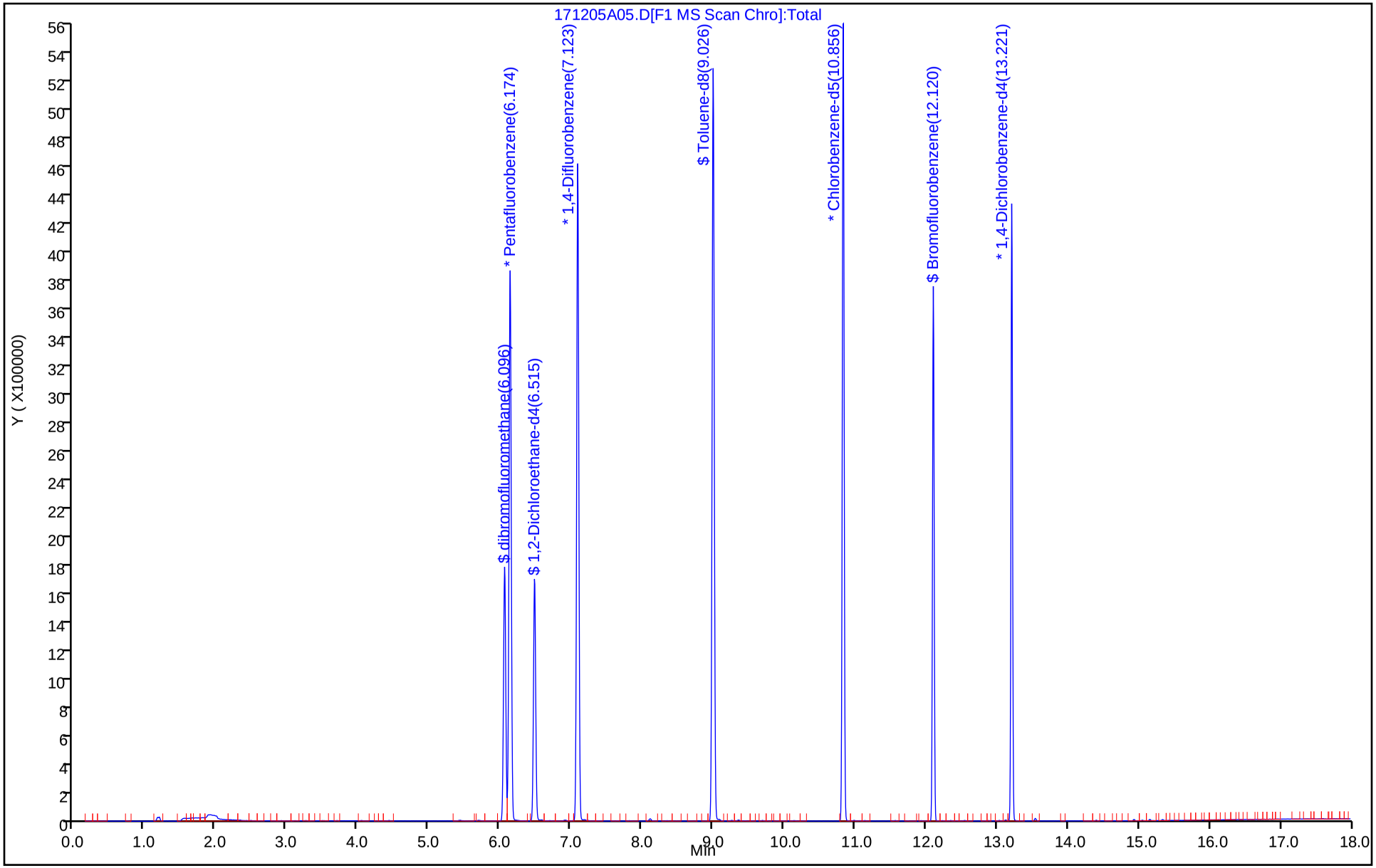
QC Flag Legend

Processing Flags
Review Flags

Report Date: 06-Dec-2019 10:05:55 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A05.D				
Injection Date:	05-Dec-2019 09:51:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	VBLKCV	Lab ID:	VBLKCV		
Sample Info:	17120519, VBLKCV				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38152-001
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Acetone	ND		1	20	5.0	ug/L	12/06/2019 0955

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		110	70-130
Bromofluorobenzene		89	70-130
Toluene-d8		101	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A05.D
Lab Sample ID: VBLKDM Client Sample ID: VBLKDM
Injection Date: 06-Dec-2019 09:55:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd18.i
Sample Info: 18120619, VBLKDM
Method: \\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m
Method Date: 06-Dec-2019 09:40:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: BLANK ALS Bottle: 5
Cpnd Sublist: std.sub
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1: Rxi-624Sil (0.25 mm) Detector: MS Scan
Data Reviewer: tml Review Date: 06-Dec-2019 11:10:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0		1.403		ND			
2 Chloromethane	50.0		1.566		ND			
3 Vinyl chloride	62.0		1.681		ND			
4 Bromomethane	94.0		2.001		ND			
5 Chloroethane	64.0		2.132		ND			
6 Trichlorofluoromethane	101.0		2.415		ND			
8 Ethyl ether	59.0		2.771		ND			
9 Acrolein	56.0		2.934		ND			
10 Acetone	43.0		3.123		ND			
11 1,1-Dichloroethene	96.0		3.044		ND			
12 Freon 113	101.0		3.081		ND			
13 Methyl iodide	142.0		3.217		ND			
14 Carbon disulfide	76.0		3.285		ND			
15 Acetonitrile	40.0		3.484		ND			
17 Allyl chloride	76.0		3.537		ND			
16 Methyl Acetate	43.0	3.558	3.547	0.011	6476	0.49068	0.49068	e
18 Methylene chloride	84.0		3.715		ND			
20 Acrylonitrile	53.0		4.030		ND			
21 trans-1,2-Dichloroethene	96.0		4.066		ND			
22 tert-Butyl methyl ether(MTBE)	73.0		4.072		ND			
23 Hexane	57.0		4.449		ND			
24 1,1-Dichloroethane	63.0		4.643		ND			
25 Vinyl acetate	86.0		4.690		ND			
26 Diisopropyl ether (IPE)	87.0		4.732		ND			
27 Chloroprene	53.0		4.738		ND			
29 cis-1,2-Dichloroethene	96.0		5.393		ND			
30 2-Butanone (MEK)	72.0		5.398		ND			

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0		5.382		ND			
32 Propionitrile	54.0		5.477		ND			
33 Ethyl Acetate	43.0		5.477		ND			
34 Methacrylonitrile	67.0		5.666		ND			
35 Bromochloromethane	128.0		5.687		ND			
36 Tetrahydrofuran	42.0		5.697		ND			
37 Chloroform	83.0		5.849		ND			
$ 39 dibromofluoromethane	111.0	6.049	6.048	0.000	378483	49.875	49.875	
40 1,1,1-Trichloroethane	97.0		6.022		ND			
* 41 Pentafluorobenzene	168.0	6.132	6.127	0.005	782866	50.000	50.000	
42 Cyclohexane	41.0		6.096		ND			
43 1,1-Dichloropropene	75.0		6.232		ND			
44 Carbon tetrachloride	119.0		6.211		ND			
45 Isobutyl alcohol	42.0		6.473		ND			
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.463	0.005	434475	54.861	54.861	
48 Benzene	78.0		6.473		ND			
49 Isopropyl Acetate	43.0		6.625		ND			
50 1,2-Dichloroethane	62.0		6.562		ND			
* 52 1,4-Difluorobenzene	114.0	7.071	7.071	0.000	1140314	50.000	50.000	
53 Trichloroethene	130.0		7.349		ND			
54 Methylcyclohexane	83.0		7.632		ND			
55 1,2-Dichloropropane	63.0		7.679		ND			
56 Dibromomethane	93.0		7.784		ND			
57 Methyl methacrylate	41.0		7.805		ND			
58 1,4-Dioxane	88.0		7.789		ND			
59 Bromodichloromethane	83.0		8.041		ND			
60 2-nitropropane	43.0		8.340		ND			
61 2-Chloroethylvinyl ether	63.0		8.444		ND			
62 cis-1,3-Dichloropropene	75.0		8.617		ND			
63 4-Methyl-2-pentanone	43.0		8.838		ND			
$ 64 Toluene-d8	98.0	8.958	8.958	0.000	1271540	50.742	50.742	
65 Toluene	92.0		9.047		ND			
66 trans-1,3-Dichloropropene	75.0		9.399		ND			
67 Ethyl methacrylate	69.0		9.498		ND			
68 1,1,2-Trichloroethane	97.0		9.650		ND			
69 Tetrachloroethene	164.0		9.729		ND			
70 1,3-Dichloropropane	76.0		9.850		ND			
71 2-Hexanone	43.0		9.949		ND			
72 Dibromochloromethane	129.0		10.112		ND			
73 n-Butyl acetate	43.0		10.117		ND			
75 1,2-Dibromoethane (EDB)	107.0		10.232		ND			
* 76 Chlorobenzene-d5	117.0	10.788	10.783	0.006	1111107	50.000	50.000	
77 Chlorobenzene	112.0		10.820		ND			
78 1,1,1,2-Tetrachloroethane	131.0		10.930		ND			
79 Ethylbenzene	106.0		10.940		ND			
80 m+p-Xylenes	106.0		11.092		ND			
81 o-Xylene	106.0		11.496		ND			
82 Styrene	104.0		11.522		ND			
83 Bromoform	173.0		11.695		ND			
84 Isopropylbenzene	105.0		11.884		ND			
85 Cyclohexanone	55.0		11.957		ND			

Report Date: 06-Dec-2019 14:13:02 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A05.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	434610	44.592	44.592	
88 1,1,2,2-Tetrachloroethane	83.0		12.204		ND			
87 Bromobenzene	156.0		12.178		ND			
89 1,2,3-Trichloropropane	110.0		12.251		ND			
90 trans-1,4-Dichloro-2-butene	53.0		12.240		ND			
91 n-Propylbenzene	91.0		12.293		ND			
92 2-Chlorotoluene	91.0		12.372		ND			
93 1,3,5-Trimethylbenzene	105.0		12.476		ND			
94 4-Chlorotoluene	126.0		12.492		ND			
95 tert-Butylbenzene	119.0		12.765		ND			
96 1,2,4-Trimethylbenzene	105.0		12.822		ND			
97 sec-Butylbenzene	105.0		12.975		ND			
98 1,3-Dichlorobenzene	146.0		13.074		ND			
99 p-Isopropyltoluene	119.0		13.116		ND			
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	604119	50.000	50.000	
101 1,4-Dichlorobenzene	146.0		13.169		ND			
102 Benzyl chloride	91.0		13.279		ND			
103 n-Butylbenzene	91.0		13.483		ND			
104 1,2-Dichlorobenzene	146.0		13.488		ND			
105 1,2-Dibromo-3-chloropropane	75.0		14.175		ND			
106 1,2,4-Trichlorobenzene	180.0		14.862		ND			
107 Hexachlorobutadiene	225.0		14.983		ND			
108 Naphthalene	128.0		15.082		ND			
109 1,2,3-Trichlorobenzene	180.0		15.261		ND			
S 110 Xylenes (total)	106.0				ND			
S 111 1,2-Dichloroethene (total)	96.0				ND			

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

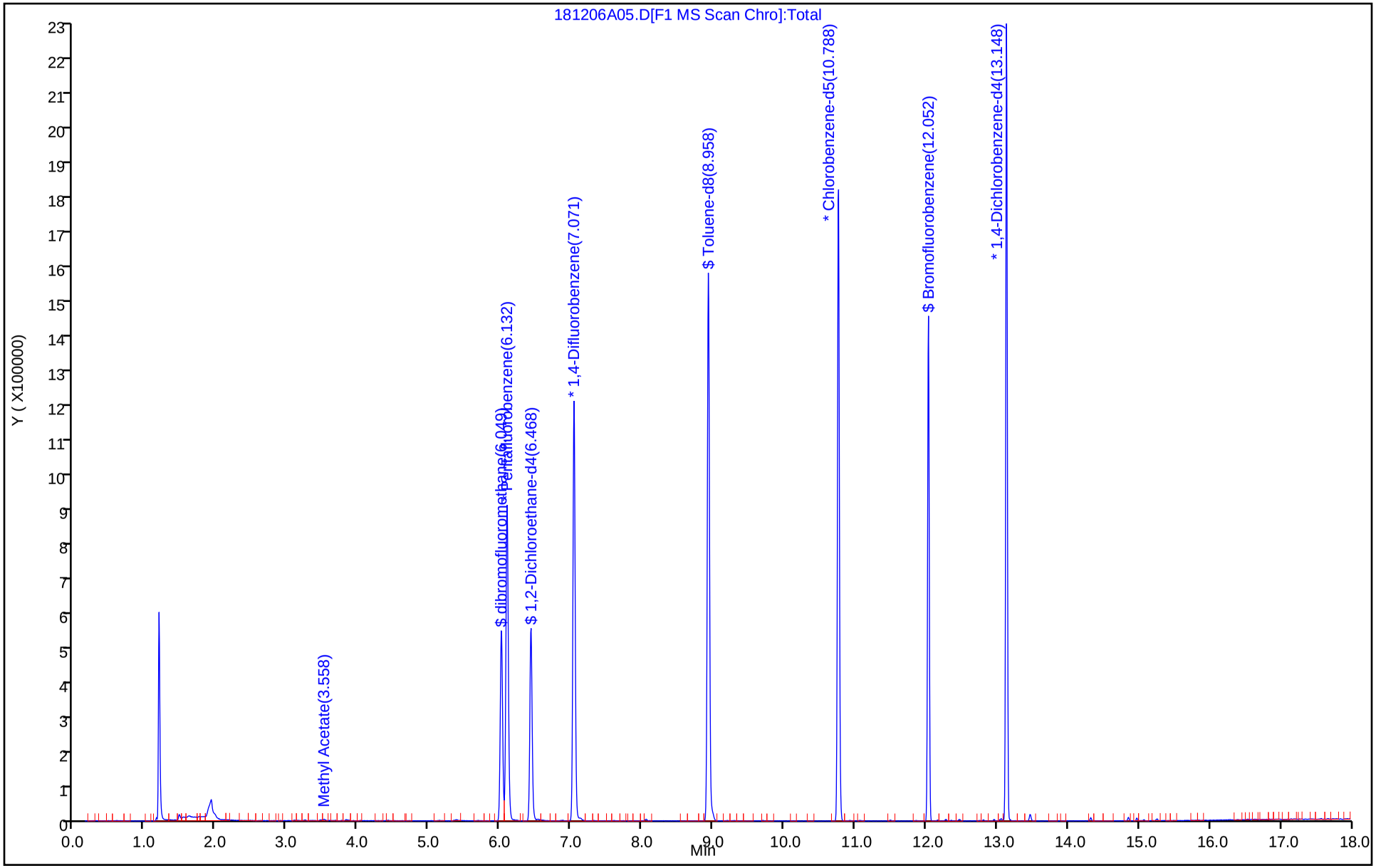
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Review Flags

Report Date: 06-Dec-2019 14:13:02 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

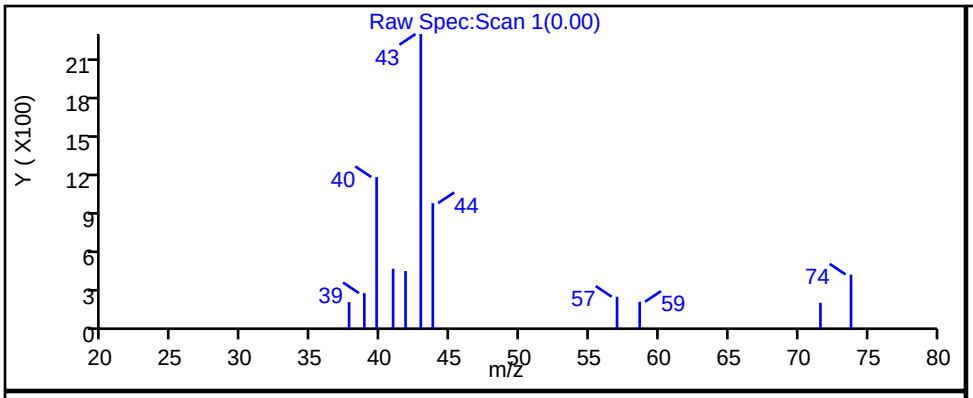
Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A05.D				
Injection Date:	06-Dec-2019 09:55:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	VBLKDM	Lab ID:	VBLKDM		
Sample Info:	18120619, VBLKDM				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		

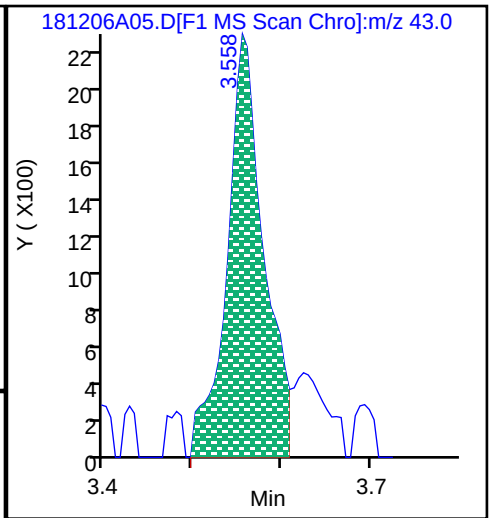


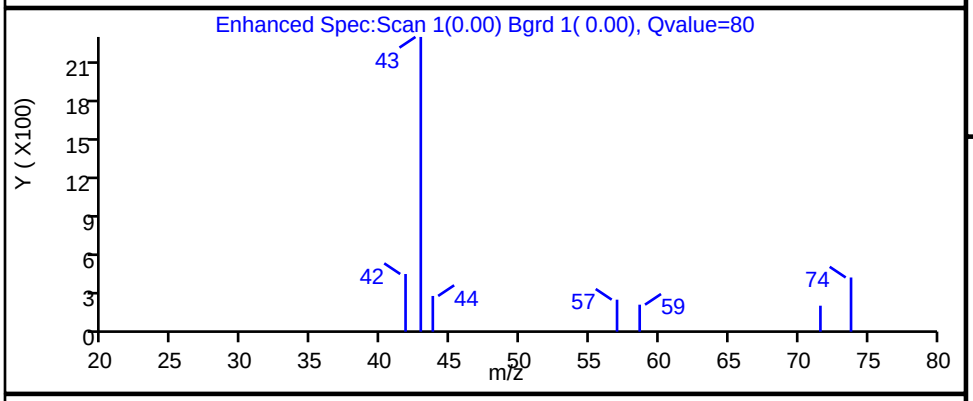
Shealy Environmental Services

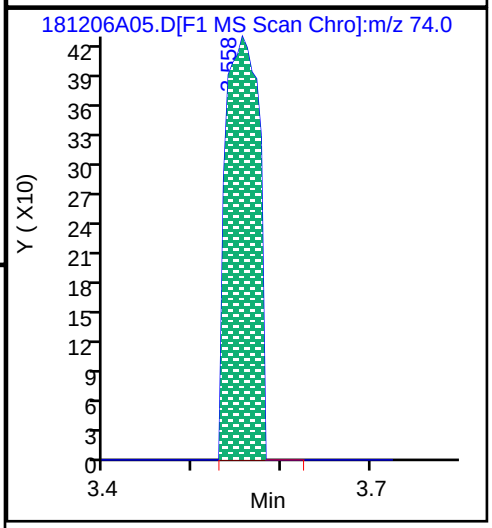
Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A05.D		
Injection Date:	06-Dec-2019 09:55:30	Inst. ID:	msd18.i
Client ID:	VBLKDM	Lab ID:	VBLKDM
Sample Info:	18120619, VBLKDM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

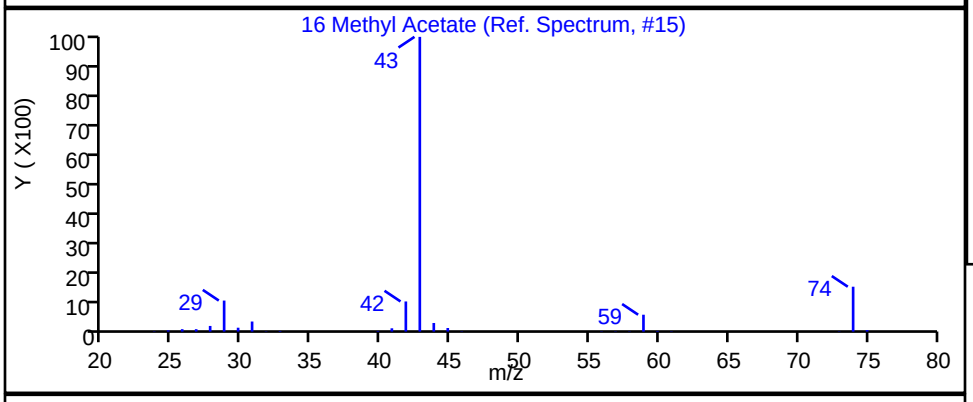
16 Methyl Acetate

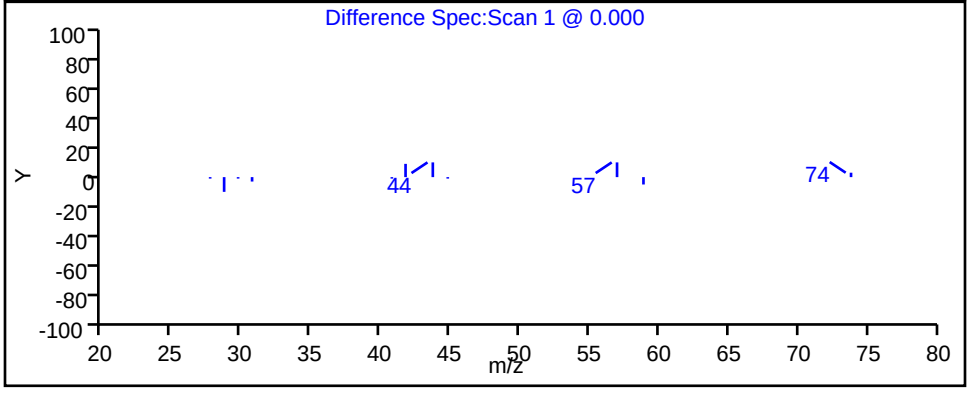












Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38003-002
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	105	60-140	12/05/2019 0904
Benzene	50	51		1	102	70-130	12/05/2019 0904
Bromodichloromethane	50	52		1	104	70-130	12/05/2019 0904
Bromoform	50	46		1	92	70-130	12/05/2019 0904
Bromomethane (Methyl bromide)	50	55		1	110	70-130	12/05/2019 0904
2-Butanone (MEK)	100	99		1	99	70-130	12/05/2019 0904
Carbon disulfide	50	54		1	108	70-130	12/05/2019 0904
Carbon tetrachloride	50	51		1	102	70-130	12/05/2019 0904
Chlorobenzene	50	50		1	100	70-130	12/05/2019 0904
Chloroethane	50	59		1	117	70-130	12/05/2019 0904
Chloroform	50	53		1	106	70-130	12/05/2019 0904
Chloromethane (Methyl chloride)	50	55		1	111	60-140	12/05/2019 0904
Cyclohexane	50	53		1	106	70-130	12/05/2019 0904
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	70-130	12/05/2019 0904
Dibromochloromethane	50	51		1	102	70-130	12/05/2019 0904
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	12/05/2019 0904
1,2-Dichlorobenzene	50	48		1	96	70-130	12/05/2019 0904
1,3-Dichlorobenzene	50	49		1	97	70-130	12/05/2019 0904
1,4-Dichlorobenzene	50	49		1	98	70-130	12/05/2019 0904
Dichlorodifluoromethane	50	56		1	112	60-140	12/05/2019 0904
1,1-Dichloroethane	50	54		1	107	70-130	12/05/2019 0904
1,2-Dichloroethane	50	50		1	99	70-130	12/05/2019 0904
1,1-Dichloroethene	50	62		1	123	70-130	12/05/2019 0904
cis-1,2-Dichloroethene	50	52		1	104	70-130	12/05/2019 0904
trans-1,2-Dichloroethene	50	57		1	113	70-130	12/05/2019 0904
1,2-Dichloropropane	50	51		1	101	70-130	12/05/2019 0904
cis-1,3-Dichloropropene	50	56		1	111	70-130	12/05/2019 0904
trans-1,3-Dichloropropene	50	55		1	109	70-130	12/05/2019 0904
Ethylbenzene	50	50		1	100	70-130	12/05/2019 0904
2-Hexanone	100	90		1	90	70-130	12/05/2019 0904
Isopropylbenzene	50	51		1	102	70-130	12/05/2019 0904
Methyl acetate	50	53		1	106	70-130	12/05/2019 0904
Methyl tertiary butyl ether (MTBE)	50	52		1	103	70-130	12/05/2019 0904
4-Methyl-2-pentanone	100	93		1	93	70-130	12/05/2019 0904
Methylcyclohexane	50	52		1	104	70-130	12/05/2019 0904
Methylene chloride	50	53		1	105	70-130	12/05/2019 0904
Styrene	50	53		1	106	70-130	12/05/2019 0904
1,1,2,2-Tetrachloroethane	50	51		1	101	70-130	12/05/2019 0904
Tetrachloroethene	50	47		1	94	70-130	12/05/2019 0904
Toluene	50	49		1	97	70-130	12/05/2019 0904
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	70-130	12/05/2019 0904
1,2,4-Trichlorobenzene	50	46		1	92	70-130	12/05/2019 0904
1,1,1-Trichloroethane	50	51		1	103	70-130	12/05/2019 0904
1,1,2-Trichloroethane	50	48		1	96	70-130	12/05/2019 0904

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38003-002
Batch: 38003
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	98	70-130	12/05/2019 0904
Trichlorofluoromethane	50	53		1	106	70-130	12/05/2019 0904
Vinyl chloride	50	53		1	105	70-130	12/05/2019 0904
Xylenes (total)	100	100		1	102	70-130	12/05/2019 0904

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		97	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		98	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A03.D
Lab Sample ID: VLCS050CV Client Sample ID: 50uL/100mL 15608/11
Injection Date: 05-Dec-2019 09:04:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd17.i
Sample Info: 17120519, VLCS050CV
Method: \\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m
Method Date: 06-Dec-2019 10:02:30 Quant Method: ISTD
Calib Date: 03-Dec-2019 03:43:30 Calib File: 171202B11.D
Sample Type: LCS ALS Bottle: 3
Cpnd Sublist: std.sub Spike List File: Limswater.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	56.19	12.4	112	60- 140
2 Chloromethane	50	55.352	10.7	110	60- 140
3 Vinyl chloride	50	52.704	5.4	105	70- 130
4 Bromomethane	50	54.771	9.5	109	70- 130
5 Chloroethane	50	58.653	17.3	117	70- 130
6 Trichlorofluoromethane	50	53.195	6.4	106	70- 130
8 Ethyl ether	50	54.487	9	108	70- 130
9 Acrolein	500	662.12	32.4	132	60- 140
10 Acetone	100	104.92	4.9	104	60- 140
11 1,1-Dichloroethene	50	61.6	23.2	123	70- 130
12 Freon 113	50	52.634	5.3	105	70- 130
13 Methyl iodide	50	50.725	1.4	101	70- 130
14 Carbon disulfide	50	53.919	7.8	107	70- 130
15 Acetonitrile	500	530.43	6.1	106	60- 140
16 Methyl Acetate	50	52.758	5.5	105	70- 130
17 Allyl chloride	50	63.196	26.4	126	70- 130
18 Methylene chloride	50	52.552	5.1	105	70- 130
20 Acrylonitrile	100	105.06	5.1	105	70- 130
21 trans-1,2-Dichloroethene	50	56.52	13	113	70- 130
22 tert-Butyl methyl ether(MTB	50	51.598	3.2	103	70- 130
23 Hexane	50	52.252	4.5	104	70- 130
24 1,1-Dichloroethane	50	53.501	7	107	70- 130
25 Vinyl acetate	50	55.086	10.2	110	60- 140
26 Diisopropyl ether (IPE)	50	53.726	7.5	107	70- 130
27 Chloroprene	50	56.889	13.8	113	70- 130
29 cis-1,2-Dichloroethene	50	51.759	3.5	103	70- 130
30 2-Butanone (MEK)	100	98.783	-1.2	98.8	70- 130
31 2,2-Dichloropropane	50	53.25	6.5	106	70- 130
32 Propionitrile	500	507.01	1.4	101	70- 130
33 Ethyl Acetate	50	48.178	-3.6	96.4	70- 130
34 Methacrylonitrile	250	260.78	4.3	104	70- 130
35 Bromochloromethane	50	50.074	0.1	100	70- 130
36 Tetrahydrofuran	50	48.193	-3.6	96.4	70- 130
37 Chloroform	50	53.195	6.4	106	70- 130
40 1,1,1-Trichloroethane	50	51.264	2.5	102	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
42 Cyclohexane	50	52.799	5.6	105	70- 130
43 1,1-Dichloropropene	50	53.189	6.4	106	70- 130
44 Carbon tetrachloride	50	51.037	2.1	102	70- 130
45 Isobutyl alcohol	500	507	1.4	101	60- 140
48 Benzene	50	50.827	1.7	101	70- 130
49 Isopropyl Acetate	50	49.023	-2	98	70- 130
50 1,2-Dichloroethane	50	49.625	-0.7	99.3	70- 130
53 Trichloroethene	50	48.759	-2.5	97.5	70- 130
54 Methylcyclohexane	50	52.037	4.1	104	70- 130
55 1,2-Dichloropropane	50	50.681	1.4	101	70- 130
56 Dibromomethane	50	49.267	-1.5	98.5	70- 130
57 Methyl methacrylate	50	48.8	-2.4	97.6	70- 130
58 1,4-Dioxane	500	532.19	6.4	106	60- 140
59 Bromodichloromethane	50	52.043	4.1	104	70- 130
60 2-nitropropane	50	47.446	-5.1	94.9	70- 130
61 2-Chloroethylvinyl ether	50	46.347	-7.3	92.7	70- 130
62 cis-1,3-Dichloropropene	50	55.57	11.1	111	70- 130
63 4-Methyl-2-pentanone	100	93.088	-6.9	93.1	70- 130
65 Toluene	50	48.733	-2.5	97.5	70- 130
66 trans-1,3-Dichloropropene	50	54.717	9.4	109	70- 130
67 Ethyl methacrylate	50	49.263	-1.5	98.5	70- 130
68 1,1,2-Trichloroethane	50	48.118	-3.8	96.2	70- 130
69 Tetrachloroethene	50	46.788	-6.4	93.6	70- 130
70 1,3-Dichloropropane	50	50.529	1.1	101	70- 130
71 2-Hexanone	100	89.921	-10.1	89.9	70- 130
72 Dibromochloromethane	50	50.933	1.9	101	70- 130
73 n-Butyl acetate	50	48.186	-3.6	96.4	70- 130
75 1,2-Dibromoethane (EDB)	50	50.15	0.3	100	70- 130
77 Chlorobenzene	50	49.948	-0.1	99.9	70- 130
78 1,1,1,2-Tetrachloroethane	50	48.565	-2.9	97.1	70- 130
79 Ethylbenzene	50	50.068	0.1	100	70- 130
80 m+p-Xylenes	50	50.562	1.1	101	70- 130
81 o-Xylene	50	51.045	2.1	102	70- 130
82 Styrene	50	52.994	6	105	70- 130
83 Bromoform	50	45.88	-8.2	91.8	70- 130
84 Isopropylbenzene	50	50.993	2	101	70- 130
85 Cyclohexanone	500	552.22	10.4	110	70- 130
87 Bromobenzene	50	49.43	-1.1	98.9	70- 130
88 1,1,2,2-Tetrachloroethane	50	50.643	1.3	101	70- 130
89 1,2,3-Trichloropropane	50	51.71	3.4	103	70- 130
90 trans-1,4-Dichloro-2-butene	50	36.572	-26.9	73.1	70- 130
91 n-Propylbenzene	50	50.846	1.7	101	70- 130
92 2-Chlorotoluene	50	50.63	1.3	101	70- 130
93 1,3,5-Trimethylbenzene	50	51.515	3	103	70- 130
94 4-Chlorotoluene	50	51.374	2.7	102	70- 130
95 tert-Butylbenzene	50	48.034	-3.9	96.1	70- 130
96 1,2,4-Trimethylbenzene	50	51.29	2.6	102	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
97 sec-Butylbenzene	50	49.149	-1.7	98.3	70- 130
98 1,3-Dichlorobenzene	50	48.719	-2.6	97.4	70- 130
99 p-Isopropyltoluene	50	51.324	2.6	102	70- 130
101 1,4-Dichlorobenzene	50	49.086	-1.8	98.2	70- 130
102 Benzyl chloride	50	57.232	14.5	114	60- 140
103 n-Butylbenzene	50	52.504	5	105	70- 130
104 1,2-Dichlorobenzene	50	48.119	-3.8	96.2	70- 130
105 1,2-Dibromo-3-chloropropane	50	47.15	-5.7	94.3	70- 130
106 1,2,4-Trichlorobenzene	50	46.209	-7.6	92.4	70- 130
107 Hexachlorobutadiene	50	45.411	-9.2	90.8	60- 140
108 Naphthalene	50	49.544	-0.9	99.1	70- 130
109 1,2,3-Trichlorobenzene	50	46.663	-6.7	93.3	70- 130
S 110 Xylenes (total)	100	101.61	1.6	101	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A03.D		
Lab Sample ID:	VLCS050CV	Client Sample ID:	50uL/100mL 15608/11
Injection Date:	05-Dec-2019 09:04:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd17.i
Sample Info:	17120519, VLCS050CV		
Method:	\\Organics\DD\chem\msd17.i\17120519.b\8260B-17.m		
Method Date:	06-Dec-2019 10:02:30	Quant Method:	ISTD
Calib Date:	03-Dec-2019 03:43:30	Calib File:	171202B11.D
Sample Type:	LCS	ALS Bottle:	3
Cpnd Sublist:	std.sub	Spike List File:	Limswater.spk
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	tml	Review Date:	05-Dec-2019 09:46:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.392	1.393	0.000	622758	56.190	56.190	
2 Chloromethane	50.0	1.571	1.571	0.000	516410	55.352	55.352	
3 Vinyl chloride	62.0	1.691	1.691	0.000	577393	52.704	52.704	
4 Bromomethane	94.0	2.022	2.022	0.000	574332	54.771	54.771	
5 Chloroethane	64.0	2.142	2.137	0.005	456058	58.653	58.653	
6 Trichlorofluoromethane	101.0	2.420	2.420	0.000	1253925	53.195	53.195	
8 Ethyl ether	59.0	2.771	2.771	0.000	861263	54.487	54.487	
9 Acrolein	56.0	2.944	2.944	0.000	2950928	662.12	662.12	
10 Acetone	43.0	3.138	3.133	0.005	1029617	104.92	104.92	
11 1,1-Dichloroethene	96.0	3.055	3.055	0.000	844083	61.600	61.600	
12 Freon 113	101.0	3.091	3.091	0.000	710751	52.634	52.634	
13 Methyl iodide	142.0	3.228	3.228	0.000	1462470	50.725	50.725	
14 Carbon disulfide	76.0	3.301	3.301	0.000	2310271	53.919	53.919	
15 Acetonitrile	40.0	3.516	3.516	0.000	738520	530.43	530.43	M
17 Allyl chloride	76.0	3.553	3.553	0.000	546326	63.196	63.196	
16 Methyl Acetate	43.0	3.568	3.563	0.005	1318005	52.758	52.758	
18 Methylene chloride	84.0	3.736	3.736	0.000	932193	52.552	52.552	
20 Acrylonitrile	53.0	4.066	4.061	0.005	1228261	105.06	105.06	
21 trans-1,2-Dichloroethene	96.0	4.087	4.087	0.000	1116365	56.520	56.520	
22 tert-Butyl methyl ether(MTBE)	73.0	4.093	4.093	0.000	2556806	51.598	51.598	
23 Hexane	57.0	4.470	4.470	0.000	1373863	52.252	52.252	
24 1,1-Dichloroethane	63.0	4.675	4.675	0.000	1775564	53.501	53.501	
25 Vinyl acetate	86.0	4.722	4.722	0.000	312957	55.086	55.086	
26 Diisopropyl ether (IPE)	87.0	4.759	4.759	0.000	906553	53.726	53.726	
27 Chloroprene	53.0	4.764	4.764	0.000	1460477	56.889	56.889	
29 cis-1,2-Dichloroethene	96.0	5.430	5.430	0.000	1207133	51.759	51.759	
30 2-Butanone (MEK)	72.0	5.440	5.440	0.000	547591	98.783	98.783	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.424	5.424	0.000	1153029	53.250	53.250	
32 Propionitrile	54.0	5.524	5.524	0.000	2421528	507.01	507.01	
33 Ethyl Acetate	43.0	5.514	5.514	0.000	1782730	48.178	48.178	
34 Methacrylonitrile	67.0	5.718	5.718	0.000	3546746	260.78	260.78	
35 Bromochloromethane	128.0	5.734	5.734	0.000	654054	50.074	50.074	
36 Tetrahydrofuran	42.0	5.734	5.734	0.000	734065	48.193	48.193	
37 Chloroform	83.0	5.896	5.891	0.005	1949813	53.195	53.195	
$ 39 dibromofluoromethane	111.0	6.096	6.090	0.005	1213039	50.921	50.921	
40 1,1,1-Trichloroethane	97.0	6.064	6.064	0.000	1608065	51.264	51.264	
* 41 Pentafluorobenzene	168.0	6.174	6.169	0.006	3033802	50.000	50.000	
42 Cyclohexane	41.0	6.132	6.132	0.000	741005	52.799	52.799	
43 1,1-Dichloropropene	75.0	6.274	6.274	0.000	1419500	53.189	53.189	
44 Carbon tetrachloride	119.0	6.253	6.253	0.000	1489197	51.037	51.037	
45 Isobutyl alcohol	42.0	6.520	6.520	0.000	520300	507.00	507.00	
$ 46 1,2-Dichloroethane-d4	65.0	6.515	6.515	0.000	1344163	48.513	48.513	
48 Benzene	78.0	6.525	6.526	0.000	4007595	50.827	50.827	
49 Isopropyl Acetate	43.0	6.672	6.672	0.000	2550940	49.023	49.023	
50 1,2-Dichloroethane	62.0	6.615	6.615	0.000	1520677	49.625	49.625	
* 52 1,4-Difluorobenzene	114.0	7.123	7.123	0.000	4327031	50.000	50.000	
53 Trichloroethene	130.0	7.401	7.401	0.000	1264797	48.759	48.759	
54 Methylcyclohexane	83.0	7.679	7.679	0.000	1696184	52.037	52.037	
55 1,2-Dichloropropane	63.0	7.742	7.742	0.000	990571	50.681	50.681	
56 Dibromomethane	93.0	7.847	7.847	0.000	767154	49.267	49.267	
57 Methyl methacrylate	41.0	7.868	7.868	0.000	1241836	48.800	48.800	
58 1,4-Dioxane	88.0	7.847	7.842	0.005	140931	532.19	532.19	
59 Bromodichloromethane	83.0	8.104	8.104	0.000	1440002	52.043	52.043	
60 2-nitropropane	43.0	8.413	8.413	0.000	616871	47.446	47.446	
61 2-Chloroethylvinyl ether	63.0	8.513	8.513	0.000	804010	46.347	46.347	
62 cis-1,3-Dichloropropene	75.0	8.686	8.686	0.000	1783181	55.570	55.570	
63 4-Methyl-2-pentanone	43.0	8.911	8.911	0.000	3194397	93.088	93.088	
$ 64 Toluene-d8	98.0	9.026	9.026	0.000	4064624	48.793	48.793	
65 Toluene	92.0	9.116	9.116	0.000	2625811	48.733	48.733	
66 trans-1,3-Dichloropropene	75.0	9.472	9.472	0.000	1704004	54.717	54.717	
67 Ethyl methacrylate	69.0	9.572	9.572	0.000	1686289	49.263	49.263	
68 1,1,2-Trichloroethane	97.0	9.724	9.724	0.000	1054086	48.118	48.118	
69 Tetrachloroethene	164.0	9.792	9.792	0.000	1026503	46.788	46.788	
70 1,3-Dichloropropane	76.0	9.923	9.923	0.000	1736646	50.529	50.529	
71 2-Hexanone	43.0	10.023	10.023	0.000	2774231	89.921	89.921	
72 Dibromochloromethane	129.0	10.180	10.180	0.000	1225742	50.933	50.933	
73 n-Butyl acetate	43.0	10.185	10.185	0.000	2202595	48.186	48.186	
75 1,2-Dibromoethane (EDB)	107.0	10.306	10.306	0.000	1188965	50.150	50.150	
* 76 Chlorobenzene-d5	117.0	10.856	10.851	0.005	3545149	50.000	50.000	
77 Chlorobenzene	112.0	10.888	10.888	0.000	2849222	49.948	49.948	
78 1,1,1,2-Tetrachloroethane	131.0	10.998	10.998	0.000	998601	48.565	48.565	
79 Ethylbenzene	106.0	11.008	11.008	0.000	1512038	50.068	50.068	
80 m+p-Xylenes	106.0	11.160	11.160	0.000	1822075	50.562	50.562	
81 o-Xylene	106.0	11.564	11.564	0.000	1631592	51.045	51.045	
82 Styrene	104.0	11.590	11.590	0.000	2863745	52.994	52.994	
83 Bromoform	173.0	11.769	11.769	0.000	806567	45.880	45.880	
84 Isopropylbenzene	105.0	11.952	11.952	0.000	3981665	50.993	50.993	
85 Cyclohexanone	55.0	12.036	12.036	0.000	490344	552.22	552.22	

Report Date: 06-Dec-2019 10:05:53 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd17.i\17120519.b\171205A03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.120	12.120	0.000	1269211	53.248	53.248	
88 1,1,2,2-Tetrachloroethane	83.0	12.277	12.277	0.000	1148140	50.643	50.643	M
87 Bromobenzene	156.0	12.251	12.251	0.000	1099953	49.430	49.430	
89 1,2,3-Trichloropropane	110.0	12.324	12.324	0.000	474354	51.710	51.710	
90 trans-1,4-Dichloro-2-butene	53.0	12.314	12.314	0.000	240202	36.572	36.572	
91 n-Propylbenzene	91.0	12.366	12.366	0.000	4377104	50.846	50.846	
92 2-Chlorotoluene	91.0	12.440	12.445	-0.004	2493275	50.630	50.630	
93 1,3,5-Trimethylbenzene	105.0	12.545	12.545	0.000	2722858	51.515	51.515	
94 4-Chlorotoluene	126.0	12.566	12.566	0.000	948088	51.374	51.374	
95 tert-Butylbenzene	119.0	12.838	12.838	0.000	2387825	48.034	48.034	
96 1,2,4-Trimethylbenzene	105.0	12.896	12.896	0.000	2586037	51.290	51.290	
97 sec-Butylbenzene	105.0	13.048	13.048	0.000	3307143	49.149	49.149	
98 1,3-Dichlorobenzene	146.0	13.148	13.153	-0.004	1552958	48.719	48.719	
99 p-Isopropyltoluene	119.0	13.189	13.190	0.000	2729948	51.324	51.324	
* 100 1,4-Dichlorobenzene-d4	152.0	13.221	13.221	0.000	1253185	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.242	13.247	-0.005	1544730	49.086	49.086	
102 Benzyl chloride	91.0	13.352	13.352	0.000	1854842	57.232	57.232	
103 n-Butylbenzene	91.0	13.556	13.557	0.000	2244637	52.504	52.504	
104 1,2-Dichlorobenzene	146.0	13.567	13.567	0.000	1366016	48.119	48.119	
105 1,2-Dibromo-3-chloropropane	75.0	14.254	14.254	0.000	224080	47.150	47.150	
106 1,2,4-Trichlorobenzene	180.0	14.941	14.946	-0.004	812444	46.209	46.209	
107 Hexachlorobutadiene	225.0	15.061	15.061	0.000	387879	45.411	45.411	
108 Naphthalene	128.0	15.161	15.166	-0.005	2473604	49.544	49.544	
109 1,2,3-Trichlorobenzene	180.0	15.344	15.344	0.000	764560	46.663	46.663	
S 110 Xylenes (total)	106.0	16.000		0.000		101.61	101.61	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		108.28	108.28	Q

Compound Type Legend

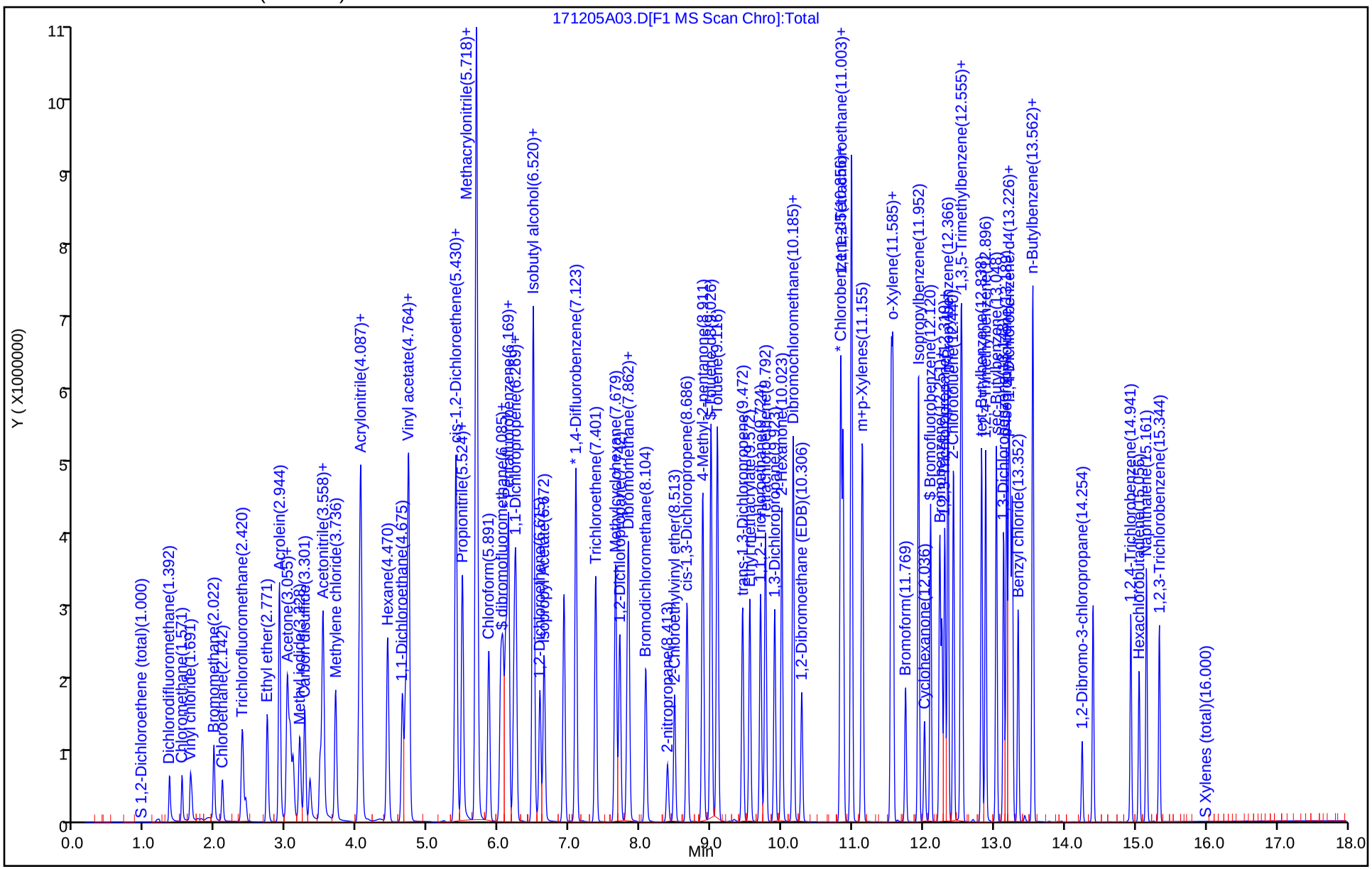
$ - Surrogate
* - ISTD
S - Summary

QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A03.D				
Injection Date:	05-Dec-2019 09:04:30	Inst. ID:	msd17.i	Operator:	TML
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050CV		
Sample Info:	17120519, VLCS050CV				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 06-Dec-2019 10:05:53 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

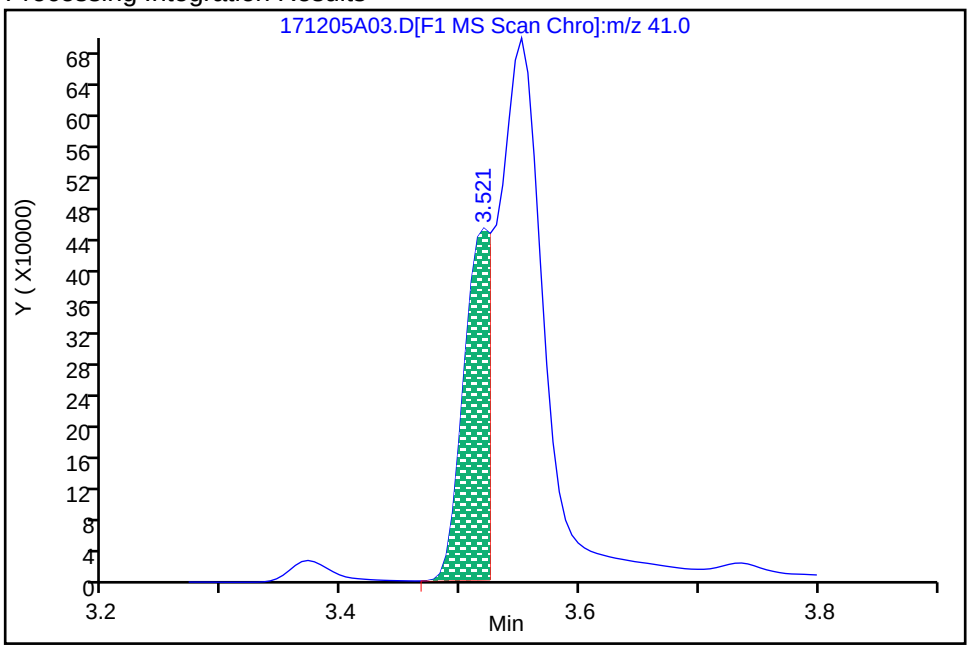
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A03.D		
Injection Date:	05-Dec-2019 09:04:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050CV
Sample Info:	17120519, VLCS050CV		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

15 Acetonitrile, CAS: 75-05-8

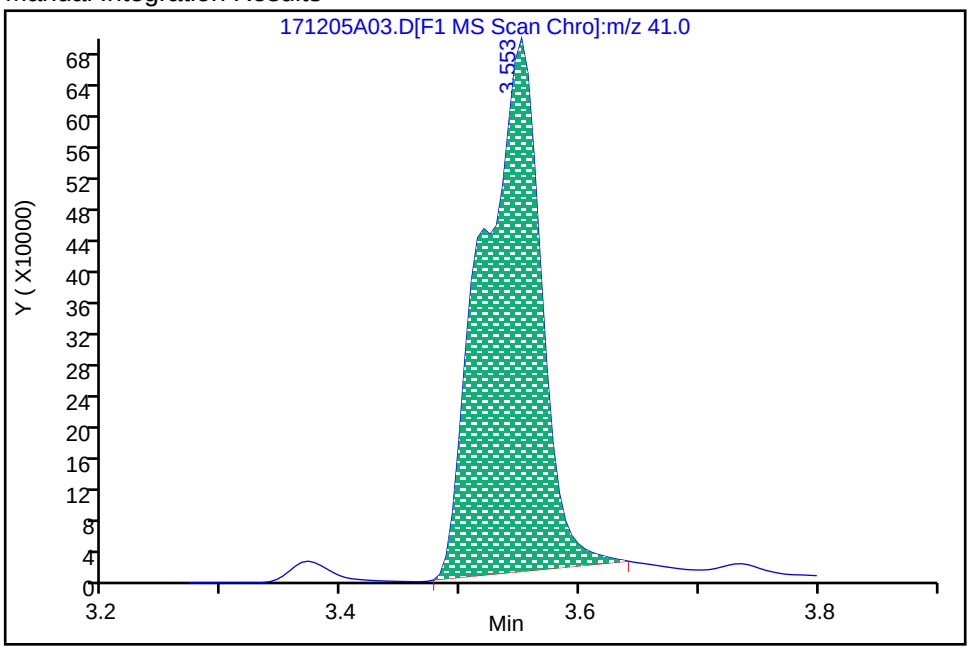
Processing Integration Results

RT: 3.521
Area: 658431
Conc: 530.43
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 3.553
Area: 2331598
Conc: 530.43
Conc Units: ug/L



Data Editor: tml, 05-Dec-2019 09:45:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 10:05:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

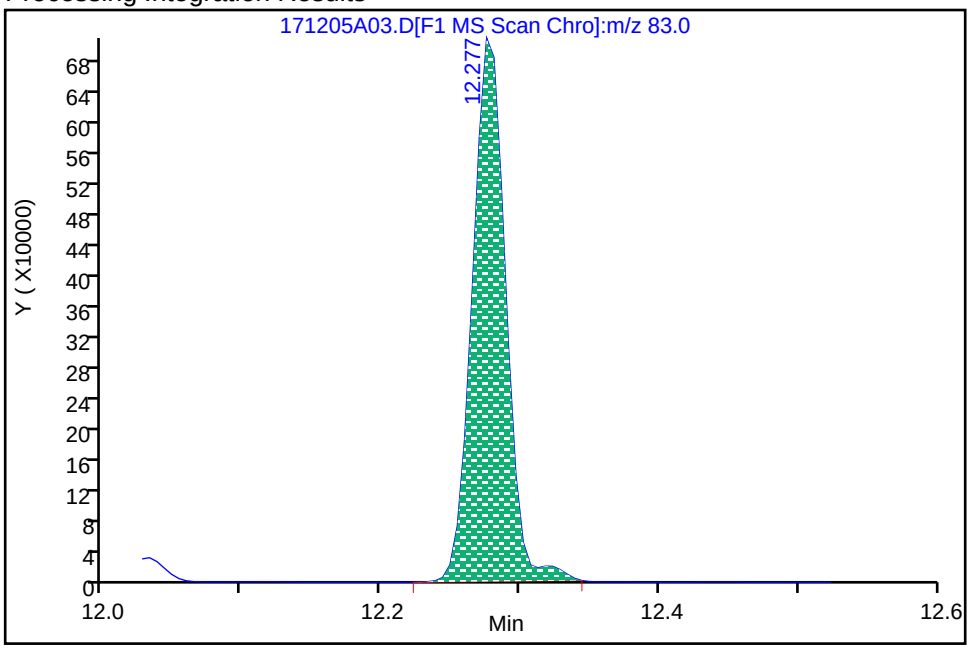
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A03.D		
Injection Date:	05-Dec-2019 09:04:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050CV
Sample Info:	17120519, VLCS050CV		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

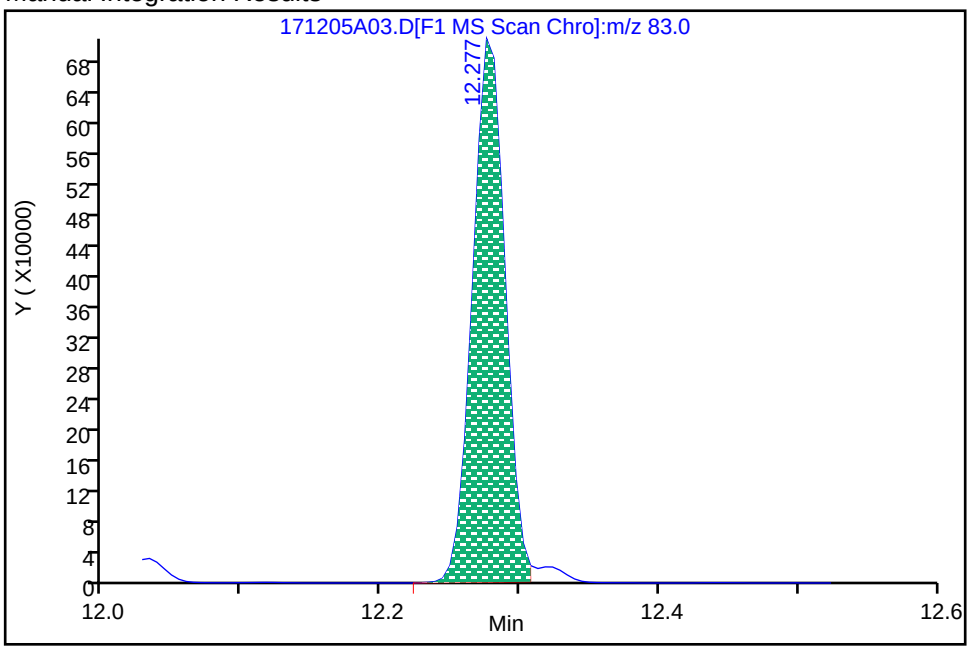
Processing Integration Results

RT: 12.277
Area: 1173833
Conc: 51.776
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 12.277
Area: 1148140
Conc: 50.643
Conc Units: ug/L



Data Editor: tml, 05-Dec-2019 09:46:30
Audit Action: Mint
Audit Reason: Split Peak

Report Date: 06-Dec-2019 10:05:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

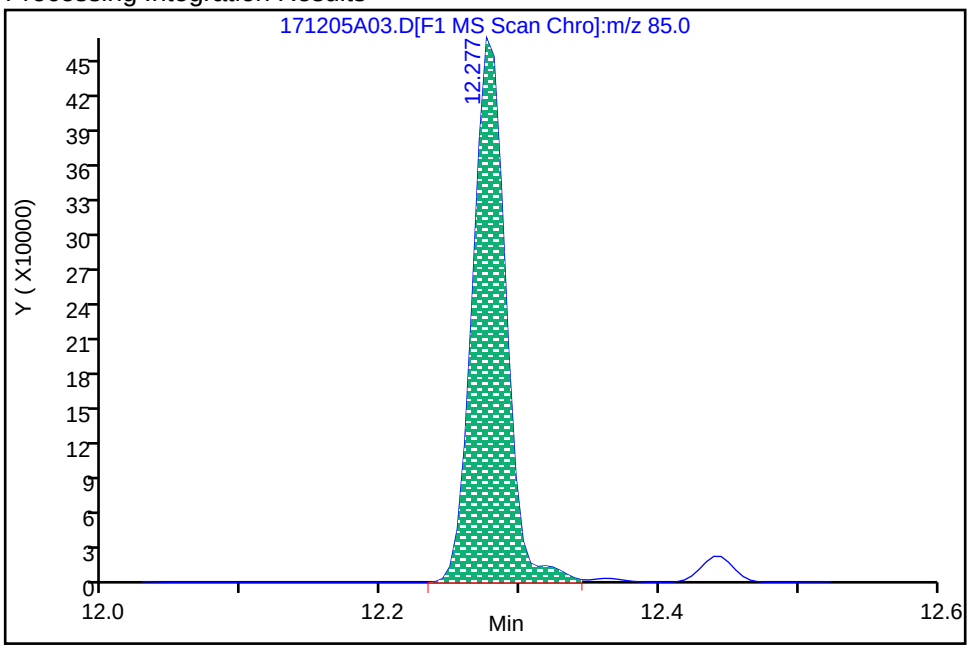
Manual Integration Report

Data File:	\\Organics\DD\chem\msd17.i\17120519.b\171205A03.D		
Injection Date:	05-Dec-2019 09:04:30	Inst. ID:	msd17.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050CV
Sample Info:	17120519, VLCS050CV		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

88 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

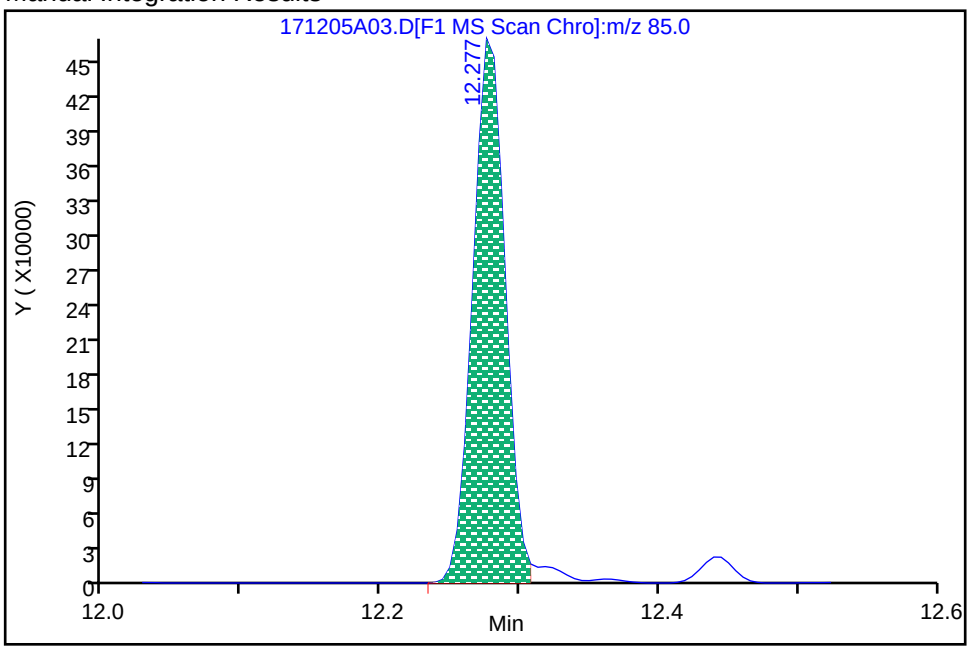
Processing Integration Results

RT: 12.277
Area: 768735
Conc: 51.776
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 12.277
Area: 749199
Conc: 50.643
Conc Units: ug/L



Data Editor: tml, 05-Dec-2019 09:46:30
Audit Action: Mint
Audit Reason: Split Peak

Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38152-002
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	101	60-140	12/06/2019 0906

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		100	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A03.D
Lab Sample ID: VLCS050DM Client Sample ID: 50uL/100mL 15608/11
Injection Date: 06-Dec-2019 09:06:30 Dil. Factor: 1.0
Operator: TML Inst. ID: msd18.i
Sample Info: 18120619, VLCS050DM
Method: \\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m
Method Date: 06-Dec-2019 09:40:30 Quant Method: ISTD
Calib Date: 04-Nov-2019 18:09:30 Calib File: 181104A12.D
Sample Type: LCS ALS Bottle: 3
Cpnd Sublist: std.sub Spike List File: Limswater.spk
Matrix/Level: Water/Medium
Target 4.14 Integrator: falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
1 Dichlorodifluoromethane	50	40.759	-18.5	81.5	60- 140
2 Chloromethane	50	47.267	-5.5	94.5	60- 140
3 Vinyl chloride	50	49.916	-0.2	99.8	70- 130
4 Bromomethane	50	55.856	11.7	111	70- 130
5 Chloroethane	50	57.603	15.2	115	70- 130
6 Trichlorofluoromethane	50	47.769	-4.5	95.5	70- 130
8 Ethyl ether	50	49.128	-1.7	98.3	70- 130
9 Acrolein	500	512.71	2.5	102	60- 140
10 Acetone	100	100.89	0.9	100	60- 140
11 1,1-Dichloroethene	50	50.42	0.8	100	70- 130
12 Freon 113	50	47.659	-4.7	95.3	70- 130
13 Methyl iodide	50	46.317	-7.4	92.6	70- 130
14 Carbon disulfide	50	43.659	-12.7	87.3	70- 130
15 Acetonitrile	500	470.72	-5.9	94.1	60- 140
16 Methyl Acetate	50	43.334	-13.3	86.7	70- 130
17 Allyl chloride	50	52.994	6	105	70- 130
18 Methylene chloride	50	46.911	-6.2	93.8	70- 130
20 Acrylonitrile	100	90.682	-9.3	90.7	70- 130
21 trans-1,2-Dichloroethene	50	48.955	-2.1	97.9	70- 130
22 tert-Butyl methyl ether(MTB	50	53.203	6.4	106	70- 130
23 Hexane	50	46.088	-7.8	92.2	70- 130
24 1,1-Dichloroethane	50	47.548	-4.9	95.1	70- 130
25 Vinyl acetate	50	50.887	1.8	101	60- 140
26 Diisopropyl ether (IPE)	50	49.711	-0.6	99.4	70- 130
27 Chloroprene	50	50.285	0.6	100	70- 130
29 cis-1,2-Dichloroethene	50	47.724	-4.6	95.4	70- 130
30 2-Butanone (MEK)	100	92.833	-7.2	92.8	70- 130
31 2,2-Dichloropropane	50	52.381	4.8	104	70- 130
32 Propionitrile	500	451.27	-9.7	90.3	70- 130
33 Ethyl Acetate	50	44.642	-10.7	89.3	70- 130
34 Methacrylonitrile	250	233.46	-6.6	93.4	70- 130
35 Bromochloromethane	50	44.85	-10.3	89.7	70- 130
36 Tetrahydrofuran	50	42.852	-14.3	85.7	70- 130
37 Chloroform	50	48.27	-3.5	96.5	70- 130
40 1,1,1-Trichloroethane	50	48.285	-3.4	96.6	70- 130

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
42 Cyclohexane	50	46.728	-6.5	93.5	70- 130
43 1,1-Dichloropropene	50	44.818	-10.4	89.6	70- 130
44 Carbon tetrachloride	50	46.655	-6.7	93.3	70- 130
45 Isobutyl alcohol	500	432.73	-13.5	86.5	60- 140
48 Benzene	50	47.018	-6	94	70- 130
49 Isopropyl Acetate	50	47.17	-5.7	94.3	70- 130
50 1,2-Dichloroethane	50	47.833	-4.3	95.7	70- 130
53 Trichloroethene	50	45.533	-8.9	91.1	70- 130
54 Methylcyclohexane	50	48.065	-3.9	96.1	70- 130
55 1,2-Dichloropropane	50	46.591	-6.8	93.2	70- 130
56 Dibromomethane	50	45.939	-8.1	91.9	70- 130
57 Methyl methacrylate	50	46.977	-6	94	70- 130
58 1,4-Dioxane	500	436.02	-12.8	87.2	60- 140
59 Bromodichloromethane	50	48.347	-3.3	96.7	70- 130
60 2-nitropropane	50	41.918	-16.2	83.8	70- 130
61 2-Chloroethylvinyl ether	50	45.685	-8.6	91.4	70- 130
62 cis-1,3-Dichloropropene	50	48.214	-3.6	96.4	70- 130
63 4-Methyl-2-pentanone	100	94.1	-5.9	94.1	70- 130
65 Toluene	50	45.251	-9.5	90.5	70- 130
66 trans-1,3-Dichloropropene	50	48.965	-2.1	97.9	70- 130
67 Ethyl methacrylate	50	46.552	-6.9	93.1	70- 130
68 1,1,2-Trichloroethane	50	45.92	-8.2	91.8	70- 130
69 Tetrachloroethene	50	46.383	-7.2	92.8	70- 130
70 1,3-Dichloropropane	50	46.4	-7.2	92.8	70- 130
71 2-Hexanone	100	94.108	-5.9	94.1	70- 130
72 Dibromochloromethane	50	44.832	-10.3	89.7	70- 130
73 n-Butyl acetate	50	45.953	-8.1	91.9	70- 130
75 1,2-Dibromoethane (EDB)	50	44.996	-10	90	70- 130
77 Chlorobenzene	50	43.83	-12.3	87.7	70- 130
78 1,1,1,2-Tetrachloroethane	50	45.414	-9.2	90.8	70- 130
79 Ethylbenzene	50	45.062	-9.9	90.1	70- 130
80 m+p-Xylenes	50	45.198	-9.6	90.4	70- 130
81 o-Xylene	50	45.623	-8.8	91.2	70- 130
82 Styrene	50	46.189	-7.6	92.4	70- 130
83 Bromoform	50	45.528	-8.9	91.1	70- 130
84 Isopropylbenzene	50	46.265	-7.5	92.5	70- 130
85 Cyclohexanone	500	481.78	-3.6	96.4	70- 130
87 Bromobenzene	50	43.681	-12.6	87.4	70- 130
88 1,1,2,2-Tetrachloroethane	50	42.549	-14.9	85.1	70- 130
89 1,2,3-Trichloropropane	50	43.991	-12	88	70- 130
90 trans-1,4-Dichloro-2-butene	50	35.539	-28.9	71.1	70- 130
91 n-Propylbenzene	50	44.14	-11.7	88.3	70- 130
92 2-Chlorotoluene	50	44.482	-11	89	70- 130
93 1,3,5-Trimethylbenzene	50	46.214	-7.6	92.4	70- 130
94 4-Chlorotoluene	50	43.603	-12.8	87.2	70- 130
95 tert-Butylbenzene	50	44.171	-11.7	88.3	70- 130
96 1,2,4-Trimethylbenzene	50	46.822	-6.4	93.6	70- 130

Report Date: 06-Dec-2019 14:12:56 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A03.D

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
97 sec-Butylbenzene	50	45.857	-8.3	91.7	70- 130
98 1,3-Dichlorobenzene	50	42.988	-14	86	70- 130
99 p-Isopropyltoluene	50	46.958	-6.1	93.9	70- 130
101 1,4-Dichlorobenzene	50	42.279	-15.4	84.6	70- 130
102 Benzyl chloride	50	47.498	-5	95	60- 140
103 n-Butylbenzene	50	46.093	-7.8	92.2	70- 130
104 1,2-Dichlorobenzene	50	43.669	-12.7	87.3	70- 130
105 1,2-Dibromo-3-chloropropane	50	39.422	-21.2	78.8	70- 130
106 1,2,4-Trichlorobenzene	50	35.392	-29.2	70.8	70- 130
107 Hexachlorobutadiene	50	45.624	-8.8	91.2	60- 140
108 Naphthalene	50	34.384	-31.2	* 68.8	70- 130
109 1,2,3-Trichlorobenzene	50	34.084	-31.8	* 68.2	70- 130
S 110 Xylenes (total)	100	90.82	-9.2	90.8	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A03.D		
Lab Sample ID:	VLCS050DM	Client Sample ID:	50uL/100mL 15608/11
Injection Date:	06-Dec-2019 09:06:30	Dil. Factor:	1.0
Operator:	TML	Inst. ID:	msd18.i
Sample Info:	18120619, VLCS050DM		
Method:	\\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m		
Method Date:	06-Dec-2019 09:40:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	LCS	ALS Bottle:	3
Cpnd Sublist:	std.sub	Spike List File:	Limswater.spk
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	tml	Review Date:	06-Dec-2019 09:34:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	191315	40.759	40.759	M
2 Chloromethane	50.0	1.566	1.566	0.000	270228	47.267	47.267	
3 Vinyl chloride	62.0	1.686	1.681	0.006	399003	49.916	49.916	
4 Bromomethane	94.0	2.001	2.001	0.000	253792	55.856	55.856	
5 Chloroethane	64.0	2.132	2.132	0.000	229766	57.603	57.603	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.001	225436	47.769	47.769	
8 Ethyl ether	59.0	2.772	2.771	0.000	267845	49.128	49.128	
9 Acrolein	56.0	2.934	2.934	0.001	1417609	512.71	512.71	
10 Acetone	43.0	3.123	3.123	0.000	646933	100.89	100.89	
11 1,1-Dichloroethene	96.0	3.049	3.044	0.005	294593	50.420	50.420	
12 Freon 113	101.0	3.086	3.081	0.006	294307	47.659	47.659	
13 Methyl iodide	142.0	3.217	3.217	0.000	557441	46.317	46.317	
14 Carbon disulfide	76.0	3.291	3.285	0.005	850590	43.659	43.659	
15 Acetonitrile	40.0	3.490	3.484	0.005	699472	470.72	470.72	
17 Allyl chloride	76.0	3.537	3.537	0.001	154273	52.994	52.994	
16 Methyl Acetate	43.0	3.553	3.547	0.005	585063	43.334	43.334	
18 Methylene chloride	84.0	3.715	3.715	0.000	315167	46.911	46.911	
20 Acrylonitrile	53.0	4.035	4.030	0.006	579381	90.682	90.682	
21 trans-1,2-Dichloroethene	96.0	4.072	4.066	0.005	311839	48.955	48.955	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.072	0.006	555106	53.203	53.203	
23 Hexane	57.0	4.449	4.449	0.000	390523	46.088	46.088	
24 1,1-Dichloroethane	63.0	4.649	4.643	0.005	549369	47.548	47.548	
25 Vinyl acetate	86.0	4.691	4.690	0.000	91211	50.887	50.887	M
26 Diisopropyl ether (IPE)	87.0	4.738	4.732	0.005	254965	49.711	49.711	
27 Chloroprene	53.0	4.738	4.738	0.000	431760	50.285	50.285	
29 cis-1,2-Dichloroethene	96.0	5.393	5.393	0.001	355487	47.724	47.724	
30 2-Butanone (MEK)	72.0	5.398	5.398	0.000	242299	92.833	92.833	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.382	0.005	297966	52.381	52.381	
32 Propionitrile	54.0	5.477	5.477	0.000	1438733	451.27	451.27	
33 Ethyl Acetate	43.0	5.477	5.477	0.000	736117	44.642	44.642	
34 Methacrylonitrile	67.0	5.671	5.666	0.005	1354396	233.46	233.46	
35 Bromochloromethane	128.0	5.692	5.687	0.005	190437	44.850	44.850	
36 Tetrahydrofuran	42.0	5.697	5.697	0.000	360693	42.852	42.852	
37 Chloroform	83.0	5.854	5.849	0.005	571156	48.270	48.270	
$ 39 dibromofluoromethane	111.0	6.048	6.048	0.000	386430	49.779	49.779	
40 1,1,1-Trichloroethane	97.0	6.022	6.022	0.000	430335	48.285	48.285	
* 41 Pentafluorobenzene	168.0	6.132	6.127	0.005	800860	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.096	0.005	273472	46.728	46.728	
43 1,1-Dichloropropene	75.0	6.237	6.232	0.006	407722	44.818	44.818	
44 Carbon tetrachloride	119.0	6.216	6.211	0.006	408878	46.655	46.655	
45 Isobutyl alcohol	42.0	6.478	6.473	0.005	387665	432.73	432.73	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.463	0.005	420907	51.271	51.271	
48 Benzene	78.0	6.478	6.473	0.005	1203635	47.018	47.018	
49 Isopropyl Acetate	43.0	6.625	6.625	0.000	949013	47.170	47.170	
50 1,2-Dichloroethane	62.0	6.568	6.562	0.005	455615	47.833	47.833	
* 52 1,4-Difluorobenzene	114.0	7.071	7.071	0.000	1182054	50.000	50.000	
53 Trichloroethene	130.0	7.349	7.349	0.000	360872	45.533	45.533	
54 Methylcyclohexane	83.0	7.632	7.632	0.000	489923	48.065	48.065	
55 1,2-Dichloropropane	63.0	7.684	7.679	0.006	322764	46.591	46.591	
56 Dibromomethane	93.0	7.789	7.784	0.006	237697	45.939	45.939	
57 Methyl methacrylate	41.0	7.810	7.805	0.006	444587	46.977	46.977	
58 1,4-Dioxane	88.0	7.794	7.789	0.005	120835	436.02	436.02	
59 Bromodichloromethane	83.0	8.046	8.041	0.006	425090	48.347	48.347	
60 2-nitropropane	43.0	8.340	8.340	0.000	212686	41.918	41.918	
61 2-Chloroethylvinyl ether	63.0	8.450	8.444	0.005	270702	45.685	45.685	
62 cis-1,3-Dichloropropene	75.0	8.623	8.617	0.005	528984	48.214	48.214	
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	1395416	94.100	94.100	
$ 64 Toluene-d8	98.0	8.958	8.958	0.000	1317248	50.222	50.222	
65 Toluene	92.0	9.048	9.047	0.000	776489	45.251	45.251	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	515002	48.965	48.965	
67 Ethyl methacrylate	69.0	9.504	9.498	0.005	548636	46.552	46.552	
68 1,1,2-Trichloroethane	97.0	9.656	9.650	0.005	340483	45.920	45.920	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	305772	46.383	46.383	
70 1,3-Dichloropropane	76.0	9.855	9.850	0.005	561536	46.400	46.400	
71 2-Hexanone	43.0	9.949	9.949	0.000	1202826	94.108	94.108	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	381919	44.832	44.832	
73 n-Butyl acetate	43.0	10.117	10.117	0.000	838579	45.953	45.953	
75 1,2-Dibromoethane (EDB)	107.0	10.232	10.232	0.000	390625	44.996	44.996	
* 76 Chlorobenzene-d5	117.0	10.788	10.783	0.006	1162969	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	904566	43.830	43.830	
78 1,1,1,2-Tetrachloroethane	131.0	10.930	10.930	0.000	332718	45.414	45.414	
79 Ethylbenzene	106.0	10.946	10.940	0.005	469260	45.062	45.062	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	586182	45.198	45.198	
81 o-Xylene	106.0	11.496	11.496	0.001	570473	45.623	45.623	
82 Styrene	104.0	11.522	11.522	0.000	958659	46.189	46.189	
83 Bromoform	173.0	11.701	11.695	0.005	323223	45.528	45.528	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	1394089	46.265	46.265	
85 Cyclohexanone	55.0	11.963	11.957	0.005	446965	481.78	481.78	

Report Date: 06-Dec-2019 14:12:56 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A03.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	463626	45.448	45.448	
88 1,1,2,2-Tetrachloroethane	83.0	12.204	12.204	0.000	586304	42.549	42.549	
87 Bromobenzene	156.0	12.178	12.178	0.000	431677	43.681	43.681	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	204011	43.991	43.991	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	127066	35.539	35.539	
91 n-Propylbenzene	91.0	12.293	12.293	0.001	1695914	44.140	44.140	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	1032026	44.482	44.482	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	1129167	46.214	46.214	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	391183	43.603	43.603	
95 tert-Butylbenzene	119.0	12.770	12.765	0.006	970483	44.171	44.171	
96 1,2,4-Trimethylbenzene	105.0	12.823	12.822	0.000	1158593	46.822	46.822	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	1376932	45.857	45.857	
98 1,3-Dichlorobenzene	146.0	13.074	13.074	0.000	784986	42.988	42.988	
99 p-Isopropyltoluene	119.0	13.121	13.116	0.005	1175602	46.958	46.958	
* 100 1,4-Dichlorobenzene-d4	152.0	13.148	13.148	0.000	674468	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.169	13.169	0.000	789770	42.279	42.279	
102 Benzyl chloride	91.0	13.279	13.279	0.000	976839	47.498	47.498	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	1081021	46.093	46.093	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	759368	43.669	43.669	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	146929	39.422	39.422	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	429434	35.392	35.392	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	218439	45.624	45.624	
108 Naphthalene	128.0	15.077	15.082	-0.004	1131310	34.384	34.384	R
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	359438	34.084	34.084	R
S 110 Xylenes (total)	106.0	16.000		0.000		90.820	90.820	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		96.679	96.679	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

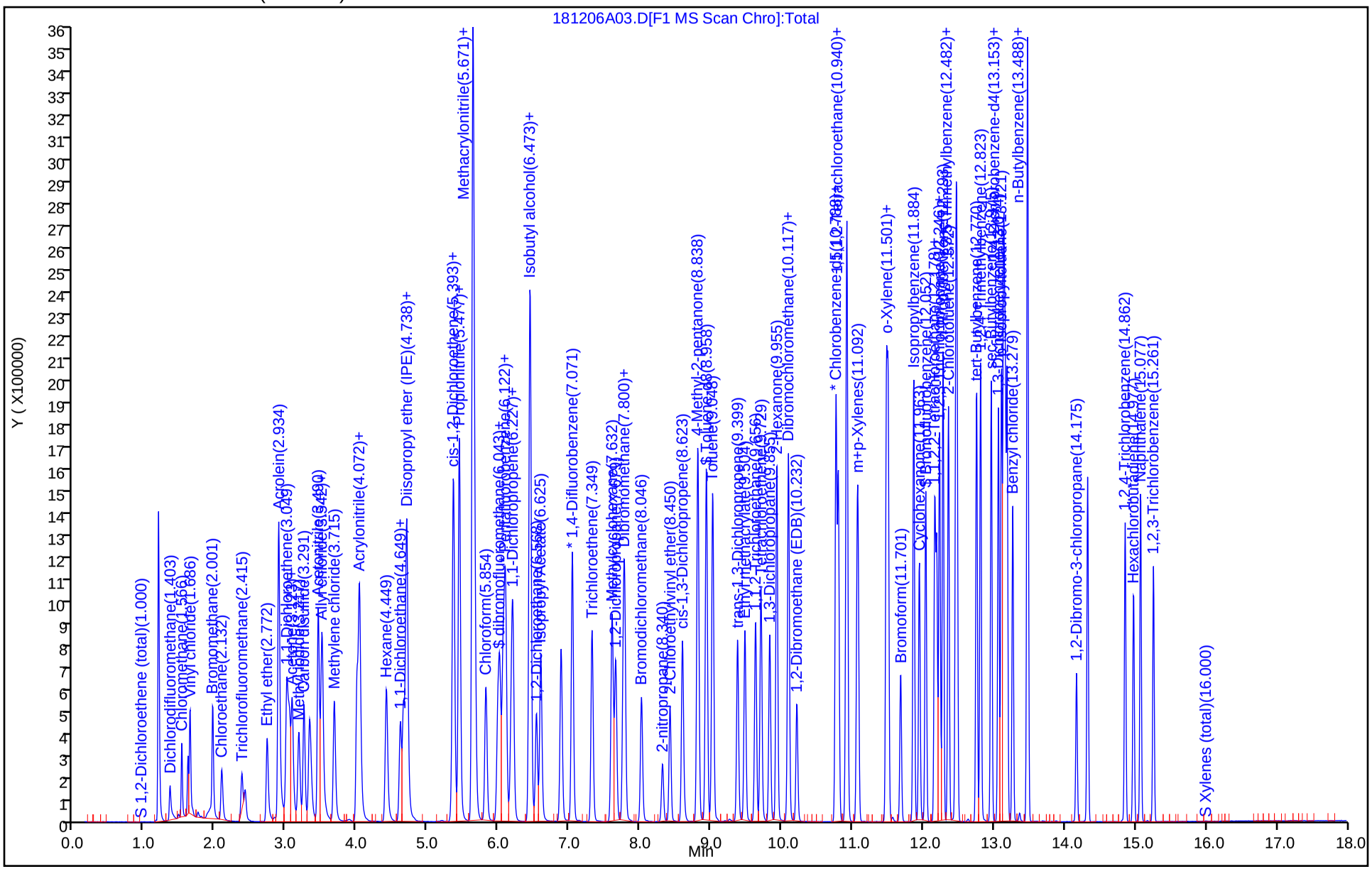
QC Flag Legend

Processing Flags
Q - Qualifier Signal(s) Fails Ratio Test
R - Spike/Surrogte Fails %Recovery Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 14:12:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A03.D				
Injection Date:	06-Dec-2019 09:06:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050DM		
Sample Info:	18120619, VLCS050DM				
Purge Vol.	5.00 ml	Dil. Factor:	1.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 06-Dec-2019 14:12:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

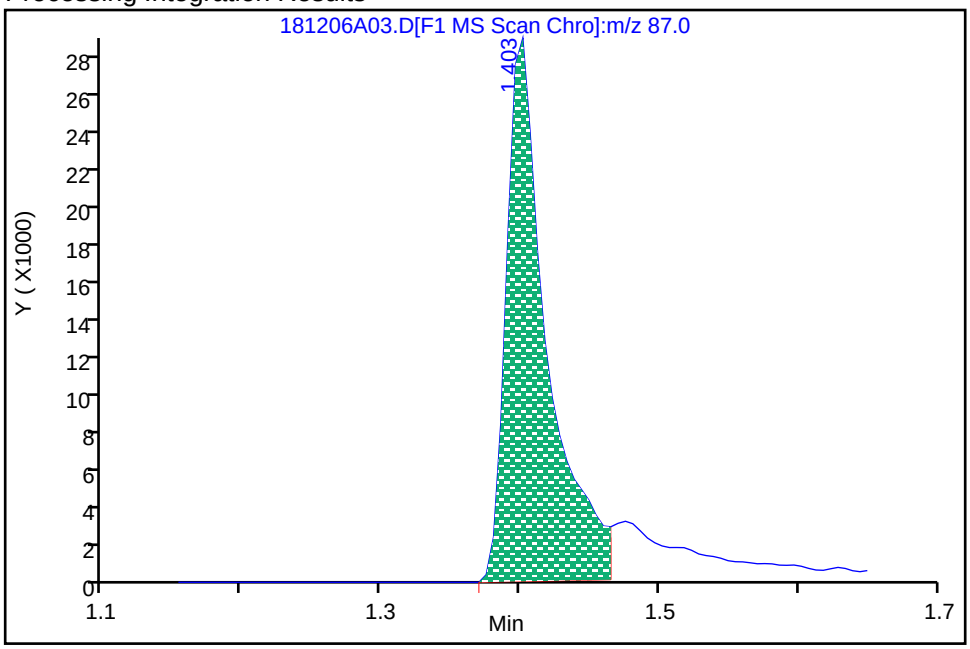
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A03.D		
Injection Date:	06-Dec-2019 09:06:30	Inst. ID:	msd18.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050DM
Sample Info:	18120619, VLCS050DM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

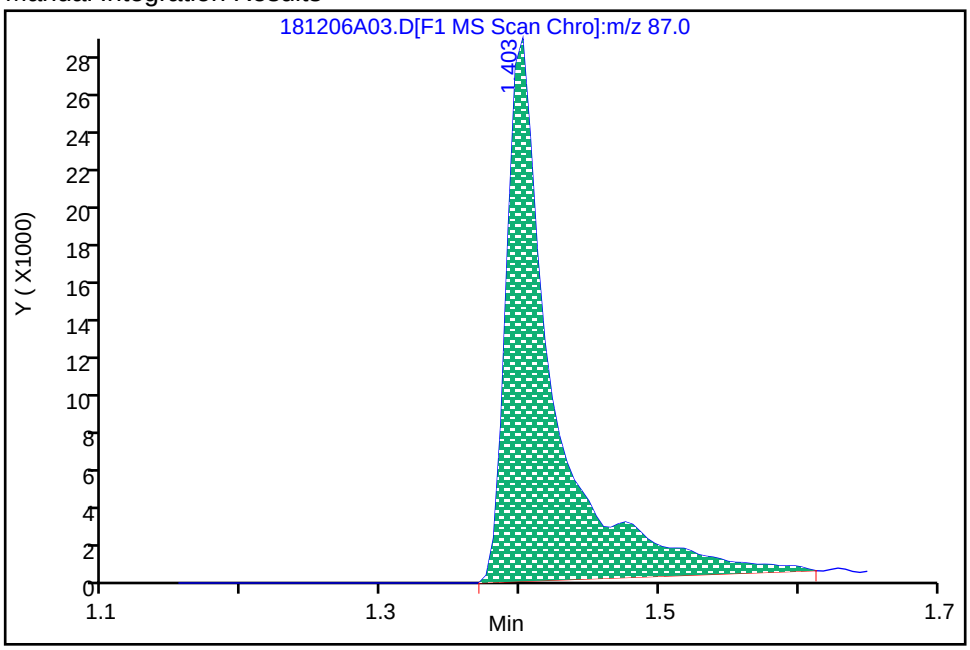
Processing Integration Results

RT:	1.403
Area:	57683
Conc:	40.666
Conc Units:	ug/L
Conc:	



Manual Integration Results

RT:	1.403
Area:	67308
Conc:	40.759
Conc Units:	ug/L



Data Editor: tml, 06-Dec-2019 09:38:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:12:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

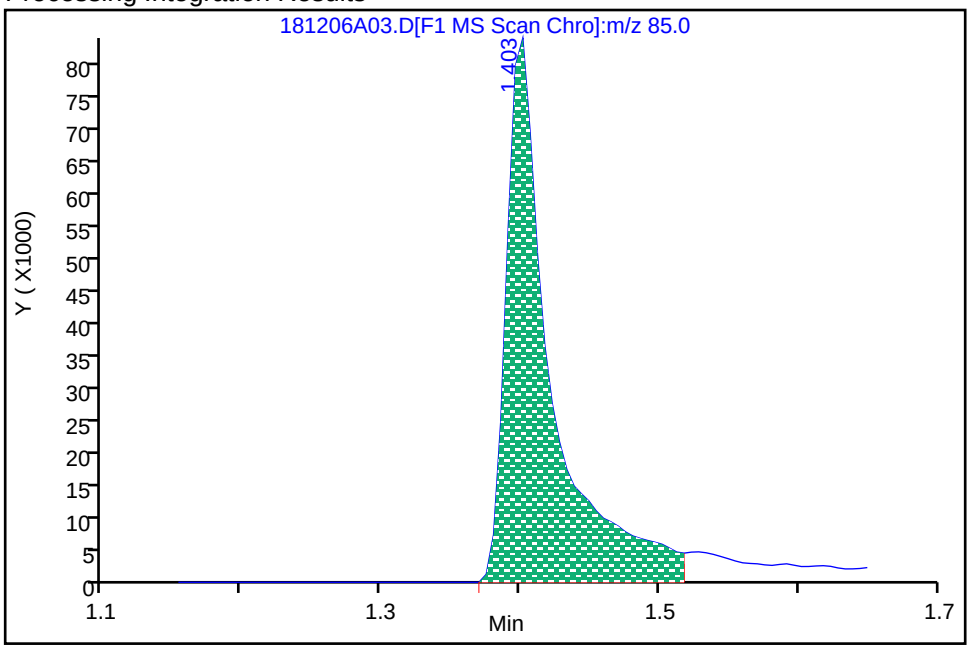
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A03.D		
Injection Date:	06-Dec-2019 09:06:30	Inst. ID:	msd18.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050DM
Sample Info:	18120619, VLCS050DM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

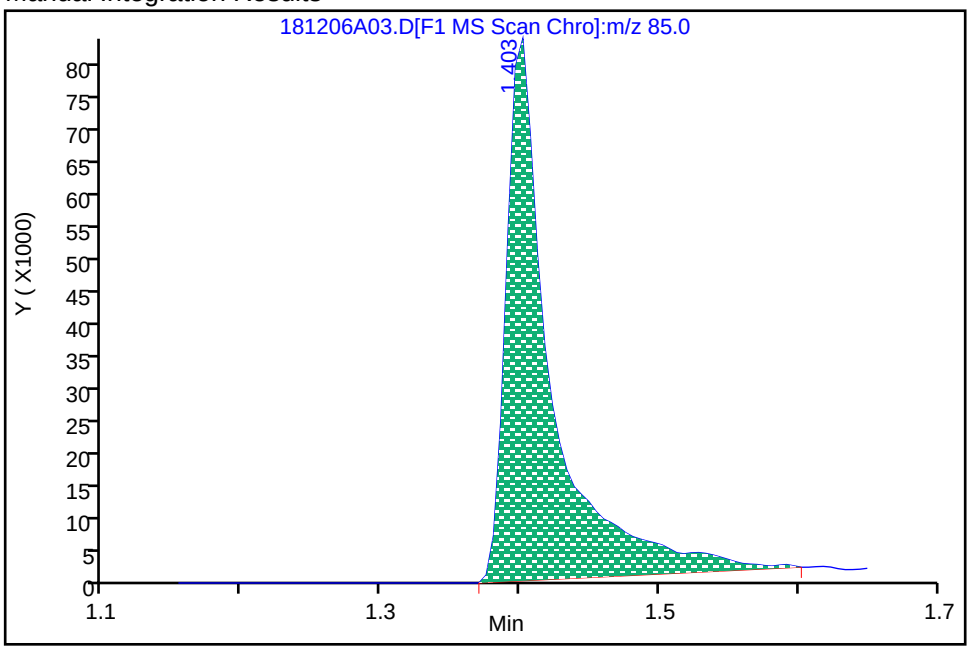
Processing Integration Results

RT: 1.403
Area: 190875
Conc: 40.666
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 191315
Conc: 40.759
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 09:38:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:12:56 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

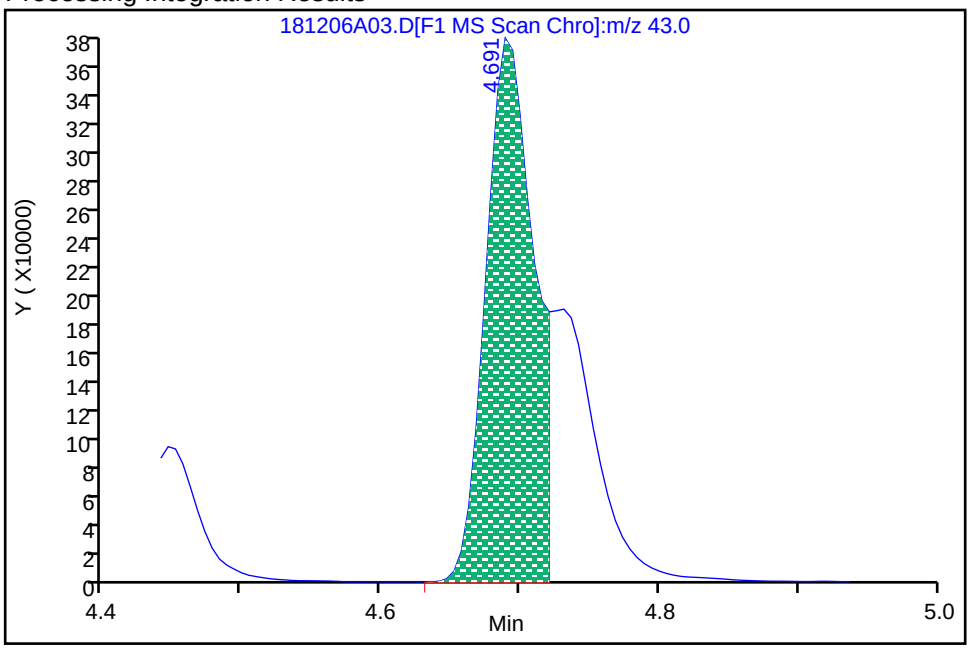
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A03.D		
Injection Date:	06-Dec-2019 09:06:30	Inst. ID:	msd18.i
Client ID:	50uL/100mL 15608/11	Lab ID:	VLCS050DM
Sample Info:	18120619, VLCS050DM		
Purge Vol.	5.00 ml	Dil. Factor:	1.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

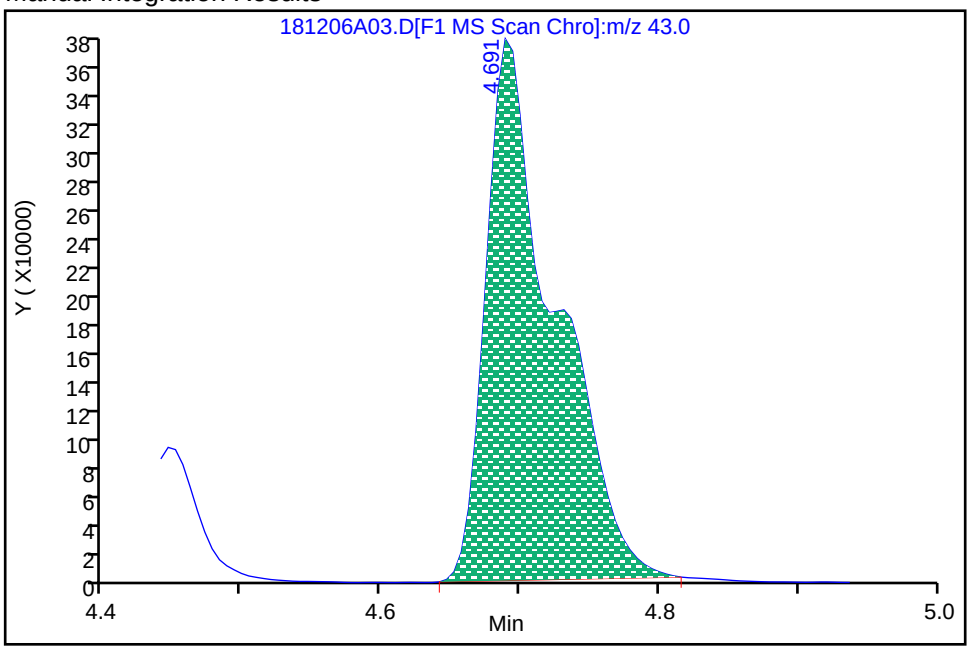
Processing Integration Results

RT: 4.691
Area: 879145
Conc: 50.887
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 4.691
Area: 1277787
Conc: 50.887
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 09:34:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Volatile Organic Compounds by GC/MS - MS

Sample ID: UL04032-006MS
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	1300	1000	2200		10	87	60-140	12/06/2019 1203

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		112	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		113	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Report Date: 06-Dec-2019 14:13:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A07.D		
Lab Sample ID:	UL04032-006	Client Sample ID:	MPGI-26-Water-RW-12
Injection Date:	06-Dec-2019 12:03:30	Dil. Factor:	10.0
Operator:	TML	Inst. ID:	msd18.i
Sample Info:	18120619, UL04032-006,10,MS		
Method:	\\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m		
Method Date:	06-Dec-2019 09:40:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	MS	ALS Bottle:	7
Cpnd Sublist:	std.sub	Spike List File:	Limswater.spk
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	tml	Review Date:	06-Dec-2019 14:06:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	203765	47.332	473.32	M
2 Chloromethane	50.0	1.566	1.566	0.000	263901	50.328	503.28	
3 Vinyl chloride	62.0	1.686	1.681	0.006	426645	58.194	581.94	
4 Bromomethane	94.0	2.006	2.001	0.006	252732	60.645	606.45	
5 Chloroethane	64.0	2.132	2.132	0.000	232139	63.454	634.54	
6 Trichlorofluoromethane	101.0	2.415	2.415	0.001	256186	59.112	591.12	
8 Ethyl ether	59.0	2.772	2.771	0.000	262546	52.504	525.04	
9 Acrolein	56.0	2.934	2.934	0.001	1355704	534.60	5346.00	
10 Acetone	43.0	3.123	3.123	0.000	1297063	220.54	2205.41	R
11 1,1-Dichloroethene	96.0	3.049	3.044	0.005	317076	59.169	591.69	
12 Freon 113	101.0	3.086	3.081	0.006	308311	54.435	544.35	
13 Methyl iodide	142.0	3.217	3.217	0.000	570071	51.643	516.43	
14 Carbon disulfide	76.0	3.291	3.285	0.005	893116	49.981	499.81	
15 Acetonitrile	40.0	3.490	3.484	0.005	645947	473.95	4739.53	
17 Allyl chloride	76.0	3.542	3.537	0.006	161010	60.319	603.19	
16 Methyl Acetate	43.0	3.553	3.547	0.005	557945	45.057	450.57	
18 Methylene chloride	84.0	3.721	3.715	0.005	319014	51.800	518.00	
20 Acrylonitrile	53.0	4.035	4.030	0.006	545630	93.111	931.11	
21 trans-1,2-Dichloroethene	96.0	4.072	4.066	0.005	317082	54.273	542.73	
22 tert-Butyl methyl ether(MTBE)	73.0	4.077	4.072	0.006	525166	54.878	548.78	
23 Hexane	57.0	4.455	4.449	0.005	415347	53.443	534.43	
24 1,1-Dichloroethane	63.0	4.649	4.643	0.005	563303	53.157	531.57	
25 Vinyl acetate	86.0	4.691	4.690	0.000	89519	54.453	544.53	M
26 Diisopropyl ether (IPE)	87.0	4.738	4.732	0.005	260987	55.480	554.80	
27 Chloroprene	53.0	4.738	4.738	0.000	454916	57.766	577.66	
29 cis-1,2-Dichloroethene	96.0	5.393	5.393	0.001	352476	51.592	515.92	
30 2-Butanone (MEK)	72.0	5.404	5.398	0.005	222480	92.936	929.36	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.382	0.005	301025	57.697	576.97	
32 Propionitrile	54.0	5.477	5.477	0.001	1326954	453.79	4537.92	
33 Ethyl Acetate	43.0	5.482	5.477	0.006	698879	46.232	462.32	
34 Methacrylonitrile	67.0	5.671	5.666	0.006	1301514	244.60	2446.05	
35 Bromochloromethane	128.0	5.692	5.687	0.005	190358	48.879	488.79	
36 Tetrahydrofuran	42.0	5.702	5.697	0.005	331065	42.884	428.84	
37 Chloroform	83.0	5.855	5.849	0.005	582438	53.668	536.68	
$ 39 dibromofluoromethane	111.0	6.054	6.048	0.005	387119	54.370	54.370	
40 1,1,1-Trichloroethane	97.0	6.028	6.022	0.005	443423	54.246	542.46	
* 41 Pentafluorobenzene	168.0	6.132	6.127	0.005	734532	50.000	50.000	
42 Cyclohexane	41.0	6.096	6.096	0.000	277447	51.688	516.88	
43 1,1-Dichloropropene	75.0	6.237	6.232	0.006	438331	52.534	525.34	
44 Carbon tetrachloride	119.0	6.216	6.211	0.006	426911	53.111	531.11	
45 Isobutyl alcohol	42.0	6.478	6.473	0.005	342353	416.65	4166.54	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.463	0.005	426377	56.214	56.214	
48 Benzene	78.0	6.478	6.473	0.005	1243492	52.575	525.75	
49 Isopropyl Acetate	43.0	6.625	6.625	0.000	907099	48.799	487.99	
50 1,2-Dichloroethane	62.0	6.568	6.562	0.005	451314	51.283	512.83	
* 52 1,4-Difluorobenzene	114.0	7.071	7.071	0.000	1092124	50.000	50.000	
53 Trichloroethene	130.0	7.349	7.349	0.000	372149	50.822	508.22	
54 Methylcyclohexane	83.0	7.632	7.632	0.000	533633	56.664	566.64	
55 1,2-Dichloropropane	63.0	7.684	7.679	0.006	325099	50.793	507.93	
56 Dibromomethane	93.0	7.789	7.784	0.006	235134	49.186	491.86	
57 Methyl methacrylate	41.0	7.810	7.805	0.006	438098	50.103	501.03	
58 1,4-Dioxane	88.0	7.794	7.789	0.005	114023	445.32	4453.19	
59 Bromodichloromethane	83.0	8.046	8.041	0.006	423157	52.090	520.90	
60 2-nitropropane	43.0	8.345	8.340	0.005	205871	43.916	439.16	
61 2-Chloroethylvinyl ether	63.0	8.450	8.444	0.005	29802	5.4437	54.437	eR
62 cis-1,3-Dichloropropene	75.0	8.623	8.617	0.005	520812	51.378	513.78	
63 4-Methyl-2-pentanone	43.0	8.838	8.838	0.000	1330477	97.108	971.08	
$ 64 Toluene-d8	98.0	8.958	8.958	0.000	1339868	56.632	56.632	
65 Toluene	92.0	9.048	9.047	0.000	785992	50.778	507.78	
66 trans-1,3-Dichloropropene	75.0	9.399	9.399	0.000	501454	52.854	528.54	
67 Ethyl methacrylate	69.0	9.504	9.498	0.005	533470	50.181	501.81	
68 1,1,2-Trichloroethane	97.0	9.656	9.650	0.005	333826	49.911	499.11	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	319169	53.673	536.73	
70 1,3-Dichloropropane	76.0	9.855	9.850	0.006	554535	50.797	507.97	
71 2-Hexanone	43.0	9.955	9.949	0.005	1145453	99.351	993.51	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	376688	49.019	490.19	
73 n-Butyl acetate	43.0	10.117	10.117	0.000	815526	49.542	495.42	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.232	0.005	386764	49.389	493.89	
* 76 Chlorobenzene-d5	117.0	10.788	10.783	0.006	1049050	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	926493	49.767	497.67	
78 1,1,1,2-Tetrachloroethane	131.0	10.930	10.930	0.000	332364	50.292	502.92	
79 Ethylbenzene	106.0	10.946	10.940	0.005	488412	51.994	519.94	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	586448	50.129	501.29	
81 o-Xylene	106.0	11.496	11.496	0.001	574909	50.970	509.70	
82 Styrene	104.0	11.522	11.522	0.000	953329	50.920	509.20	
83 Bromoform	173.0	11.701	11.695	0.005	310136	48.428	484.28	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	1455267	53.539	535.39	
85 Cyclohexanone	55.0	11.963	11.957	0.005	396228	473.47	4734.70	

Report Date: 06-Dec-2019 14:13:06 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A07.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	489439	53.188	53.188	
88 1,1,2,2-Tetrachloroethane	83.0	12.204	12.204	0.000	580604	47.701	477.01	
87 Bromobenzene	156.0	12.183	12.178	0.005	443449	50.800	508.00	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	197589	48.235	482.35	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	135009	42.749	427.49	
91 n-Propylbenzene	91.0	12.298	12.293	0.006	1772996	52.242	522.42	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	1053181	51.391	513.91	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	1172684	54.336	543.36	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	385483	48.644	486.44	
95 tert-Butylbenzene	119.0	12.770	12.765	0.006	996370	51.340	513.40	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.822	0.005	1203889	55.079	550.79	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	1448496	54.613	546.13	
98 1,3-Dichlorobenzene	146.0	13.080	13.074	0.005	790371	49.000	490.00	
99 p-Isopropyltoluene	119.0	13.121	13.116	0.005	1240922	56.115	561.15	
* 100 1,4-Dichlorobenzene-d4	152.0	13.153	13.148	0.005	595764	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.169	0.005	800671	48.525	485.25	
102 Benzyl chloride	91.0	13.279	13.279	0.000	948305	52.202	522.02	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	1179810	56.951	569.51	
104 1,2-Dichlorobenzene	146.0	13.488	13.488	0.000	776519	50.555	505.55	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	148327	45.055	450.55	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	486981	45.437	454.37	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	228553	54.115	541.15	
108 Naphthalene	128.0	15.082	15.082	0.000	1277838	43.968	439.68	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	423219	45.433	454.33	
S 110 Xylenes (total)	106.0	16.000		0.000		101.10	1010.99	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		105.87	1058.65	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

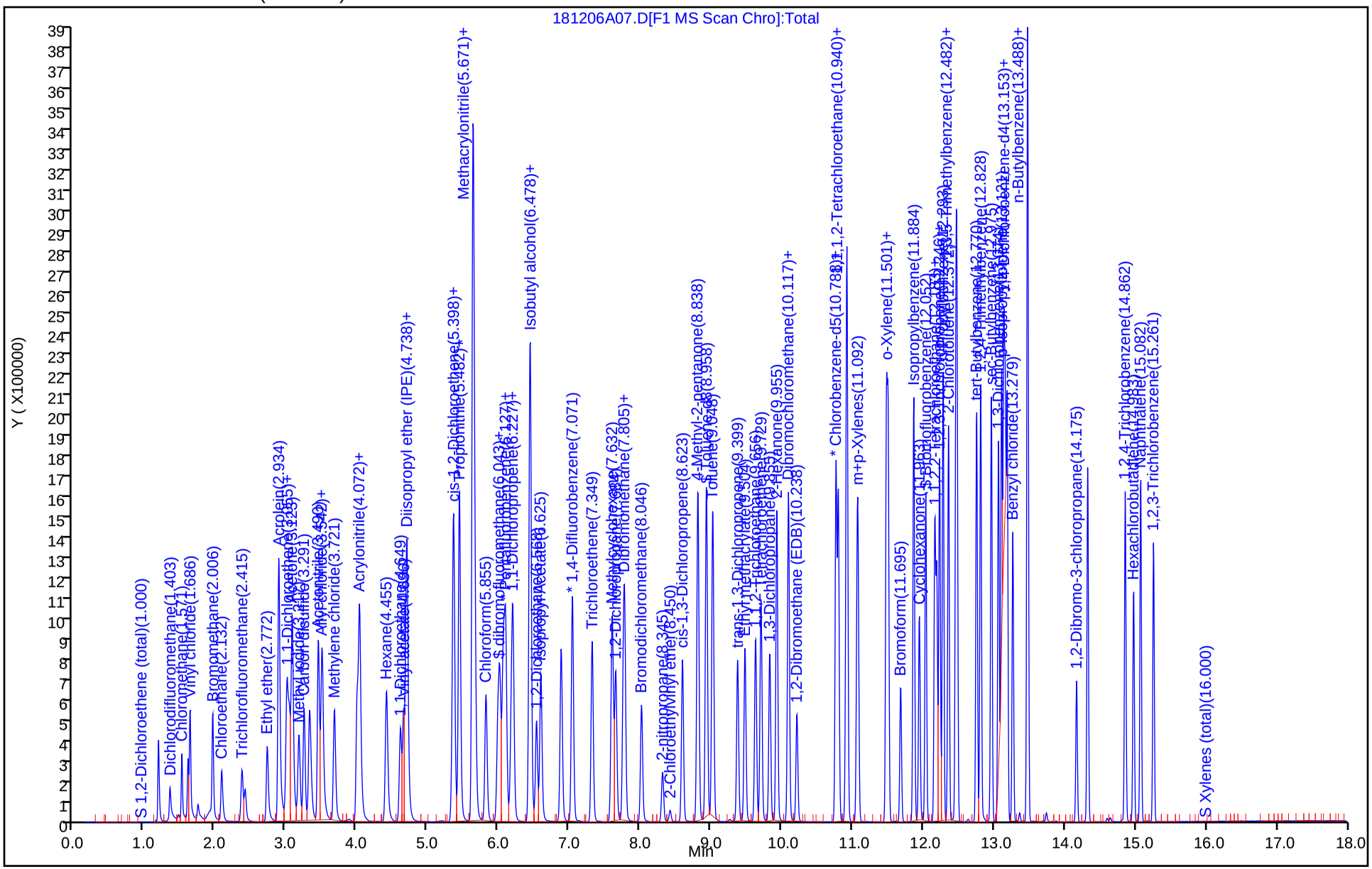
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Q - Qualifier Signal(s) Fails Ratio Test
R - Spike/Surrogte Fails %Recovery Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 14:13:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A07.D				
Injection Date:	06-Dec-2019 12:03:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006		
Sample Info:	18120619, UL04032-006,10,MS				
Purge Vol.	5.00 ml	Dil. Factor:	10.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 06-Dec-2019 14:13:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

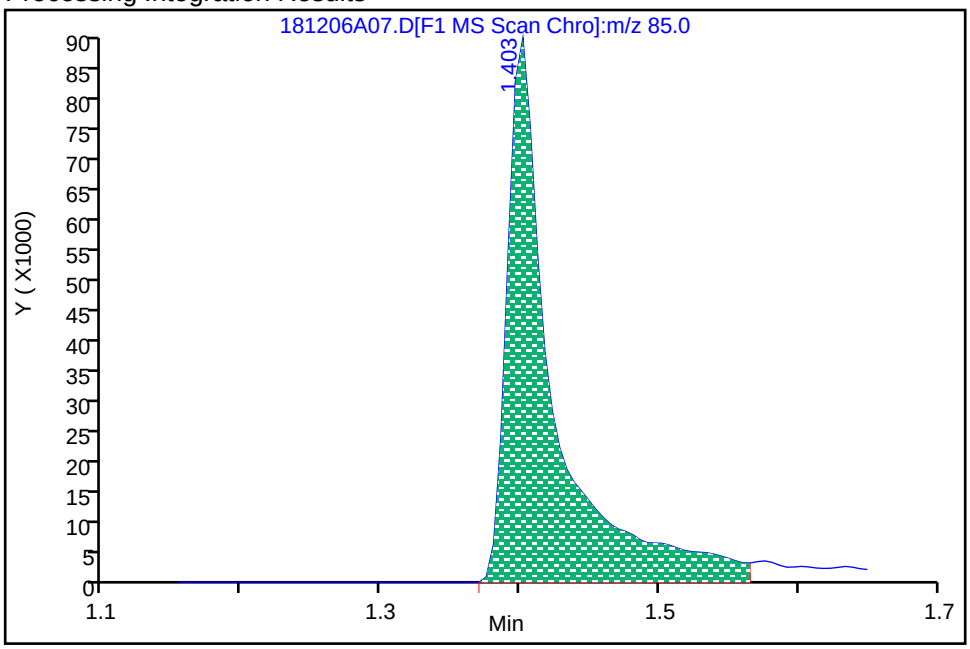
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A07.D		
Injection Date:	06-Dec-2019 12:03:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10,MS		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

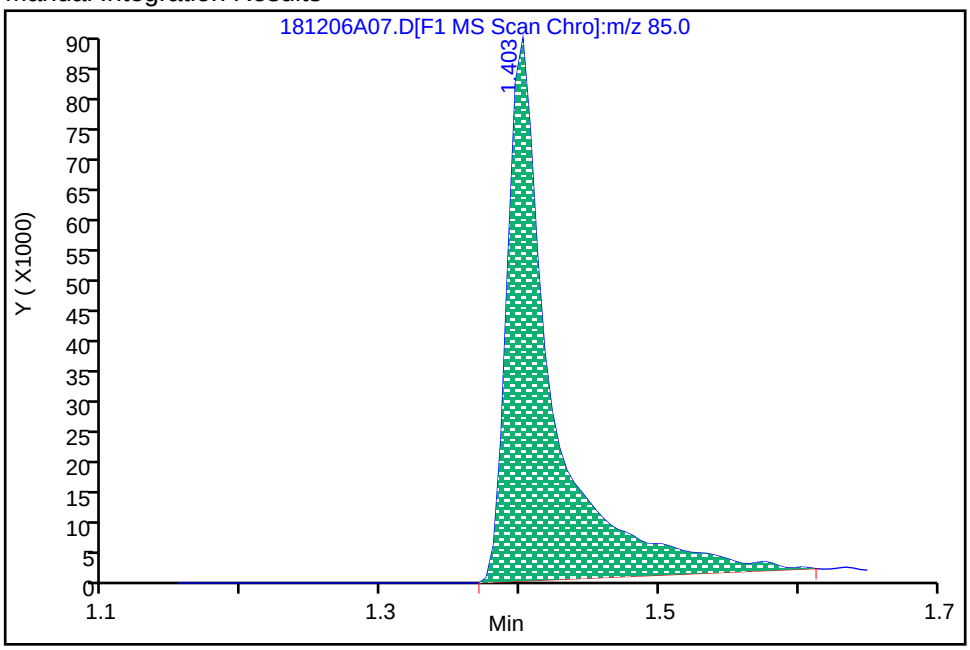
Processing Integration Results

RT:	1.403
Area:	212661
Conc:	493.98
Conc Units:	ug/L
Conc:	



Manual Integration Results

RT:	1.403
Area:	203765
Conc:	473.32
Conc Units:	ug/L



Data Editor: tml, 06-Dec-2019 14:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:13:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

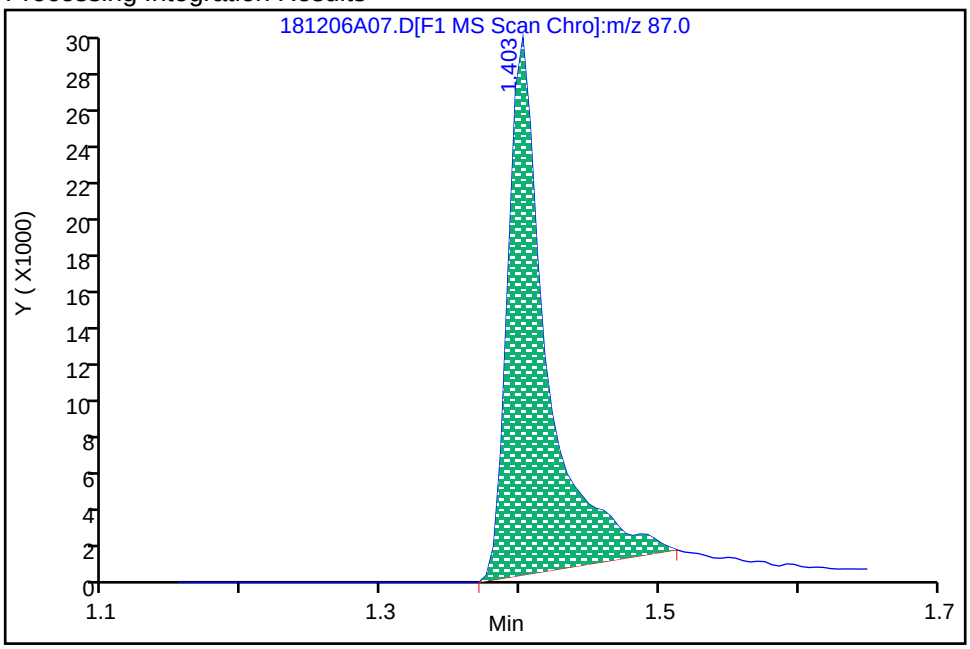
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A07.D		
Injection Date:	06-Dec-2019 12:03:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10,MS		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

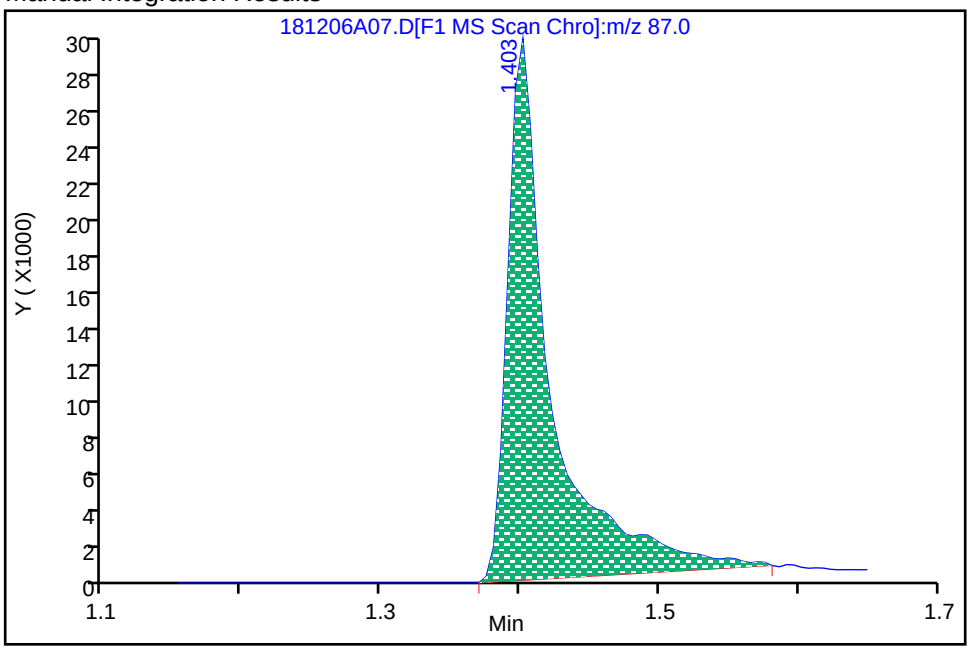
Processing Integration Results

RT:	1.403
Area:	56589
Conc:	493.98
Conc Units:	ug/L
Conc:	



Manual Integration Results

RT:	1.403
Area:	63482
Conc:	473.32
Conc Units:	ug/L



Data Editor: tml, 06-Dec-2019 14:06:30

Audit Action: Mint

Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:13:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

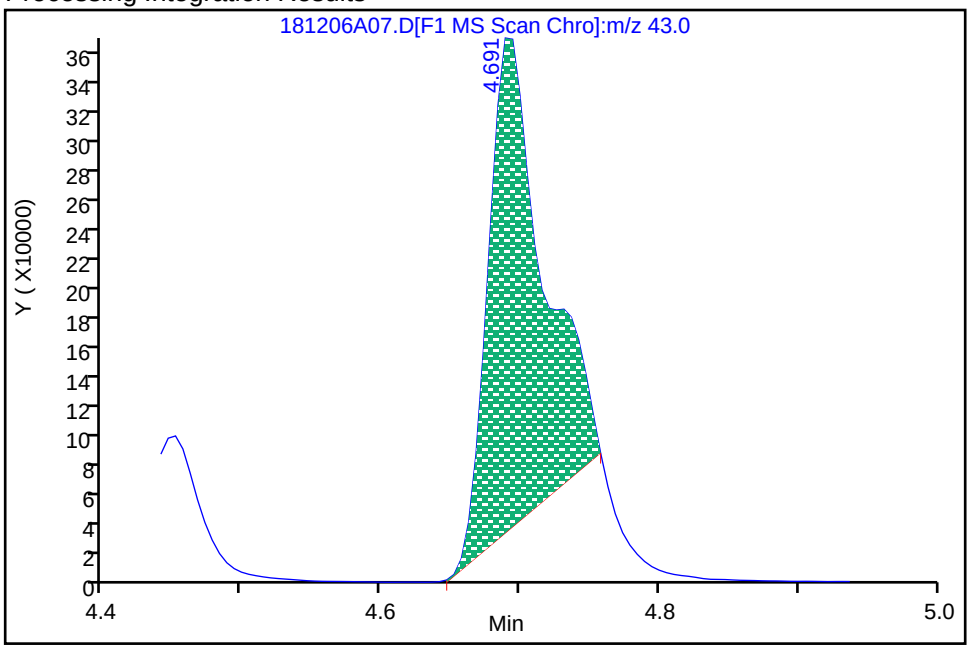
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A07.D		
Injection Date:	06-Dec-2019 12:03:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10,MS		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

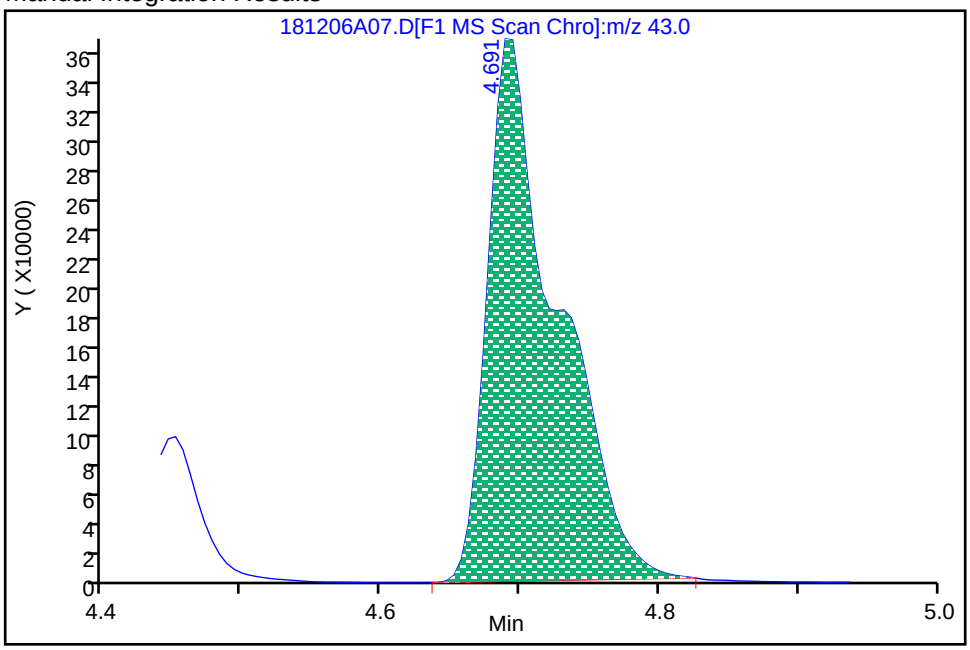
Processing Integration Results

RT: 4.691
Area: 915609
Conc: 544.53
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 4.691
Area: 1275807
Conc: 544.53
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 14:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Volatile Organic Compounds by GC/MS - MSD

Sample ID: UL04032-006MD
Batch: 38152
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	1300	1000	2200		10	89	0.81	60-140	20	12/06/2019 1228

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		111	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		109	70-130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A08.D		
Lab Sample ID:	UL04032-006	Client Sample ID:	MPGI-26-Water-RW-12
Injection Date:	06-Dec-2019 12:28:30	Dil. Factor:	10.0
Operator:	TML	Inst. ID:	msd18.i
Sample Info:	18120619, UL04032-006,10,MSD		
Method:	\\Organics\DD\chem\msd18.i\18120619.b\8260B-18.m		
Method Date:	06-Dec-2019 09:40:30	Quant Method:	ISTD
Calib Date:	04-Nov-2019 18:09:30	Calib File:	181104A12.D
Sample Type:	MSD	ALS Bottle:	8
Cpnd Sublist:	std.sub	Spike List File:	Limswater.spk
Matrix/Level:	Water/Medium		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Uf	0	
Cpnd Variable		Local Cpnd Variable

Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan
Data Reviewer:	tml	Review Date:	06-Dec-2019 14:06:30

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
1 Dichlorodifluoromethane	85.0	1.403	1.403	0.001	217224	50.008	500.08	M
2 Chloromethane	50.0	1.571	1.566	0.005	270053	51.043	510.43	
3 Vinyl chloride	62.0	1.686	1.681	0.006	443225	59.916	599.16	
4 Bromomethane	94.0	2.006	2.001	0.006	255620	60.791	607.91	
5 Chloroethane	64.0	2.132	2.132	0.000	246260	66.713	667.13	R
6 Trichlorofluoromethane	101.0	2.415	2.415	0.001	274894	62.844	628.44	
8 Ethyl ether	59.0	2.772	2.771	0.000	263770	52.279	522.79	
9 Acrolein	56.0	2.934	2.934	0.001	1379695	539.21	5392.11	
10 Acetone	43.0	3.123	3.123	0.000	1319402	222.34	2223.40	R
11 1,1-Dichloroethene	96.0	3.049	3.044	0.005	322662	59.674	596.74	
12 Freon 113	101.0	3.086	3.081	0.006	315210	55.157	551.57	
13 Methyl iodide	142.0	3.217	3.217	0.000	580074	52.081	520.81	
14 Carbon disulfide	76.0	3.291	3.285	0.005	907424	50.329	503.29	
15 Acetonitrile	40.0	3.495	3.484	0.011	660978	480.66	4806.59	
17 Allyl chloride	76.0	3.542	3.537	0.006	164276	60.996	609.96	
16 Methyl Acetate	43.0	3.553	3.547	0.005	570387	45.651	456.51	
18 Methylene chloride	84.0	3.721	3.715	0.005	324740	52.262	522.62	
20 Acrylonitrile	53.0	4.035	4.030	0.006	553293	93.577	935.77	
21 trans-1,2-Dichloroethene	96.0	4.072	4.066	0.005	326750	55.429	554.29	
22 tert-Butyl methyl ether(MTBE)	73.0	4.082	4.072	0.011	547207	56.672	566.72	
23 Hexane	57.0	4.455	4.449	0.005	413338	52.711	527.11	
24 1,1-Dichloroethane	63.0	4.649	4.643	0.005	576222	53.891	538.91	
25 Vinyl acetate	86.0	4.696	4.690	0.005	92004	55.466	554.66	M
26 Diisopropyl ether (IPE)	87.0	4.738	4.732	0.005	265731	55.985	559.85	
27 Chloroprene	53.0	4.743	4.738	0.005	456373	57.435	574.35	
29 cis-1,2-Dichloroethene	96.0	5.398	5.393	0.006	364440	52.868	528.68	
30 2-Butanone (MEK)	72.0	5.404	5.398	0.005	225084	93.186	931.86	

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
31 2,2-Dichloropropane	77.0	5.388	5.382	0.005	313720	59.594	595.94	
32 Propionitrile	54.0	5.482	5.477	0.006	1347707	456.78	4567.80	
33 Ethyl Acetate	43.0	5.482	5.477	0.006	724069	47.487	474.87	
34 Methacrylonitrile	67.0	5.671	5.666	0.005	1332137	248.13	2481.28	
35 Bromochloromethane	128.0	5.692	5.687	0.005	195878	49.848	498.48	
36 Tetrahydrofuran	42.0	5.702	5.697	0.005	344306	44.201	442.01	
37 Chloroform	83.0	5.854	5.849	0.005	587331	53.636	536.36	
$ 39 dibromofluoromethane	111.0	6.054	6.048	0.005	383682	53.407	53.407	
40 1,1,1-Trichloroethane	97.0	6.022	6.022	0.000	454745	55.135	551.35	
* 41 Pentafluorobenzene	168.0	6.132	6.127	0.005	741139	50.000	50.000	
42 Cyclohexane	41.0	6.101	6.096	0.005	286534	52.905	529.05	
43 1,1-Dichloropropene	75.0	6.237	6.232	0.006	442433	52.553	525.53	
44 Carbon tetrachloride	119.0	6.216	6.211	0.006	437349	53.925	539.25	
45 Isobutyl alcohol	42.0	6.478	6.473	0.005	345298	416.49	4164.92	
$ 46 1,2-Dichloroethane-d4	65.0	6.468	6.463	0.005	424586	55.460	55.460	
48 Benzene	78.0	6.478	6.473	0.005	1266912	53.070	530.70	
49 Isopropyl Acetate	43.0	6.630	6.625	0.005	919844	49.028	490.28	
50 1,2-Dichloroethane	62.0	6.568	6.562	0.005	465661	52.424	524.24	
* 52 1,4-Difluorobenzene	114.0	7.076	7.071	0.006	1102317	50.000	50.000	
53 Trichloroethene	130.0	7.354	7.349	0.005	379457	51.341	513.41	
54 Methylcyclohexane	83.0	7.637	7.632	0.006	539465	56.753	567.53	
55 1,2-Dichloropropane	63.0	7.684	7.679	0.006	328921	50.915	509.15	
56 Dibromomethane	93.0	7.789	7.784	0.006	244978	50.771	507.71	
57 Methyl methacrylate	41.0	7.810	7.805	0.006	451280	51.133	511.33	
58 1,4-Dioxane	88.0	7.794	7.789	0.005	111920	433.06	4330.63	
59 Bromodichloromethane	83.0	8.046	8.041	0.006	434477	52.989	529.89	
60 2-nitropropane	43.0	8.345	8.340	0.005	212413	44.893	448.93	
61 2-Chloroethylvinyl ether	63.0	8.455	8.444	0.011	8066	1.4597	14.597	eR
62 cis-1,3-Dichloropropene	75.0	8.623	8.617	0.005	537248	52.509	525.09	
63 4-Methyl-2-pentanone	43.0	8.843	8.838	0.006	1349384	97.578	975.78	
$ 64 Toluene-d8	98.0	8.964	8.958	0.005	1314846	54.487	54.487	
65 Toluene	92.0	9.053	9.047	0.005	813463	51.525	515.25	
66 trans-1,3-Dichloropropene	75.0	9.404	9.399	0.006	511683	52.877	528.77	
67 Ethyl methacrylate	69.0	9.504	9.498	0.005	542989	50.077	500.77	
68 1,1,2-Trichloroethane	97.0	9.656	9.650	0.005	339401	49.751	497.51	
69 Tetrachloroethene	164.0	9.729	9.729	0.000	332570	54.832	548.32	
70 1,3-Dichloropropane	76.0	9.855	9.850	0.005	563474	50.606	506.06	
71 2-Hexanone	43.0	9.955	9.949	0.005	1147760	97.603	976.03	
72 Dibromochloromethane	129.0	10.112	10.112	0.000	391564	49.958	499.58	
73 n-Butyl acetate	43.0	10.122	10.117	0.005	816004	48.601	486.01	
75 1,2-Dibromoethane (EDB)	107.0	10.238	10.232	0.005	393669	49.287	492.87	
* 76 Chlorobenzene-d5	117.0	10.788	10.783	0.006	1069989	50.000	50.000	
77 Chlorobenzene	112.0	10.820	10.820	0.000	949431	50.001	500.01	
78 1,1,1,2-Tetrachloroethane	131.0	10.935	10.930	0.006	341350	50.641	506.41	
79 Ethylbenzene	106.0	10.946	10.940	0.005	504274	52.632	526.32	
80 m+p-Xylenes	106.0	11.092	11.092	0.000	613354	51.403	514.03	
81 o-Xylene	106.0	11.501	11.496	0.006	588565	51.160	511.60	
82 Styrene	104.0	11.522	11.522	0.000	988660	51.774	517.74	
83 Bromoform	173.0	11.701	11.695	0.005	315408	48.288	482.88	
84 Isopropylbenzene	105.0	11.884	11.884	0.001	1481276	53.430	534.30	
85 Cyclohexanone	55.0	11.963	11.957	0.005	390598	457.61	4576.08	

Report Date: 06-Dec-2019 14:13:09 AIM Revision: 1.0 11-Sep-2019 14:31:36
Data File: \\Organics\DD\chem\msd18.i\18120619.b\181206A08.D

Compound	Sig	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/L	Final Conc ug/L	Flags
$ 86 Bromofluorobenzene	95.0	12.052	12.052	0.000	455168	48.496	48.496	
88 1,1,2,2-Tetrachloroethane	83.0	12.209	12.204	0.006	580600	46.605	466.05	
87 Bromobenzene	156.0	12.183	12.178	0.005	446541	49.979	499.79	
89 1,2,3-Trichloropropane	110.0	12.251	12.251	0.001	203144	48.451	484.51	
90 trans-1,4-Dichloro-2-butene	53.0	12.241	12.240	0.000	127765	39.526	395.26	
91 n-Propylbenzene	91.0	12.298	12.293	0.006	1799700	51.810	518.10	
92 2-Chlorotoluene	91.0	12.372	12.372	0.000	1075225	51.261	512.61	
93 1,3,5-Trimethylbenzene	105.0	12.477	12.476	0.000	1185372	53.661	536.61	
94 4-Chlorotoluene	126.0	12.492	12.492	0.000	401004	49.440	494.40	
95 tert-Butylbenzene	119.0	12.770	12.765	0.006	999824	50.333	503.33	
96 1,2,4-Trimethylbenzene	105.0	12.828	12.822	0.005	1208112	54.002	540.02	
97 sec-Butylbenzene	105.0	12.975	12.975	0.000	1447425	53.318	533.18	
98 1,3-Dichlorobenzene	146.0	13.079	13.074	0.005	809591	49.038	490.38	
99 p-Isopropyltoluene	119.0	13.121	13.116	0.005	1262231	55.767	557.67	
* 100 1,4-Dichlorobenzene-d4	152.0	13.153	13.148	0.005	609781	50.000	50.000	
101 1,4-Dichlorobenzene	146.0	13.174	13.169	0.005	812073	48.084	480.84	
102 Benzyl chloride	91.0	13.279	13.279	0.000	940014	50.557	505.57	
103 n-Butylbenzene	91.0	13.483	13.483	0.000	1162851	54.842	548.42	
104 1,2-Dichlorobenzene	146.0	13.494	13.488	0.005	781315	49.698	496.98	
105 1,2-Dibromo-3-chloropropane	75.0	14.175	14.175	0.000	143248	42.512	425.12	
106 1,2,4-Trichlorobenzene	180.0	14.862	14.862	0.000	468233	42.683	426.83	
107 Hexachlorobutadiene	225.0	14.983	14.983	0.000	236837	54.792	547.92	
108 Naphthalene	128.0	15.082	15.082	0.000	1161230	39.037	390.37	
109 1,2,3-Trichlorobenzene	180.0	15.261	15.261	0.000	387235	40.615	406.15	
S 110 Xylenes (total)	106.0	16.000		0.000		102.56	1025.62	Q
S 111 1,2-Dichloroethene (total)	96.0	1.000		0.000		108.30	1082.97	Q

Compound Type Legend

$ - Surrogate
* - ISTD
S - Summary

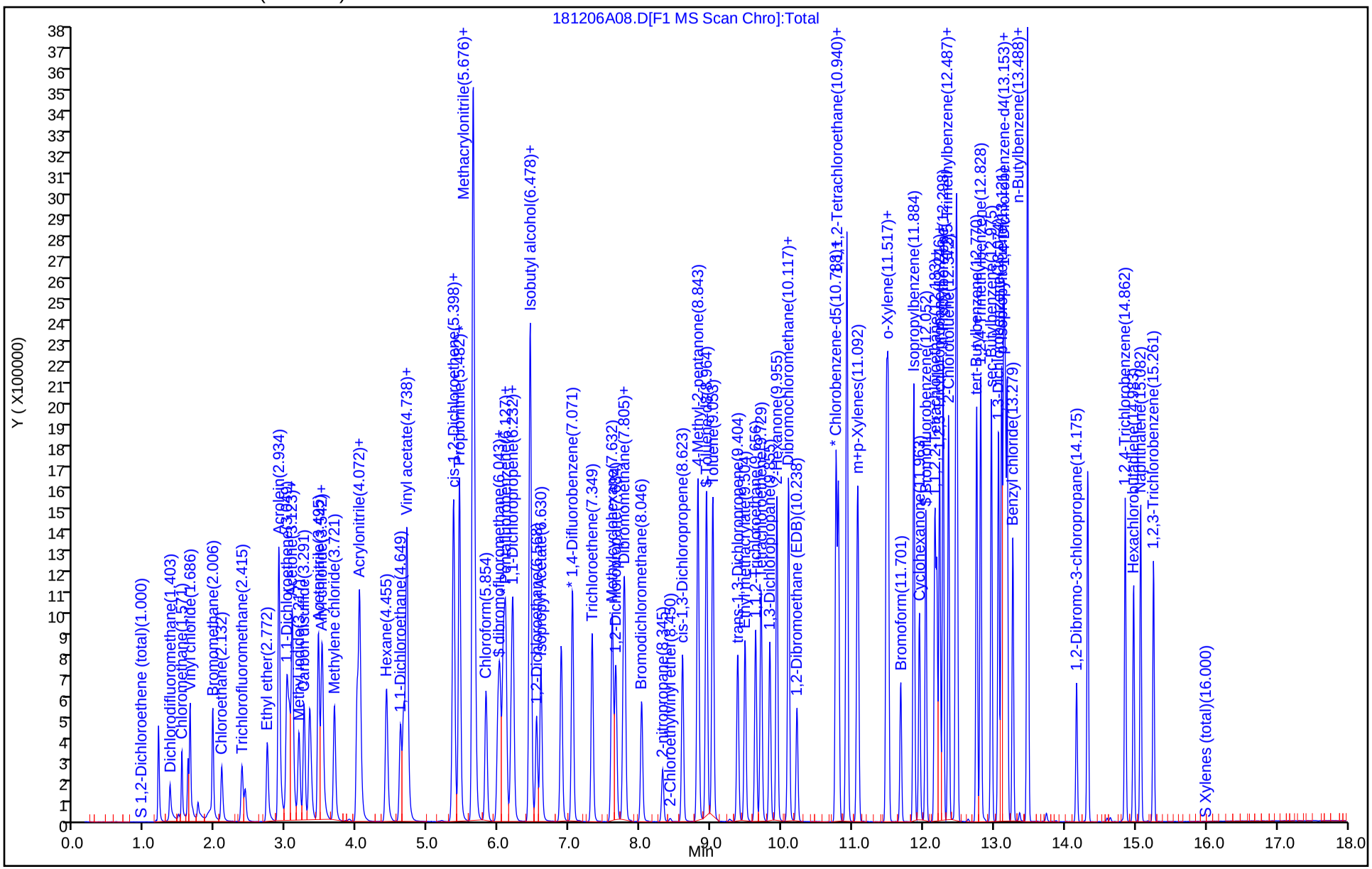
QC Flag Legend

Processing Flags
e - Compound Concentration Below Quantitation Limit
Q - Qualifier Signal(s) Fails Ratio Test
R - Spike/Surrogte Fails %Recovery Test
Review Flags
M - Compound Hit/Peak Manually Integrated

Report Date: 06-Dec-2019 14:13:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A08.D				
Injection Date:	06-Dec-2019 12:28:30	Inst. ID:	msd18.i	Operator:	TML
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006		
Sample Info:	18120619, UL04032-006,10,MSD				
Purge Vol.	5.00 ml	Dil. Factor:	10.0		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan		



Report Date: 06-Dec-2019 14:13:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

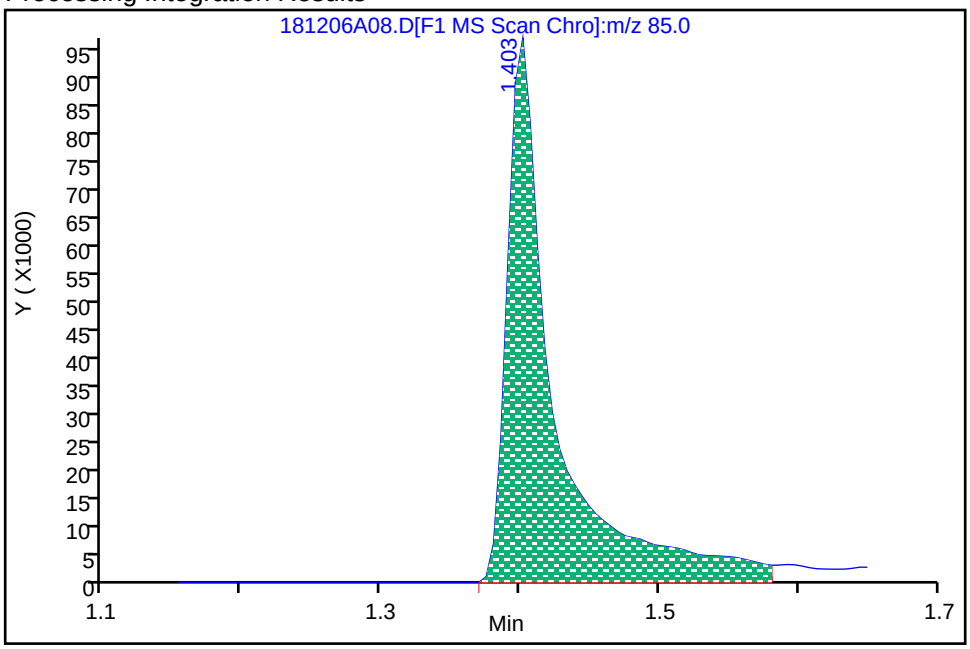
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A08.D		
Injection Date:	06-Dec-2019 12:28:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10,MSD		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

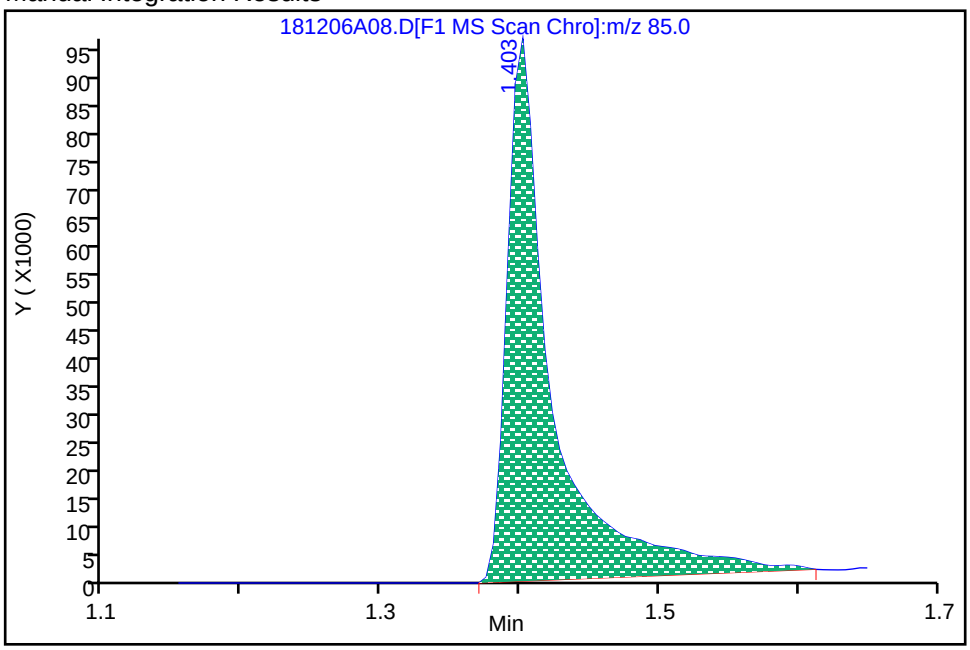
Processing Integration Results

RT: 1.403
Area: 229124
Conc: 527.48
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 217224
Conc: 500.08
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 14:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:13:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

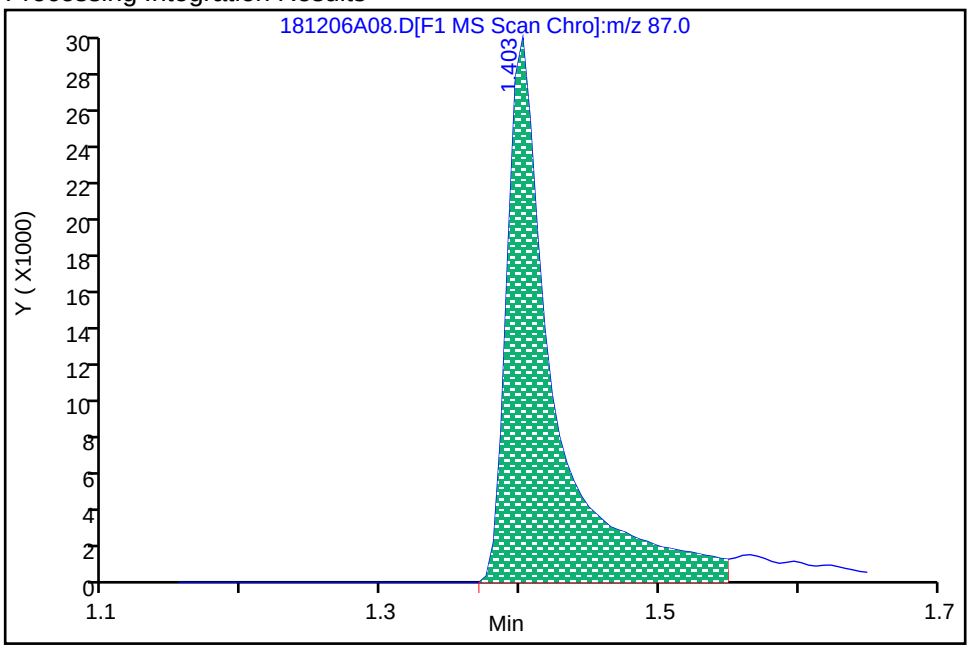
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A08.D		
Injection Date:	06-Dec-2019 12:28:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10,MSD		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

1 Dichlorodifluoromethane, CAS: 75-71-8

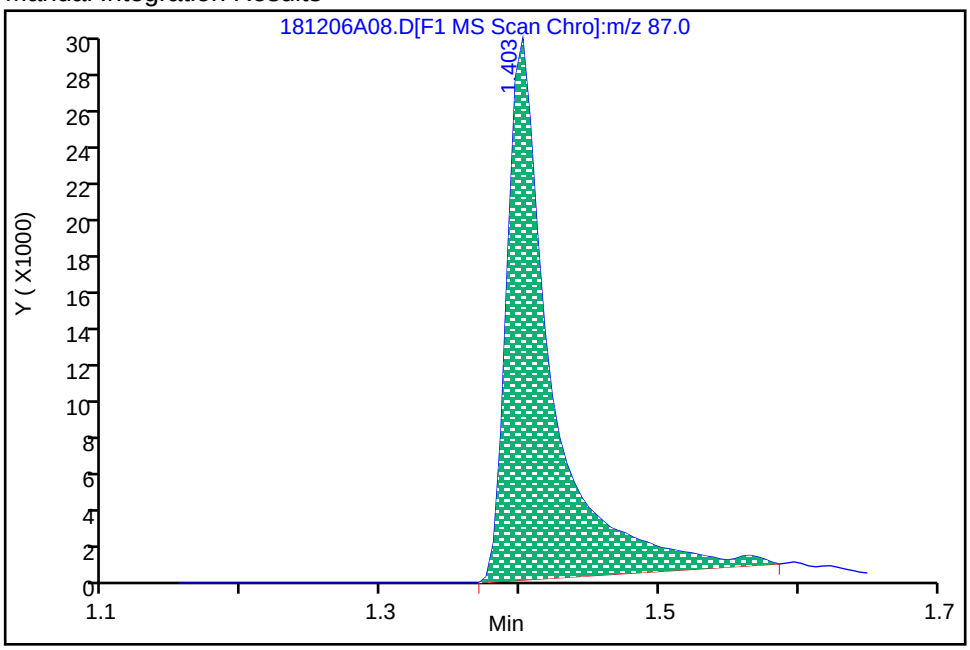
Processing Integration Results

RT: 1.403
Area: 71122
Conc: 527.48
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 1.403
Area: 67337
Conc: 500.08
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 14:06:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Report Date: 06-Dec-2019 14:13:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

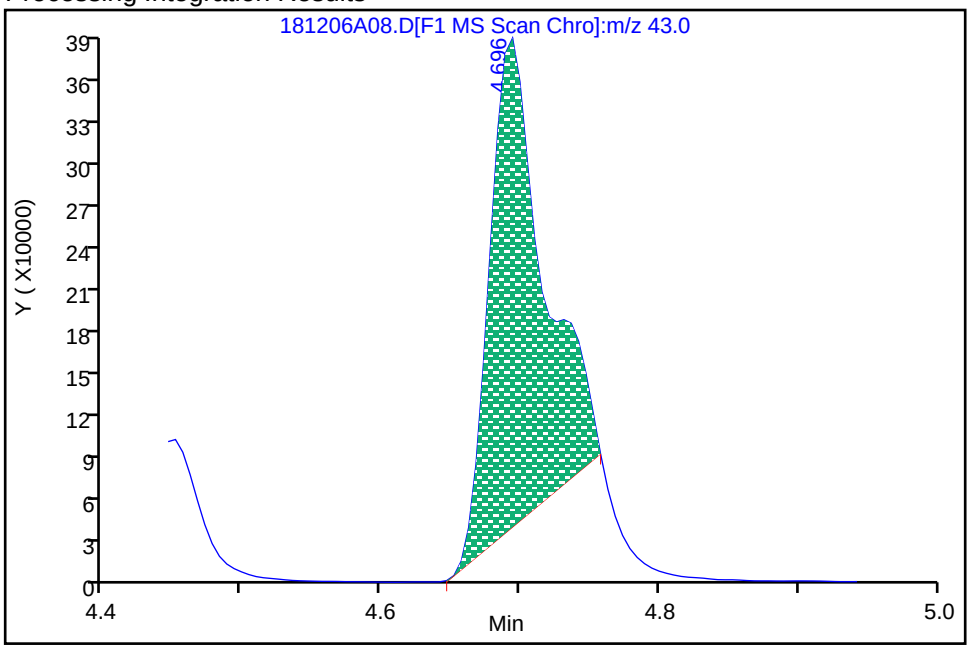
Manual Integration Report

Data File:	\\Organics\DD\chem\msd18.i\18120619.b\181206A08.D		
Injection Date:	06-Dec-2019 12:28:30	Inst. ID:	msd18.i
Client ID:	MPGI-26-Water-RW-12	Lab ID:	UL04032-006
Sample Info:	18120619, UL04032-006,10,MSD		
Purge Vol.	5.00 ml	Dil. Factor:	10.0
Operator:	TML		
Column1:	Rxi-624Sil (0.25 mm)	Detector:	MS Scan

25 Vinyl acetate, CAS: 108-05-4

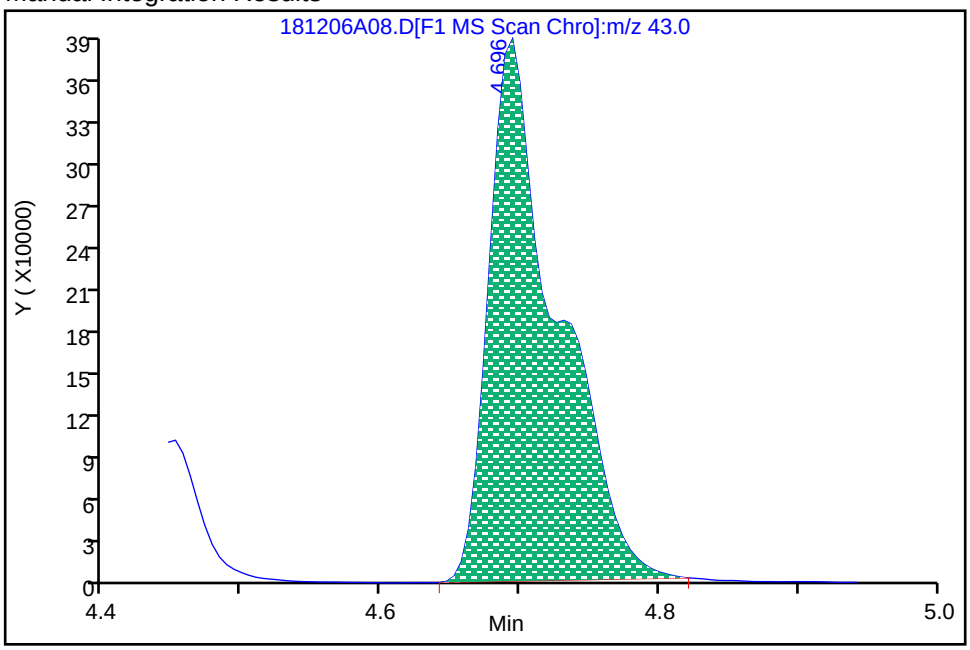
Processing Integration Results

RT: 4.696
Area: 935496
Conc: 554.66
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 4.696
Area: 1303074
Conc: 554.66
Conc Units: ug/L



Data Editor: tml, 06-Dec-2019 14:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

MISC. DATA

Shealy Environmental Services
Run Log Report

IS: 15587
SS: 15547

Batch Path: \\Organics\DD\chem\msd17.i\17120219B.b
Inst. ID: msd17.i Method: 8260B-17
Matrix: Water Operator: TML
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBBQ	02-Dec-2019 23:45:30	171202B01.D	BFB		15547	Water	1	all				Yes					8260B-17
2	VIBLK	03-Dec-2019 00:10:30	171202B02.D	Client		VIBLK	Water	1	std									8260B-17
3	VIBLK	03-Dec-2019 00:34:30	171202B03.D	Client		VIBLK	Water	1	std									8260B-17
4	VIBLK	03-Dec-2019 00:58:30	171202B04.D	Client		VIBLK	Water	1	std									8260B-17
5	VSTD0.5BQ	03-Dec-2019 01:21:30	171202B05.D	Ical	1	1mL/100mL VSTD050	Water	1	std									8260B-17
6	VSTD001BQ	03-Dec-2019 01:44:30	171202B06.D	Ical	2	2mL/100mL VSTD050	Water	1	std									8260B-17
7	VSTD005BQ	03-Dec-2019 02:08:30	171202B07.D	Ical	3	5uL/100mL 15613/10	Water	1	std									8260B-17
8	VSTD020BQ	03-Dec-2019 02:32:30	171202B08.D	Ical	4	20uL/100mL 15613/10	Water	1	std									8260B-17
9	VSTD050BQ	03-Dec-2019 02:56:30	171202B09.D	Ical	5	50uL/100mL 15613/10	Water	1	std									8260B-17
10	VSTD100BQ	03-Dec-2019 03:19:30	171202B10.D	Ical	6	100uL/100mL15613/10	Water	1	std									8260B-17
11	VSTD200BQ	03-Dec-2019 03:43:30	171202B11.D	Ical	7	200uL/100mL15613/10	Water	1	std									8260B-17
12	VIBLK	03-Dec-2019 04:07:30	171202B12.D	Client		VIBLK	Water	1	std									8260B-17
13	VICV050BQ	03-Dec-2019 04:30:30	171202B13.D	ICV		50uL/100mL 15608/11	Water	1	std	8260ICV70-130							passes 8260	8260B-17
13	VICV050BQ	03-Dec-2019 04:30:30	171202B13_dodI	ICV		50uL/100mL 15608/11	Water	1	std_5.0	DoDICV80-120							* passes DOD	8260B-17

ICV passes 8260

ICAL Summary:
Acetonitrile 10-2000 (lvl 1 off)

Weighted Linear
Bromoform (5958)
trans-1,4-dichloro-2-butene (2546)

* ICV passes DOD except:
1,1-Dichloroethene 122%
Allyl Chloride 125%

Shealy Environmental Services
Run Log Report

BATCH: UQ38003 (8260B)
UQ38005 (8260D)
IS: 15614
SS: 15547

Batch Path: \\Organics\DD\chem\msd17.i\17120519.b
Inst. ID: msd17.i Method: 8260B-17
Matrix: Water Operator: TML
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBCV	05-Dec-2019 08:04:30	171205A01.D	BFB	15547	Water	1	all				Yes				ICV NCM 29174	BFB-17
2	VSTD050CV	05-Dec-2019 08:28:30	171205A02.D	Ccv	50uL/100mL 15613/10	Water	1	std									8260B-17
2	VLCS050CV	05-Dec-2019 08:28:30	171205A02_lcs.D	LCS	50uL/100mL 15613/10	Water	1	std	Limswater								8260B-17
3	VLCS050CV	05-Dec-2019 09:04:30	171205A03.D	LCS	50uL/100mL 15608/11	Water	1	std	Limswater								8260B-17
4	VIBLK	05-Dec-2019 09:28:30	171205A04.D	Client	VIBLK	Water	1	std									8260B-17
5	VBLKCV	05-Dec-2019 09:51:30	171205A05.D	BLANK	VBLKCV	Water	1	std									8260B-17
6	UL03013-004	05-Dec-2019 10:32:30	171205A06.D	Client	Trip Blank	Water	1	sample									8260B-17
7	UL04123-001	05-Dec-2019 10:56:30	171205A07.D	Client	Trip Blanks	Water	1	sample									8260B-17
8	UL04032-007	05-Dec-2019 11:20:30	171205A08.D	Client	MPG1-FB-120319	Water	1	sample									8260B-17
9	UL04032-008	05-Dec-2019 11:44:30	171205A09.D	Client	MPG1-TB-120319	Water	1	sample									8260B-17
10	UL04032-001	05-Dec-2019 12:07:30	171205A10.D	Client	MPG1-09-Water-RW-12	Water	1	sample									8260B-17
11	UL04032-002	05-Dec-2019 12:31:30	171205A11.D	Client	MPG1-11-Water-RW-12	Water	1	sample									8260B-17
12	UL04032-003	05-Dec-2019 12:55:30	171205A12.D	Client	MPG1-12-Water-RW-12	Water	1	sample									8260B-17
13	UL04032-004	05-Dec-2019 13:20:30	171205A13.D	Client	MPG1-13-Water-RW-12	Water	1	sample									8260B-17
14	UL04032-005	05-Dec-2019 13:44:30	171205A14.D	Client	MPG1-13-Water-RW-12	Water	1	sample									8260B-17
15	UL04032-006	05-Dec-2019 14:07:30	171205A15.D	Client	MPG1-26-Water-RW-12	Water	1	sample								R-10X Acetone	8260B-17
16	UL03065-005	05-Dec-2019 14:31:30	171205A16.D	Client	DPT-5	Water	1	sample								D NCM 29171	8260B-17
17	UL03065-007	05-Dec-2019 14:55:30	171205A17.D	Client	DPT-7	Water	1	sample									8260B-17
18	UL04133-001	05-Dec-2019 15:18:30	171205A18.D	Client	TW-3	Water	1	sample									8260B-17
19	UL04133-002	05-Dec-2019 15:41:30	171205A19.D	Client	TW-4	Water	1	sample									8260B-17
20	UL04133-003	05-Dec-2019 16:05:30	171205A20.D	Client	TW-5	Water	1	sample									8260B-17
21	UL03013-003	05-Dec-2019 16:29:30	171205A21.D	Client	SW-3	Water	1	sample									8260B-17
22	UL04123-002	05-Dec-2019 16:54:30	171205A22.D	Client	2071 Dallas	Water	1	sample									8260B-17
23	UL04123-003	05-Dec-2019 17:18:30	171205A23.D	Client	2083 Dallas	Water	1	sample									8260B-17
24	UL04054-002	05-Dec-2019 17:41:30	171205A24.D	Client	EFFLUENT	Water	1	sample									8260B-17
25	UL04054-001	05-Dec-2019 18:05:30	171205A25.D	Client	INFLUENT	Water	5	sample									8260B-17
26	UL04054-001	05-Dec-2019 18:29:30	171205A26.D	MS	INFLUENTMS	Water	5	std	Limswater						15608/20/11	21.5ul/43ml	8260B-17
27	UL04054-001	05-Dec-2019 18:53:30	171205A27.D	MSD	INFLUENTMSD	Water	5	std	Limswater						15608/20/11	21.5ul/43ml	8260B-17

Report Date: 06-Nov-2019 11:39:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Batch: UQ35104
IS: 15525
SS: 15547

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\dd\chem\msd18.i\18110419.b
Inst. ID: msd18.i Method: 8260B-18
Matrix: Water Operator: ECB
Srch Tics: Yes Quant Tics: Yes Maximum Tics: 20

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBIK	04-Nov-2019 13:33:30	181104A01.D	BFB		15567	Water	1	all				Yes					BFB-18
2	VSTD050IK	04-Nov-2019 13:59:30	181104A02.D	Client		50ul/100ml 15576/74	Water	1	std								NR	8260B-18
3	VIBLK	04-Nov-2019 14:24:30	181104A03.D	Client			Water	1	std									8260B-18
4	VIBLK	04-Nov-2019 14:50:30	181104A04.D	Client			Water	1	std									8260B-18
5	VIBLK	04-Nov-2019 15:15:30	181104A05.D	Client			Water	1	std									8260B-18
6	VSTD0.5IK	04-Nov-2019 15:40:30	181104A06.D	Ical	1	1ml/100ml VSTD050IK	Water	1	std									8260B-18
7	VSTD001IK	04-Nov-2019 16:05:30	181104A07.D	Ical	2	2ml/100ml VSTD050IK	Water	1	std									8260B-18
8	VSTD005IK	04-Nov-2019 16:30:30	181104A08.D	Ical	3	5ul/100ml 15576/74	Water	1	std									8260B-18
9	VSTD020IK	04-Nov-2019 16:55:30	181104A09.D	Ical	4	20ul/100ml 15576/74	Water	1	std									8260B-18
10	VSTD050IK	04-Nov-2019 17:20:30	181104A10.D	Ical	5	50ul/100ml 15576/74	Water	1	std									8260B-18
11	VSTD100IK	04-Nov-2019 17:45:30	181104A11.D	Ical	6	50ul/50ml 15576/74	Water	1	std									8260B-18
12	VSTD200IK	04-Nov-2019 18:09:30	181104A12.D	Ical	7	100ul/50ml 15576/74	Water	1	std									8260B-18
13	VIBLK	04-Nov-2019 18:34:30	181104A13.D	Client			Water	1	std									8260B-18
14	VICV050IK	04-Nov-2019 18:59:30	181104A14.D	LCS		50ul/100ml 15578/73	Water	1	std	8260ICV70-130								8260B-18
14	VICV050IK	04-Nov-2019 18:59:30	181104A14_dod.I	LCS		50ul/100ml 15578/73	Water	1	std_5.0	DoDICV80-120								8260B-18
15	VIBLK	04-Nov-2019 19:23:30	181104A15.D	Client			Water	1	std									8260B-18
16	UK07048-001	04-Nov-2019 19:48:30	181104A16.D	Client		MDLb XLL MSD18 Day	Water	1	std									8260B-18
17	UK07047-001	04-Nov-2019 20:12:30	181104A17.D	Client		MDLv XLL MSD18 Day	Water	1	sample							1ml/100ml	VSTD050IK	8260B-18
18	UK07047-001	04-Nov-2019 20:37:30	181104A18.D	Client		MDLv XLL MSD18 Day	Water	1	std							2ml/100ml	VSTD050IK	8260B-18
19	UK06015-001	04-Nov-2019 21:02:30	181104A19.D	Client		MDLb XLL MSD18 Day	Water	1	std								NR	8260B-18

ICAL SUMMARY:

Ethyl Acetate 0.5-100

Wt Linear:
TCFM 2636
Allyl Chloride 3473
Methylene Chloride 8692
Ethyl Acetate 36974
HCBD 5629

ICV passes 8260
DOD ICV 181111A03_DODICV
ALL PASS

Shealy Environmental Services
Run Log Report

Batch: UQ38152 (8260B)

Batch Path: \\Organics\DD\chem\msd18.i\18120619.b
Inst. ID: msd18.i
Method: 8260B-18
Matrix: Water
Operator: TML
Srch Tics: Yes
Quant Tics: Yes
Maximum Tics: 20

IS: 15525
SS: 15588

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Rpt Tics	Tics Det.	MS Tune	Inst QC	pH	Std Lot#	Comments	Method
1	BFBDM	06-Dec-2019 08:16:30	181206A01.D	BFB	15588	Water	1	all				Yes					BFB-18
2	VSTD050DM	06-Dec-2019 08:42:30	181206A02.D	Ccv	50uL/100mL 15613/10	Water	1	std									8260B-18
3	VLCS050DM	06-Dec-2019 09:06:30	181206A03.D	LCS	50uL/100mL 15608/11	Water	1	std	Limswater								8260B-18
4	VIBLK	06-Dec-2019 09:31:30	181206A04.D	Client		Water	1	std									8260B-18
5	VBLKDM	06-Dec-2019 09:55:30	181206A05.D	BLANK	VBLKDM	Water	1	std									8260B-18
6	UL04032-006	06-Dec-2019 11:38:30	181206A06.D	Client	MPGI-26-Water-RW-12	Water	10	sample									8260B-18
7	UL04032-006	06-Dec-2019 12:03:30	181206A07.D	MS	MPGI-26-Water-RW-12	Water	10	std	Limswater						15608/20/11	21.5uL/43mL	8260B-18
8	UL04032-006	06-Dec-2019 12:28:30	181206A08.D	MSD	MPGI-26-Water-RW-12	Water	10	std	Limswater						15608/20/11	21.5uL/43mL	8260B-18

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL05034**

Date Completed:12/10/2019

N. Saikaly

12/10/2019 3:47 PM
Approved and released by:
Project Manager: Nisreen Saikaly

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL05034

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample UL05034-010 (MPGI-RB-120419) Collected: 12/04/2019 at 1315 was received in a broken container. Results are not reported for this sample.

DRO

The matrix spike and matrix spike duplicate (MS/MSD) recoveries in batch 38050 were outside acceptance criteria. All other QC criteria for the batch was within acceptance criteria and method control limits. The MS/MSD recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL05034

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-North-Soil-01-120419	Solid	12/04/2019 0826	12/05/2019
002	MPGI-North-Soil-02-120419	Solid	12/04/2019 0835	12/05/2019
003	MPGI-North-Soil-03-120419	Solid	12/04/2019 0900	12/05/2019
004	MPGI-North-Soil-04-120419	Solid	12/04/2019 0927	12/05/2019
005	MPGI-North-Soil-04-120419-D	Solid	12/04/2019 0929	12/05/2019
006	MPGI-East-Soil-06-120419	Solid	12/04/2019 1037	12/05/2019
007	MPGI-East-Soil-07-120419	Solid	12/04/2019 1105	12/05/2019
008	MPGI-East-Soil-08-120419	Solid	12/04/2019 1125	12/05/2019
009	MPGI-East-Soil-09-120419	Solid	12/04/2019 1257	12/05/2019
010	MPGI-RB-120419	Aqueous	12/04/2019 1315	12/05/2019

(10 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL05034

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MPGI-North-Soil-01-120419	Solid	TPH-DRO	8015C	12000		ug/kg	5
002	MPGI-North-Soil-02-120419	Solid	TPH-DRO	8015C	33000		ug/kg	6
004	MPGI-North-Soil-04-120419	Solid	TPH-DRO	8015C	15000		ug/kg	8
005	MPGI-North-Soil-04-120419-D	Solid	TPH-DRO	8015C	16000		ug/kg	9
006	MPGI-East-Soil-06-120419	Solid	TPH-DRO	8015C	69000		ug/kg	10
007	MPGI-East-Soil-07-120419	Solid	TPH-DRO	8015C	220000		ug/kg	11
008	MPGI-East-Soil-08-120419	Solid	TPH-DRO	8015C	69000		ug/kg	12
009	MPGI-East-Soil-09-120419	Solid	TPH-DRO	8015C	99000		ug/kg	13

(8 detections)

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-001
Description: MPGI-North-Soil-01-120419
Matrix: Solid
Date Sampled: 12/04/2019 0826
% Solids: 75.6 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/10/2019 1324	CHG	12/10/2019 0935	38432

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	12000		8900	4200	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-002
Description: MPGI-North-Soil-02-120419
Matrix: Solid
Date Sampled: 12/04/2019 0835
% Solids: 79.9 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1219	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	33000		8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		59	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-003
Description: MPGI-North-Soil-03-120419
Matrix: Solid
Date Sampled: 12/04/2019 0900
% Solids: 78.8 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/10/2019 1344	CHG	12/10/2019 0935	38432

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		96	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-004
Description: MPGI-North-Soil-04-120419
Matrix: Solid
Date Sampled: 12/04/2019 0927
% Solids: 79.9 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1258	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	15000		8300	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		63	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-005
Description: MPGI-North-Soil-04-120419-D
Matrix: Solid
Date Sampled: 12/04/2019 0929
% Solids: 79.3 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1317	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	16000		8300	4000	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		77	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-006
Description: MPGI-East-Soil-06-120419
Matrix: Solid
Date Sampled: 12/04/2019 1037
% Solids: 77.3 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1336	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	69000		8600	4100	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		72	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-007
Description: MPGI-East-Soil-07-120419
Matrix: Solid
Date Sampled: 12/04/2019 1105
% Solids: 84.3 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1434	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	220000		7900	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		86	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-008
Description: MPGI-East-Soil-08-120419
Matrix: Solid
Date Sampled: 12/04/2019 1125
% Solids: 90.4 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1453	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	69000		7400	3500	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-009
Description: MPGI-East-Soil-09-120419
Matrix: Solid
Date Sampled: 12/04/2019 1257
% Solids: 94.9 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1512	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	99000		7000	3300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		96	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Summary

TPH - DRO - MB

Sample ID: UQ38050-001
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/09/2019 1024

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		97	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - LCS

Sample ID: UQ38050-002
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	61000		1	74	70-130	12/09/2019 1043

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MS

Sample ID: UL05034-006MS
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	69000	110000	110000	N	1	34	70-130	12/09/2019 1355

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		77	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MSD

Sample ID: UL05034-006MD
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	69000	110000	150000	+	1	77	36	70-130	20	12/09/2019 1415

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		78	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MB

Sample ID: UQ38432-001
Batch: 38432
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/10/2019 0935

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/10/2019 1246

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - LCS

Sample ID: UQ38432-002
Batch: 38432
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/10/2019 0935

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	67000		1	81	70-130	12/10/2019 1305

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		97	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

SHEALY ENVIRONMENTAL SERVICES, INC.

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number UL05034

Client: Tetra Tech	Report to Contact: Andre Baker and Brendan Martin	Telephone No. / E-mail: andre.baker@tetratech.com, brendan.martin@tetratech.com	Quote No.
Address: 1 S. Wacker Drive, Suite 3700	Sampler's Signature: x Brendan Martin	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Chicago / State: IL / Zip Code: 60606	Printed Name: Brendan Martin		
Project Name: Joliet Chemical Fire PRP Cleanup Site			
Project Number: 103X90310090002AJ001	P.O No.: SHLY-1		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	C=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	TPH-DRO/SW-846 8015C	TAL Metals (with mercury)/SW 846 6010D/7470A/7471B	Remarks / Cooler I.D.
MP6I-North-Soil-01-120419	120419	0826			X		1								X		
MP6I-North-Soil-02-120419	120419	0835			X		1								X		
MP6I-North-Soil-03-120419	120419	0900			X		1								X		
MP6I-North-Soil-04-120419	120419	0927			X		1								X		
MP6I-North-Soil-04-120419-D	120419	0929			X		1								X		
MP6I-East-Soil-06-120419	120419	1037			X		2								X		Extra volume for MS/MSD
MP6I-East-Soil-07-120419	120419	1105			X		1								X		
MP6I-East-Soil-08-120419	120419	1125			X		1								X		
MP6I-East-Soil-09-120419	120419	1257			X		1								X		
MP6I-AB-120419	~~1315~~ 120419 BM	~~1315~~ 1315 BM		X			1								X		Rinsate Blank

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks): ☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements:

	Date	Time		Date	Time
1. Relinquished by: Brendan Martin	120419	1400	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: FedEx	120519	1040	4. Laboratory Received by	12/05/19	1040

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY — Received on Ice (Check): ☑ Y ☐ N ☐ Ice Pack — Receipt Temp: 4.4 °C

Document Number: ME002QW-01

Shealy Environmental Services, Inc.
Document Number: ME0018C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: TETRA TECH Cooler Inspected by/date: JSH / 12/05/19 Lot #: UL05034

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 19-2044

4.4 / 4.4 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☐ Yes	☑ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote # NA

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: BMG Date: 12/05/19

Comments: UL05034-010(MPG1-RB) received with a broken lid.

TPH-GRO

QC SUMMARY

FORM 2
ISOTOPE DILUTION STANDARD RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL05034

Project No.: 103X9031006

AnalyticalMethod: 8015C Matrix: Soil

CLIENT SAMPLE ID	IDS1								TOT OUT
MPGI-North-Soil-01-	95								0
MPGI-North-Soil-02-	59								0
MPGI-North-Soil-03-	96								0
MPGI-North-Soil-04-	63								0
MPGI-North-Soil-04-	77								0
MPGI-East-Soil-06-1	72								0
MPGI-East-Soil-07-1	86								0
MPGI-East-Soil-08-1	95								0
MPGI-East-Soil-09-1	96								0
DBLK32	95								0
DLCS32	97								0
DBLK50	97								0
DLCS50	95								0
MPGI-East-Soil-06-1MS	77								0
MPGI-East-Soil-06-1MSD	78								0

QC LIMITS

IDS1 = o - Terphenyl 55-120

* Recoveries outside QC limits
D IDS Diluted Out

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL05034

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Soil

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPGI-East-Soil-06-1

Instrument ID: Agilent_6890_GC12 Lab Sample ID: UL05034-006MS

Concentration Units (ug/L, mg/L, ug/kg): ug/kg

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC	#	QC LIMITS REC.
TPH-DRO	110000	69000	110000	34	*	70-130

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R	#	RPD	#	QC LIMITS RPD	QC LIMITS %R
TPH-DRO	110000	150000	77		36	*	0-20	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL05034

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Soil

Client Sample ID: DLCS32 Lab Sample ID: UQ38432-002

Instrument ID: Agilent_6890_GC12

Concentration Units (ug/L, mg/L, ug/kg): ug/kg

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
TPH-DRO	83000	67000	81	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL05034

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Soil

Client Sample ID: DLCS50 Lab Sample ID: UQ38050-002

Instrument ID: Agilent_6890_GC12

Concentration Units (ug/L, mg/L, ug/kg): ug/kg

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
TPH-DRO	83000	61000	74	70-130

* Values outside of QC Limits

CLIENT SAMPLE ID

DBLK32

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc.
Lot No.: UL05034

Project No.: 103X9031006
Lab Sample ID: UQ38432-001

Analytical Method: 8015C
Matrix: Soil

Instrument ID: Agilent_6890_GC12
Lab File ID: UQ38432-001.txt

Extraction Type: 3550C
Date Extracted: 12/10/2019

LC Column: DB-35MS ID: 0.32 (mm)
Date Analyzed: 12/10/2019

Time Analyzed: 12:46

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPGI-North-Soil-01-	UL05034-001	UL05034-001.txt	13:24
MPGI-North-Soil-03-	UL05034-003	UL05034-003.txt	13:44
DLCS32	UQ38432-002	UQ38432-002.txt	13:05

CLIENT SAMPLE ID

DBLK50

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc.
Lot No.: UL05034

Project No.: 103X9031006
Lab Sample ID: UQ38050-001

Analytical Method: 8015C
Matrix: Soil

Instrument ID: Agilent_6890_GC12
Lab File ID: UQ38050-001.txt

Extraction Type: 3550C
Date Extracted: 12/05/2019

LC Column: DB-35MS ID: 0.32 (mm)
Date Analyzed: 12/09/2019

Time Analyzed: 10:24

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPGI-North-Soil-02-	UL05034-002	UL05034-002.txt	12:19
MPGI-North-Soil-04-	UL05034-004	UL05034-004.txt	12:58
MPGI-North-Soil-04-	UL05034-005	UL05034-005.txt	13:17
MPGI-East-Soil-06-1	UL05034-006	UL05034-006.txt	13:36
MPGI-East-Soil-07-1	UL05034-007	UL05034-007.txt	14:34
MPGI-East-Soil-08-1	UL05034-008	UL05034-008.txt	14:53
MPGI-East-Soil-09-1	UL05034-009	UL05034-009.txt	15:12
DLCS50	UQ38050-002	UQ38050-002.txt	10:43
MPGI-East-Soil-06-1MS	UL05034-006MS	UL05034-006MS.txt	13:55
MPGI-East-Soil-06-1MSD	UL05034-006MD	UL05034-006MD.txt	14:15

Report Date: 20-Nov-2019 15:05:31 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\112019F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK	001F0101.d	20-Nov-2019 09:23:30	6.900
Client	IBLK	001F0201.d	20-Nov-2019 09:42:30	6.887
Client	SVGC-1832	002F0301.d	20-Nov-2019 10:01:30	6.895
Ical	SVGC-1659	003F0401.d	20-Nov-2019 10:20:30	6.893
Ical	SVGC-1660	004F0501.d	20-Nov-2019 10:40:30	6.892
Ical	SVGC-1661	005F0601.d	20-Nov-2019 10:59:30	6.895
Ical	SVGC-1662	006F0701.d	20-Nov-2019 11:18:30	6.897
Ical	SVGC-1663	007F0801.d	20-Nov-2019 11:37:30	6.902
Client	SVGC-1832	002F0901.d	20-Nov-2019 11:56:30	6.894
LCS	SVGC-1711	008F1001.d	20-Nov-2019 12:15:30	6.895
Client	SVGC-1832	002F1101.d	20-Nov-2019 12:34:30	6.895

Report Date: 10-Dec-2019 10:09:12 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\120919F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK	001F0101.d	09-Dec-2019 09:08:30	6.892
Client	IBLK	001F0201.d	09-Dec-2019 09:27:30	6.893
Client	SVGC-1832	002F0301.d	09-Dec-2019 09:46:30	6.894
Ccv	SVGC-1661	003F0401.d	09-Dec-2019 10:05:30	6.894
BLANK	UQ38050-001	004F0501.d	09-Dec-2019 10:24:30	6.893
LCS	UQ38050-002	005F0601.d	09-Dec-2019 10:43:30	6.894
Client	UL02035-001	006F0701.d	09-Dec-2019 11:03:30	6.893
Client	UL02035-002	007F0801.d	09-Dec-2019 11:22:30	6.893
Ccv	SVGC-1661	003F0901.d	09-Dec-2019 11:41:30	6.894
Client	UL05034-001	008F1001.d	09-Dec-2019 12:00:30	6.893
Client	UL05034-002	009F1101.d	09-Dec-2019 12:19:30	6.893
Client	UL05034-003	010F1201.d	09-Dec-2019 12:38:30	6.892
Client	UL05034-004	011F1301.d	09-Dec-2019 12:58:30	6.893
Client	UL05034-005	012F1401.d	09-Dec-2019 13:17:30	6.894
Client	UL05034-006	013F1501.d	09-Dec-2019 13:36:30	6.894
MS	UL05034-006MS	014F1601.d	09-Dec-2019 13:55:30	6.894
MSD	UL05034-006MD	015F1701.d	09-Dec-2019 14:15:30	6.895
Client	UL05034-007	016F1801.d	09-Dec-2019 14:34:30	6.895
Client	UL05034-008	017F1901.d	09-Dec-2019 14:53:30	6.895
Client	UL05034-009	018F2001.d	09-Dec-2019 15:12:30	6.895
Client	UL05034-001	019F2101.d	09-Dec-2019 15:32:30	6.894
Client	UL05034-003	020F2201.d	09-Dec-2019 15:51:30	6.894
Client	SVGC-1832	002F2301.d	09-Dec-2019 16:10:30	6.895
Ccv	SVGC-1852	003F2401.d	09-Dec-2019 16:30:30	6.895
BLANK	UQ37982-001	021F2501.d	09-Dec-2019 16:49:30	6.895
LCS	UQ37982-002	022F2601.d	09-Dec-2019 17:08:30	6.895
Client	UL04116-002	023F2701.d	09-Dec-2019 17:27:30	6.895
MS	UL04116-002MS	024F2801.d	09-Dec-2019 17:46:30	6.894
MSD	UL04116-002MD	025F2901.d	09-Dec-2019 18:06:30	6.895
Client	UL04116-003	026F3001.d	09-Dec-2019 18:25:30	6.895
Client	UL04116-004	027F3101.d	09-Dec-2019 18:44:30	6.895
Client	UL04116-005	028F3201.d	09-Dec-2019 19:03:30	6.895
Client	UL04116-006	029F3301.d	09-Dec-2019 19:23:30	6.895
Client	UL04116-007	030F3401.d	09-Dec-2019 19:42:30	6.894
Client	UL04116-008	031F3501.d	09-Dec-2019 20:01:30	6.895
Client	UL04116-009	032F3601.d	09-Dec-2019 20:20:30	6.894
Client	UL04116-010	033F3701.d	09-Dec-2019 20:40:30	6.896
Client	UL04116-011	034F3801.d	09-Dec-2019 20:59:30	6.895
Client	UL04116-012	035F3901.d	09-Dec-2019 21:18:30	6.894
Client	UL04116-013	036F4001.d	09-Dec-2019 21:37:30	6.895

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	UL04116-014	037F4101.d	09-Dec-2019 21:56:30	6.895
Client	UL04116-015	038F4201.d	09-Dec-2019 22:16:30	6.895
Client	UL04130-002	039F4301.d	09-Dec-2019 22:35:30	6.895
Ccv	SVGC-1852	003F4401.d	09-Dec-2019 22:54:30	6.895
BLANK	UQ38055-001	040F4501.d	09-Dec-2019 23:13:30	6.894
Client	UK05007-048	041F4601.d	09-Dec-2019 23:32:30	6.893
Ccv	SVGC-1852	003F4701.d	09-Dec-2019 23:51:30	6.895

Report Date: 11-Dec-2019 10:05:02 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\121019F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK	001F0101.d	10-Dec-2019 11:29:30	6.897
Client	IBLK	001F0201.d	10-Dec-2019 11:48:30	6.889
Client	SVGC-1832	002F0301.d	10-Dec-2019 12:07:30	6.895
Ccv	SVGC-1661	003F0401.d	10-Dec-2019 12:27:30	6.895
BLANK	UQ38432-001	004F0501.d	10-Dec-2019 12:46:30	6.896
LCS	UQ38432-002	005F0601.d	10-Dec-2019 13:05:30	6.895
Client	UL05034-001	006F0701.d	10-Dec-2019 13:24:30	6.895
Client	UL05034-003	007F0801.d	10-Dec-2019 13:44:30	6.895
Ccv	SVGC-1661	003F0901.d	10-Dec-2019 14:03:30	6.896
Client	UL06039-047	008F1001.d	10-Dec-2019 14:22:30	6.895
Client	UL07014-001	009F1101.d	10-Dec-2019 14:41:30	6.895
Client	UL07014-002	010F1201.d	10-Dec-2019 15:01:30	6.896
Client	UL07014-003	011F1301.d	10-Dec-2019 15:20:30	6.895
Client	UL07014-004	012F1401.d	10-Dec-2019 15:39:30	6.896
MS	UL07014-004MS	013F1501.d	10-Dec-2019 15:59:30	6.895
MSD	UL07014-004MD	014F1601.d	10-Dec-2019 16:18:30	6.895
Ccv	SVGC-1852	003F1701.d	10-Dec-2019 16:37:30	6.896

RAW SAMPLE DATA

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-001
Description: MPGI-North-Soil-01-120419
Matrix: Solid
Date Sampled: 12/04/2019 0826
% Solids: 75.6 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/10/2019 1324	CHG	12/10/2019 0935	38432

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	12000		8900	4200	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\006F0701.D		
Lab Sample ID:	UL05034-001	Client Sample ID:	MPGI-North-Soil-01-
Injection Date:	10-Dec-2019 13:24:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-001		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	6
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	7321891	56.014	9335.71	M
$	1 OTP	6.895	6.895	0.000	7187084	47.665	7944.19	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

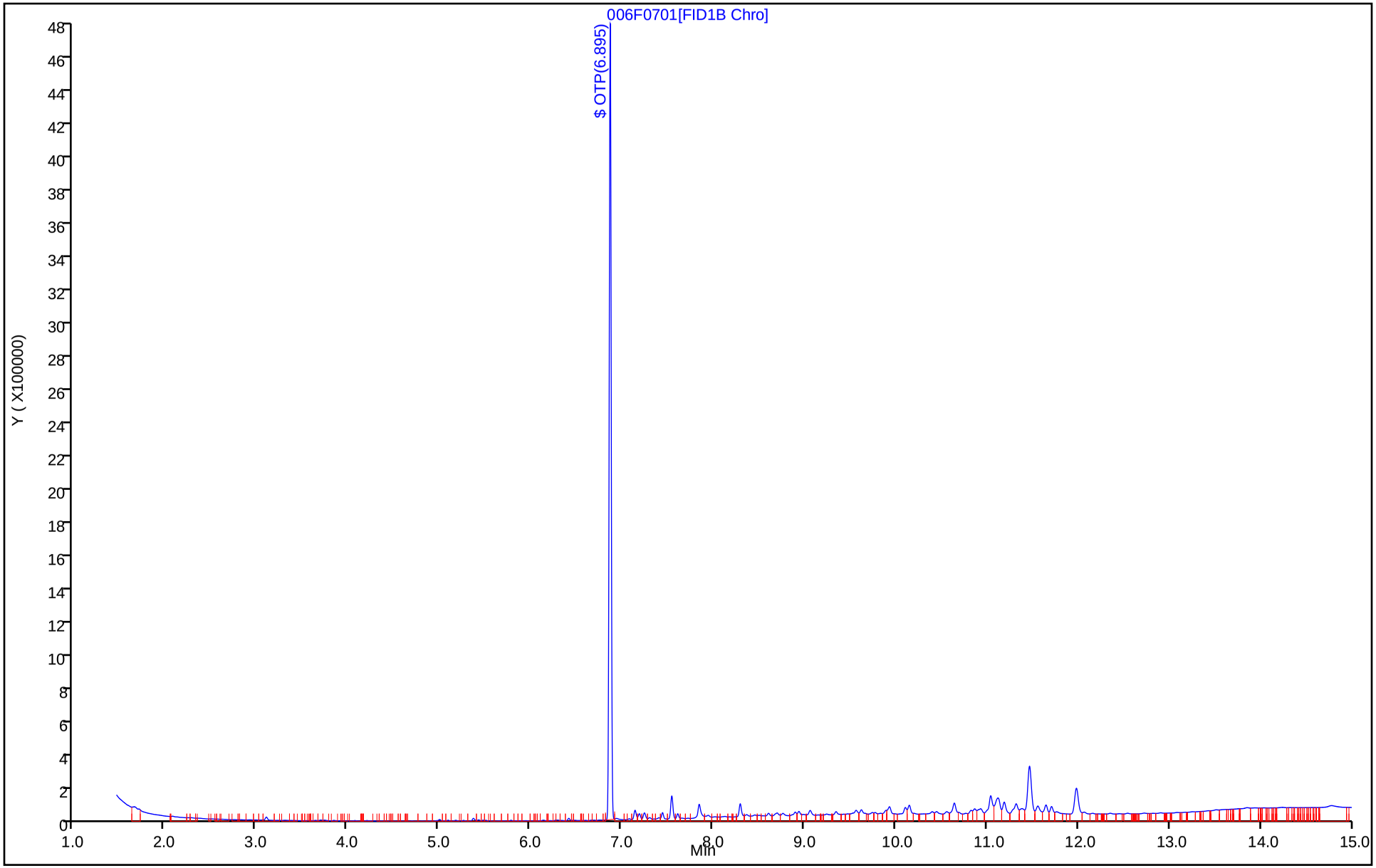
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\006F0701.D				
Injection Date:	10-Dec-2019 13:24:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-North-Soil-01-	Lab ID:	UL05034-001		
Sample Info:	UL05034-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

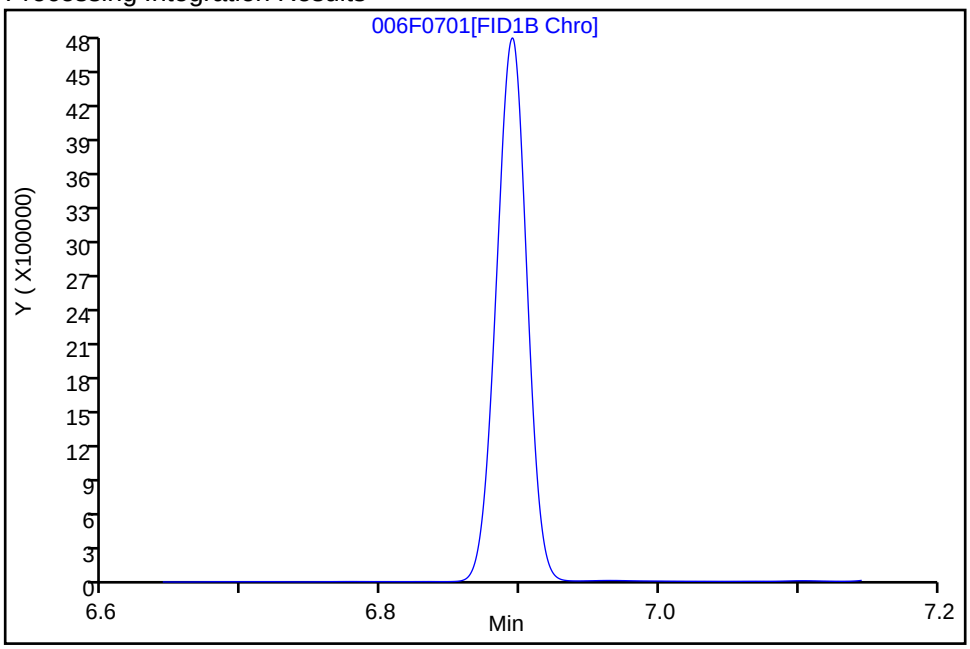
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\006F0701.D		
Injection Date:	10-Dec-2019 13:24:30	Inst. ID:	gc12.i
Client ID:	MPGI-North-Soil-01-	Lab ID:	UL05034-001
Sample Info:	UL05034-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

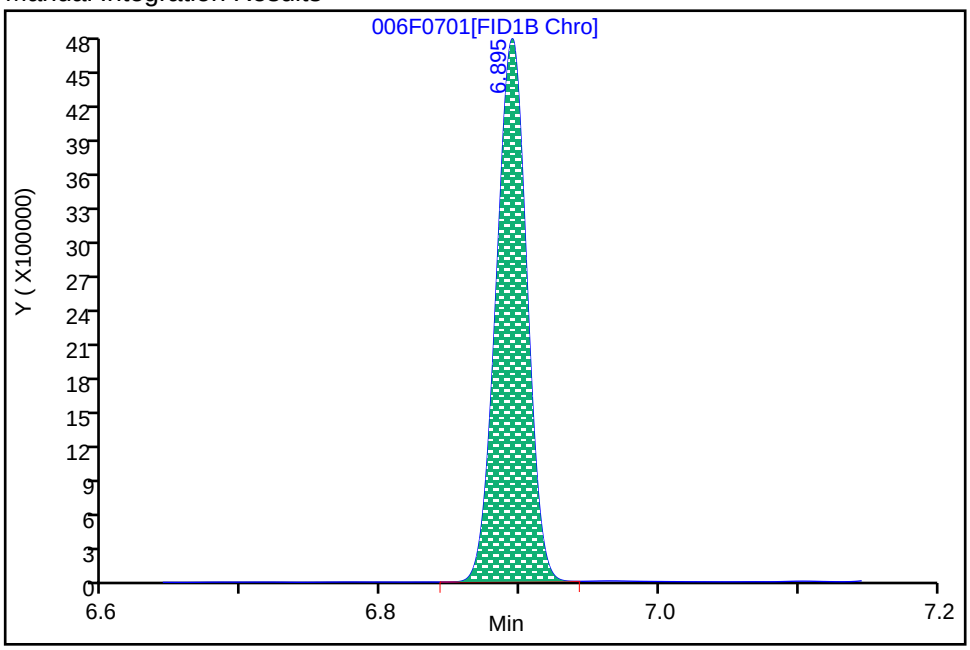
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 7187084
Conc: 7944.19
Conc Units: ug/Kg



Data Editor: chg, 11-Dec-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-002
Description: MPGI-North-Soil-02-120419
Matrix: Solid
Date Sampled: 12/04/2019 0835
% Solids: 79.9 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1219	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	33000		8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		59	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\009F1101.D		
Lab Sample ID:	UL05034-002	Client Sample ID:	MPGI-North-Soil-02-
Injection Date:	09-Dec-2019 12:19:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-002		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	9
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.740	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 13:36:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	21468690	164.24	26715	M
$	1 OTP	6.893	6.895	-0.001	4413353	29.270	4760.83	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

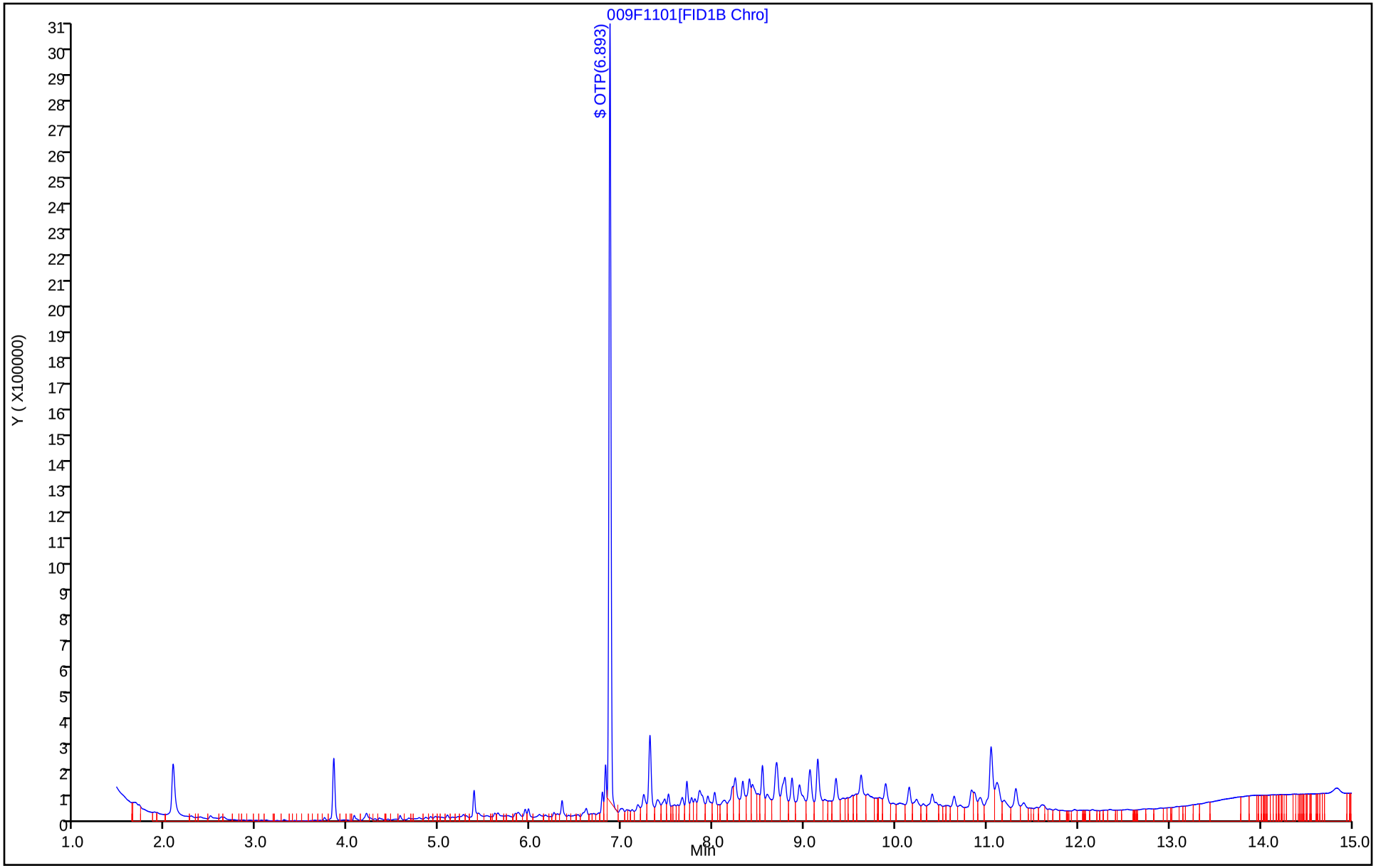
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:27 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\009F1101.D				
Injection Date:	09-Dec-2019 12:19:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-North-Soil-02-	Lab ID:	UL05034-002		
Sample Info:	UL05034-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:28 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

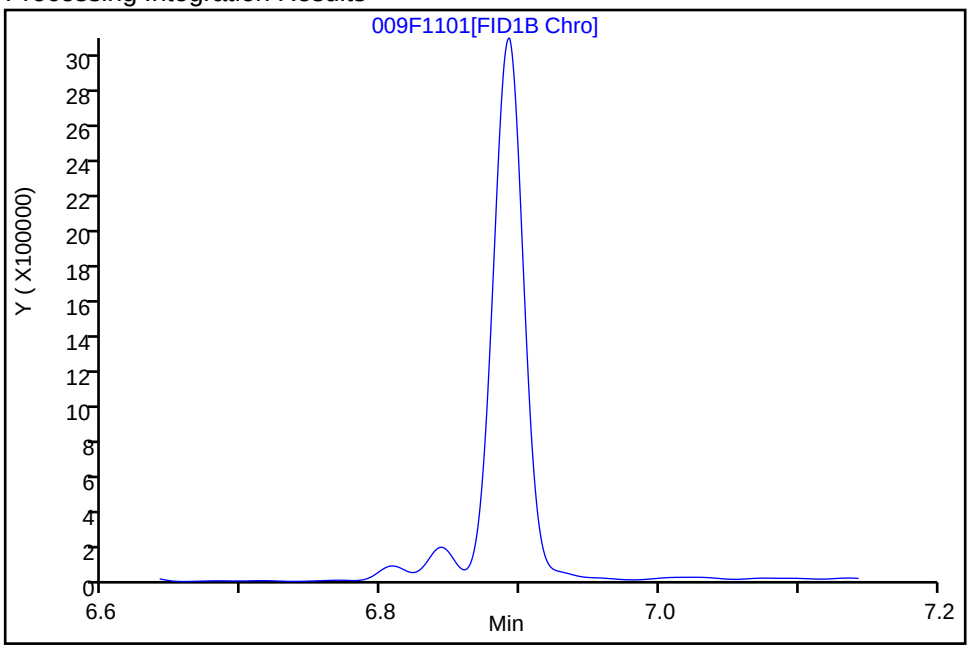
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\009F1101.D		
Injection Date:	09-Dec-2019 12:19:30	Inst. ID:	gc12.i
Client ID:	MPGI-North-Soil-02-	Lab ID:	UL05034-002
Sample Info:	UL05034-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

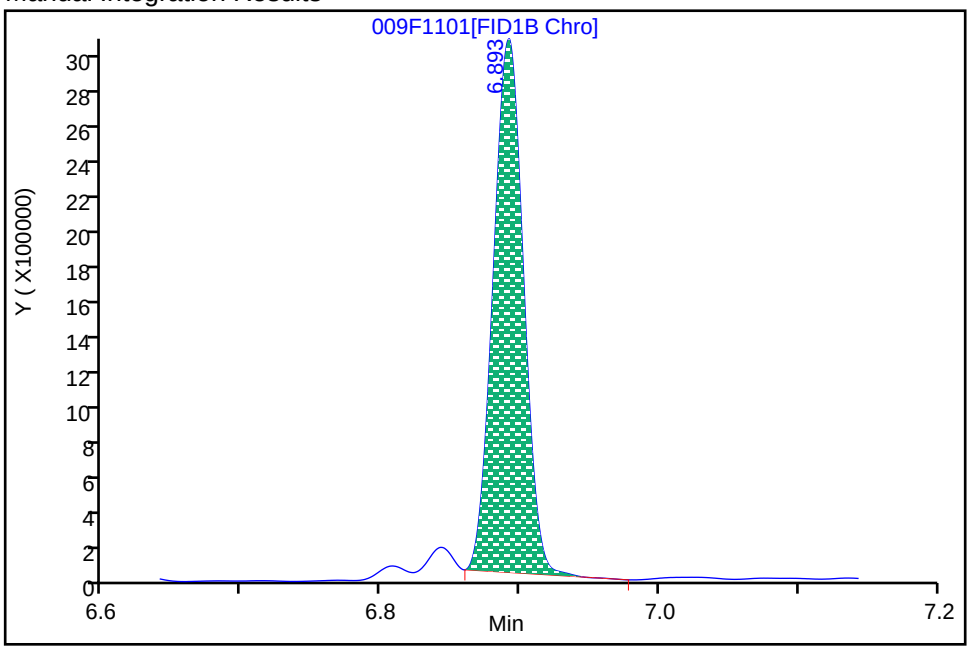
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.893
Area: 4413353
Conc: 4760.83
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 13:36:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-003
Description: MPGI-North-Soil-03-120419
Matrix: Solid
Date Sampled: 12/04/2019 0900
% Solids: 78.8 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/10/2019 1344	CHG	12/10/2019 0935	38432

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		96	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\007F0801.D		
Lab Sample ID:	UL05034-003	Client Sample ID:	MPGI-North-Soil-03-
Injection Date:	10-Dec-2019 13:44:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-003		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	7
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.300	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:02:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1981537	15.159	2501.53	eM
$	1 OTP	6.895	6.895	0.000	7271313	48.224	7957.71	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

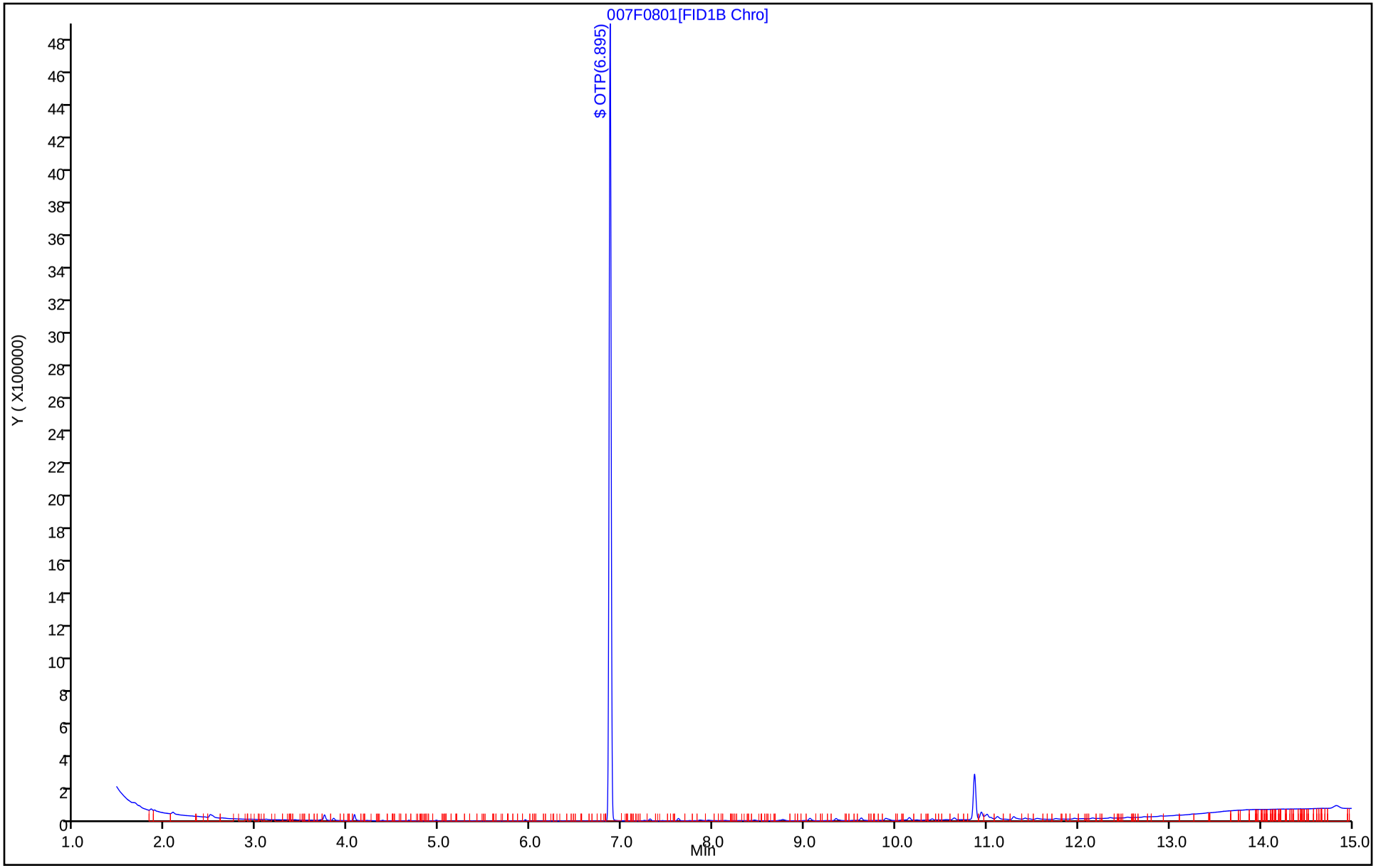
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\007F0801.D				
Injection Date:	10-Dec-2019 13:44:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-North-Soil-03-	Lab ID:	UL05034-003		
Sample Info:	UL05034-003				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

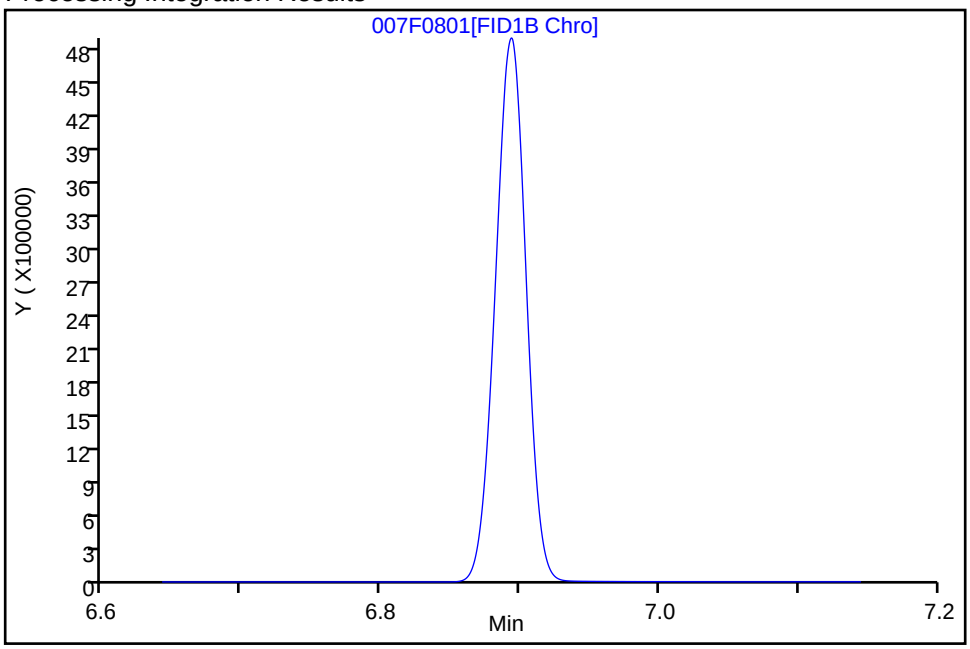
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\007F0801.D		
Injection Date:	10-Dec-2019 13:44:30	Inst. ID:	gc12.i
Client ID:	MPGI-North-Soil-03-	Lab ID:	UL05034-003
Sample Info:	UL05034-003		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

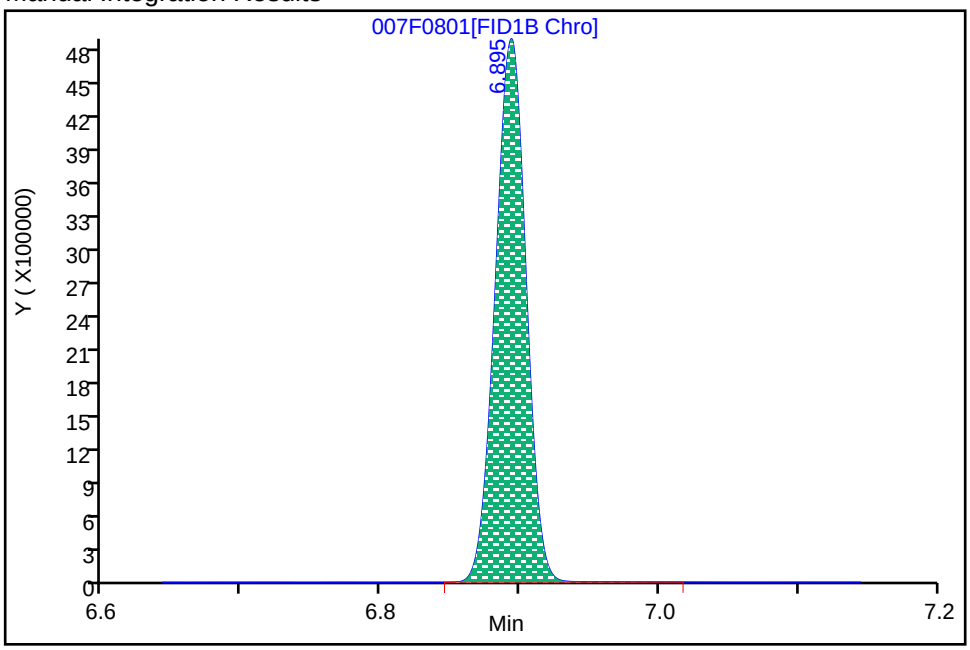
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 7271313
Conc: 7957.71
Conc Units: ug/Kg



Data Editor: chg, 11-Dec-2019 10:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-004
Description: MPGI-North-Soil-04-120419
Matrix: Solid
Date Sampled: 12/04/2019 0927
% Solids: 79.9 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1258	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	15000		8300	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		63	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\011F1301.D		
Lab Sample ID:	UL05034-004	Client Sample ID:	MPGI-North-Soil-04-
Injection Date:	09-Dec-2019 12:58:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-004		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	11
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.430	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 13:36:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	9383050	71.783	11795	M
$	1 OTP	6.893	6.895	-0.001	4780317	31.703	5209.22	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

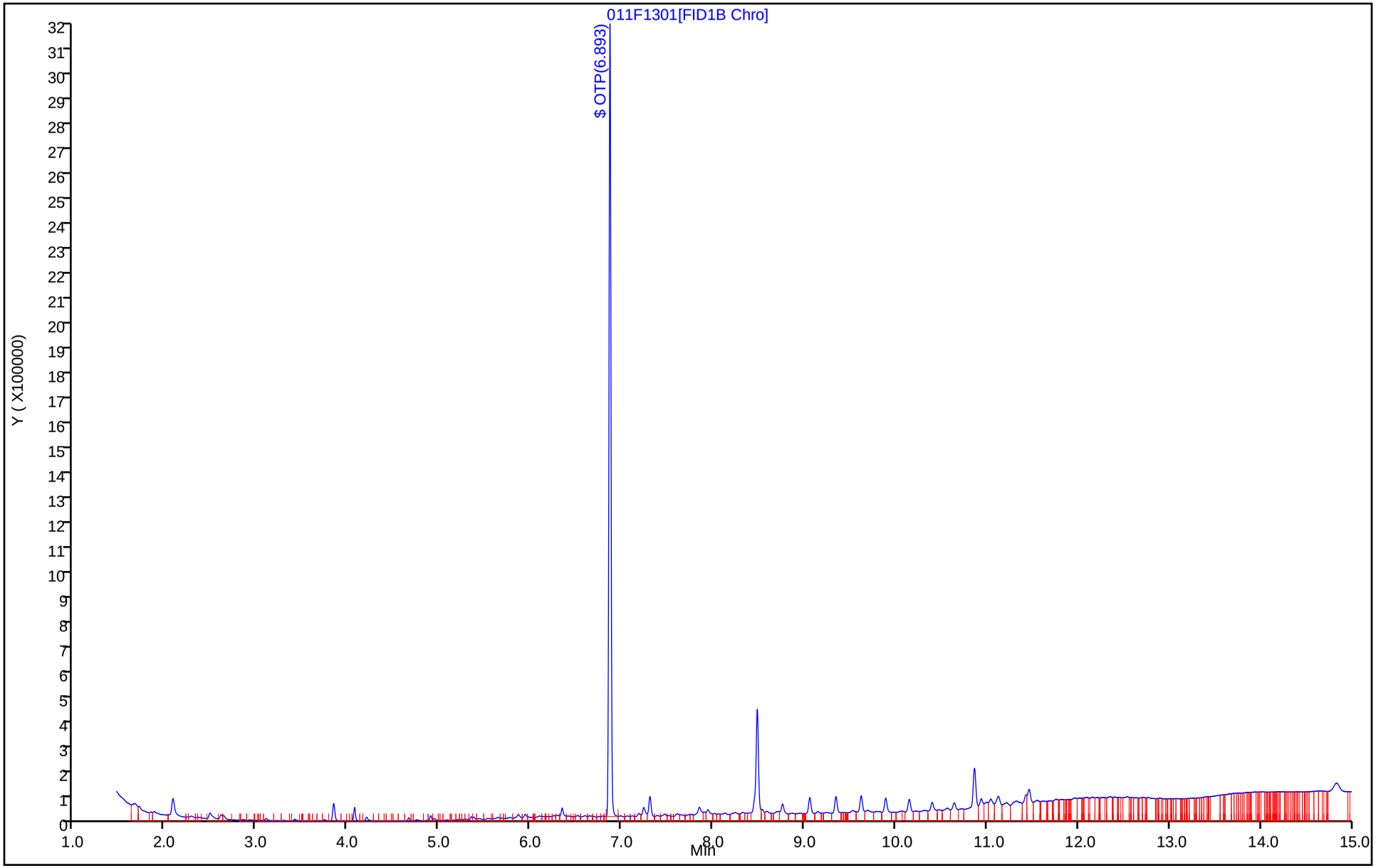
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\011F1301.D				
Injection Date:	09-Dec-2019 12:58:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-North-Soil-04-	Lab ID:	UL05034-004		
Sample Info:	UL05034-004				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

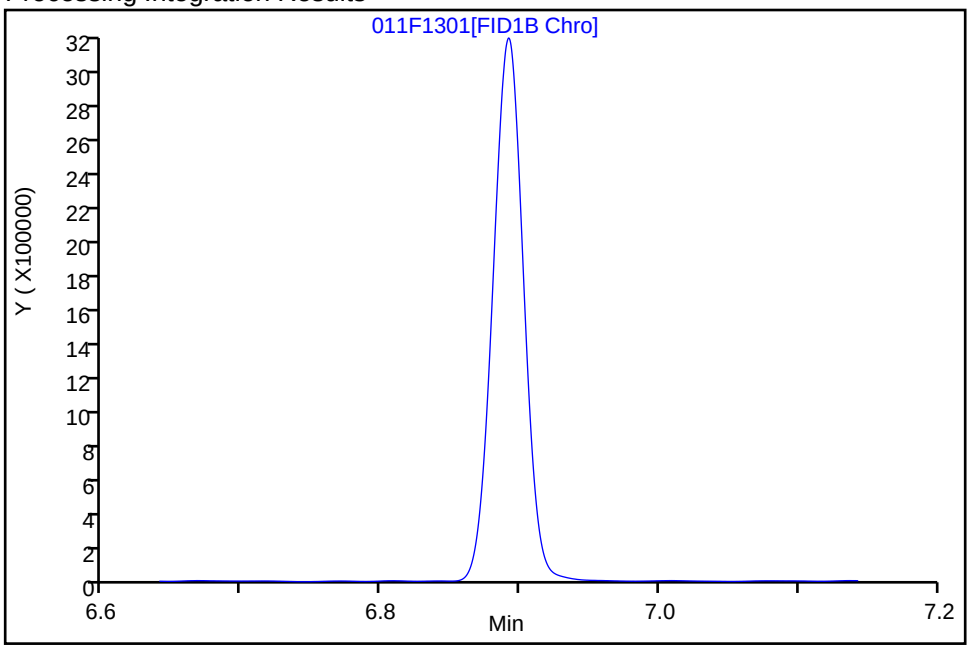
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\011F1301.D		
Injection Date:	09-Dec-2019 12:58:30	Inst. ID:	gc12.i
Client ID:	MPGI-North-Soil-04-	Lab ID:	UL05034-004
Sample Info:	UL05034-004		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

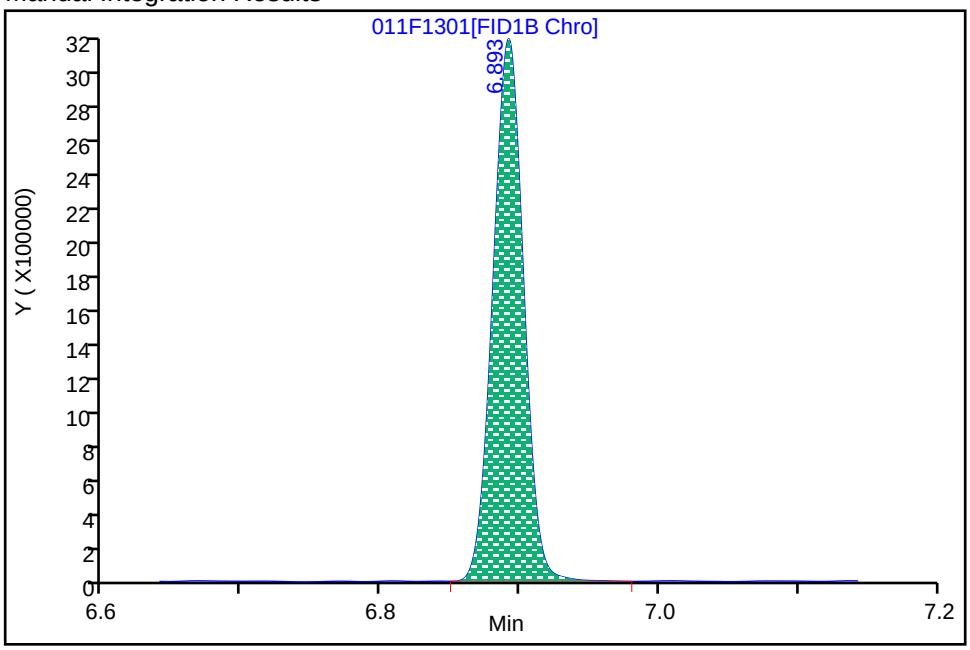
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.893
Area: 4780317
Conc: 5209.22
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 13:36:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-005
Description: MPGI-North-Soil-04-120419-D
Matrix: Solid
Date Sampled: 12/04/2019 0929
% Solids: 79.3 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1317	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	16000		8300	4000	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		77	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\012F1401.D		
Lab Sample ID:	UL05034-005	Client Sample ID:	MPGI-North-Soil-04-
Injection Date:	09-Dec-2019 13:17:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-005		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.640	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 13:36:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	10224998	78.224	12765	M
$	1 OTP	6.894	6.895	-0.001	5797381	38.449	6274.24	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

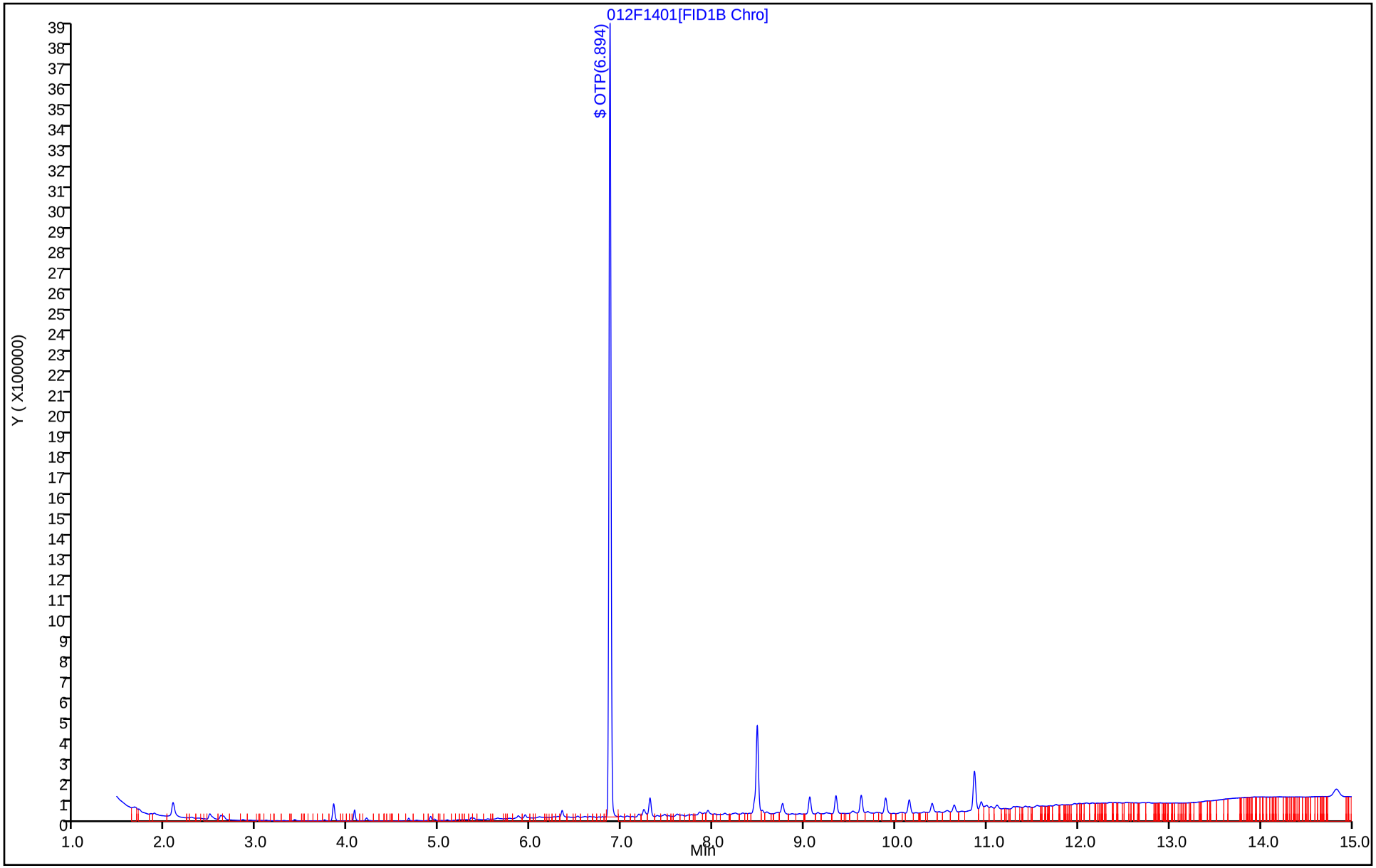
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\012F1401.D				
Injection Date:	09-Dec-2019 13:17:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-North-Soil-04-	Lab ID:	UL05034-005		
Sample Info:	UL05034-005				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:29 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

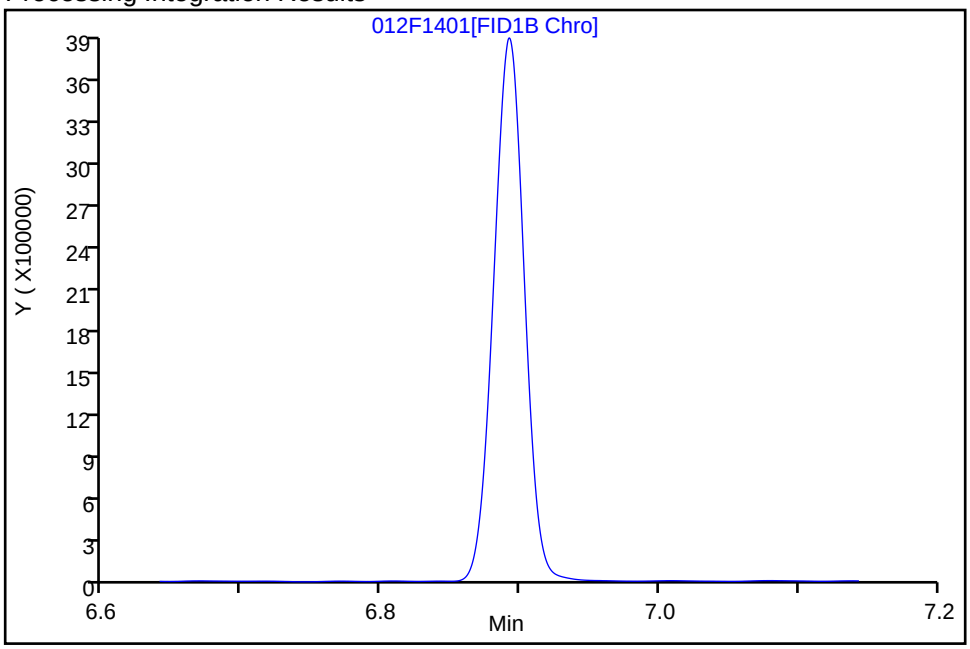
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\012F1401.D		
Injection Date:	09-Dec-2019 13:17:30	Inst. ID:	gc12.i
Client ID:	MPGI-North-Soil-04-	Lab ID:	UL05034-005
Sample Info:	UL05034-005		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

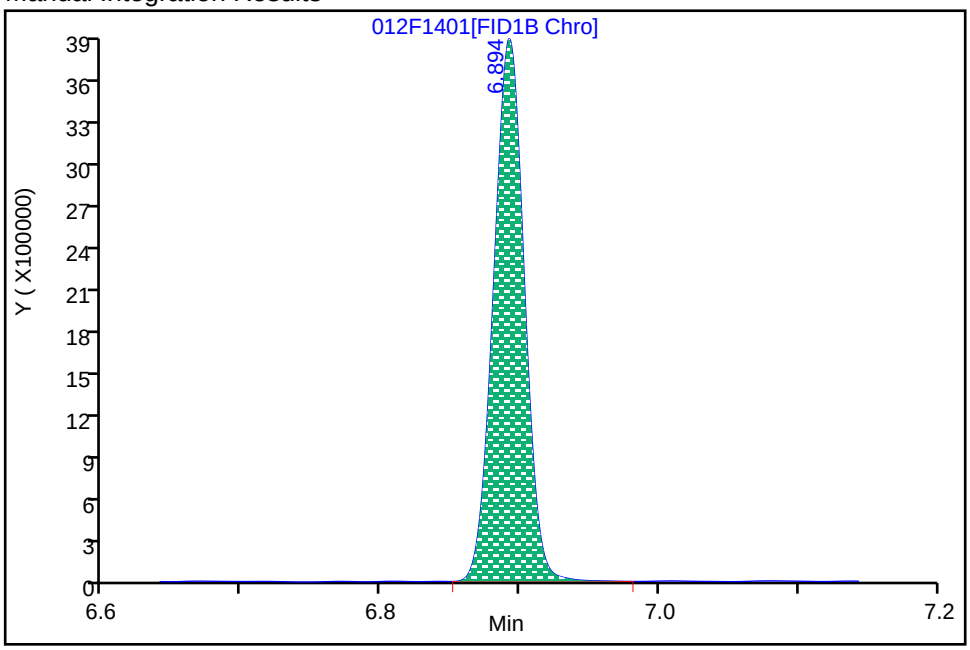
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.894
Area: 5797381
Conc: 6274.24
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 13:36:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-006
Description: MPGI-East-Soil-06-120419
Matrix: Solid
Date Sampled: 12/04/2019 1037
% Solids: 77.3 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1336	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	69000		8600	4100	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		72	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\013F1501.D		
Lab Sample ID:	UL05034-006	Client Sample ID:	MPGI-East-Soil-06-1
Injection Date:	09-Dec-2019 13:36:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-006		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	13
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.310	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 13:51:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	42478838	324.97	53608	M
$	1 OTP	6.894	6.895	-0.001	5408150	35.867	5916.72	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

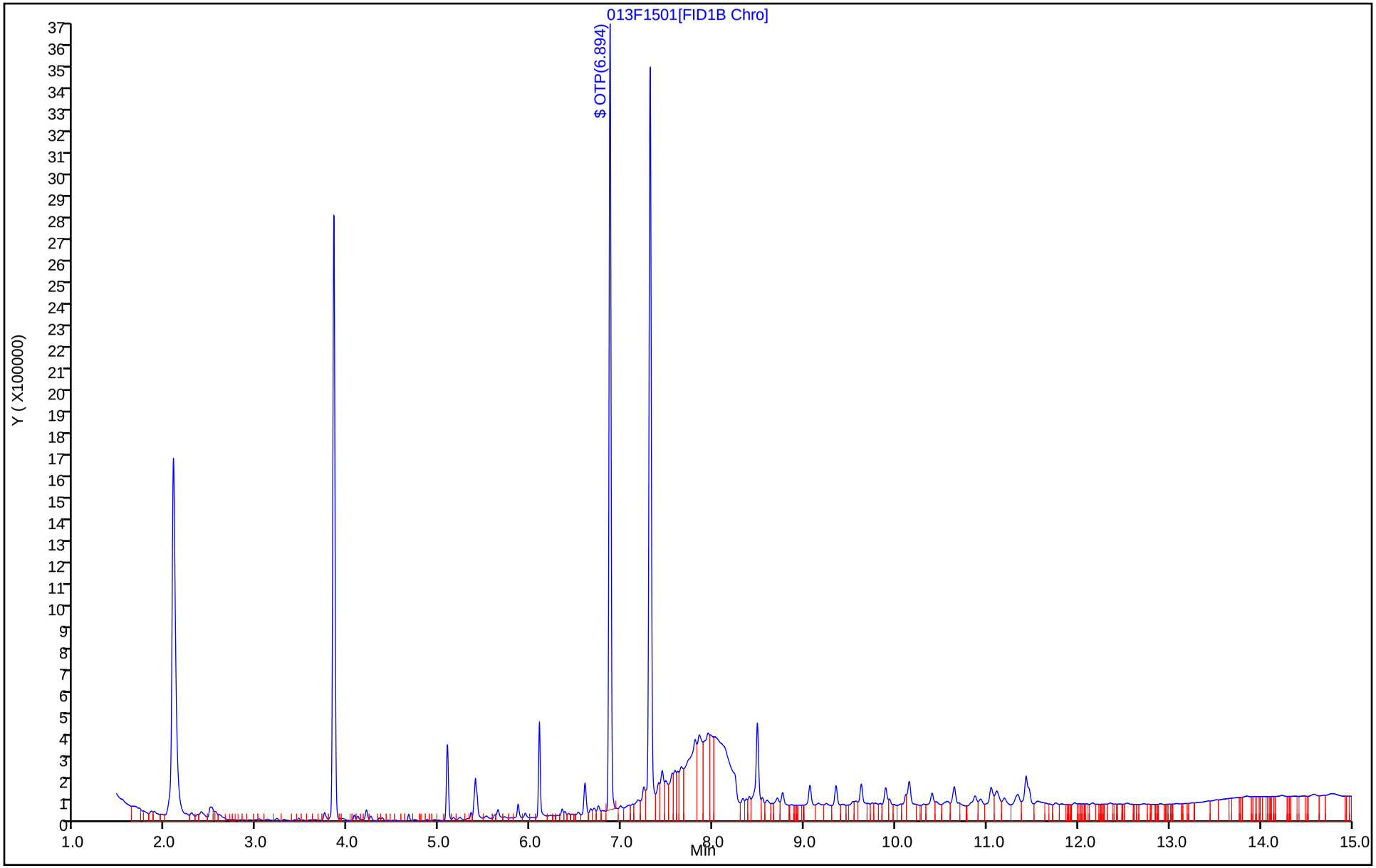
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:30 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\013F1501.D				
Injection Date:	09-Dec-2019 13:36:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-East-Soil-06-1	Lab ID:	UL05034-006		
Sample Info:	UL05034-006				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:30 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

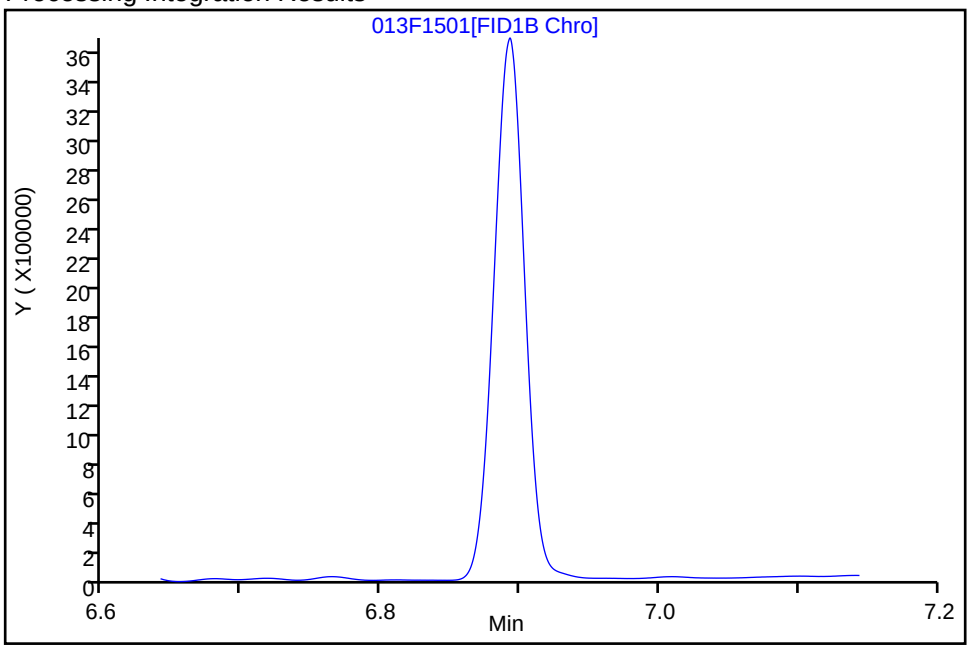
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\013F1501.D		
Injection Date:	09-Dec-2019 13:36:30	Inst. ID:	gc12.i
Client ID:	MPGI-East-Soil-06-1	Lab ID:	UL05034-006
Sample Info:	UL05034-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

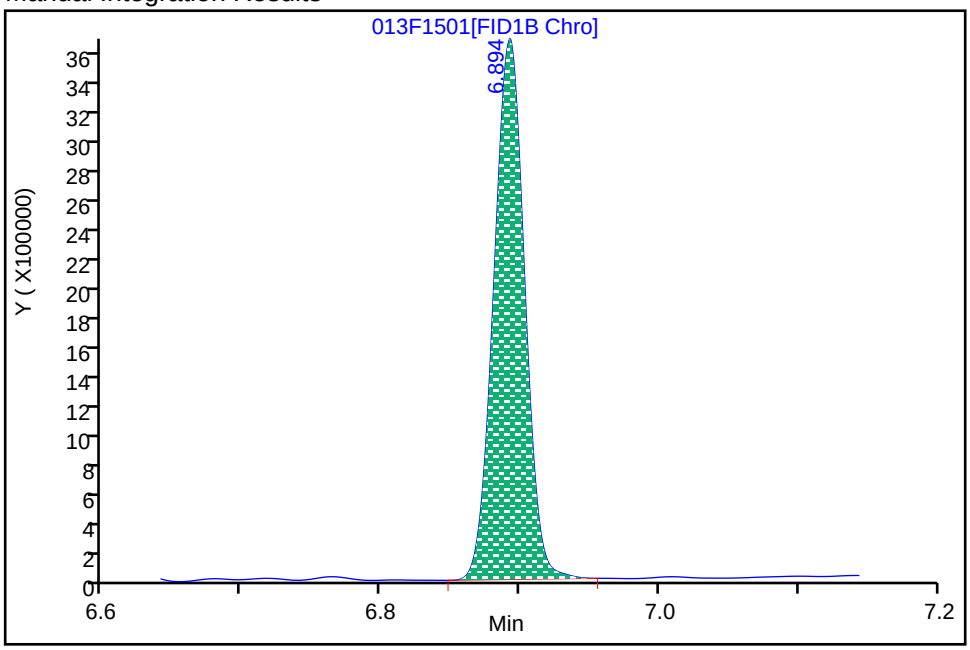
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.894
Area: 5408150
Conc: 5916.72
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 13:51:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-007
Description: MPGI-East-Soil-07-120419
Matrix: Solid
Date Sampled: 12/04/2019 1105
% Solids: 84.3 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1434	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	220000		7900	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		86	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\016F1801.D		
Lab Sample ID:	UL05034-007	Client Sample ID:	MPGI-East-Soil-07-1
Injection Date:	09-Dec-2019 14:34:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-007		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	16
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.120	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 14:53:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	144492902	1105.41	183500	M
$	1 OTP	6.895	6.895	0.000	6484124	43.003	7138.62	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

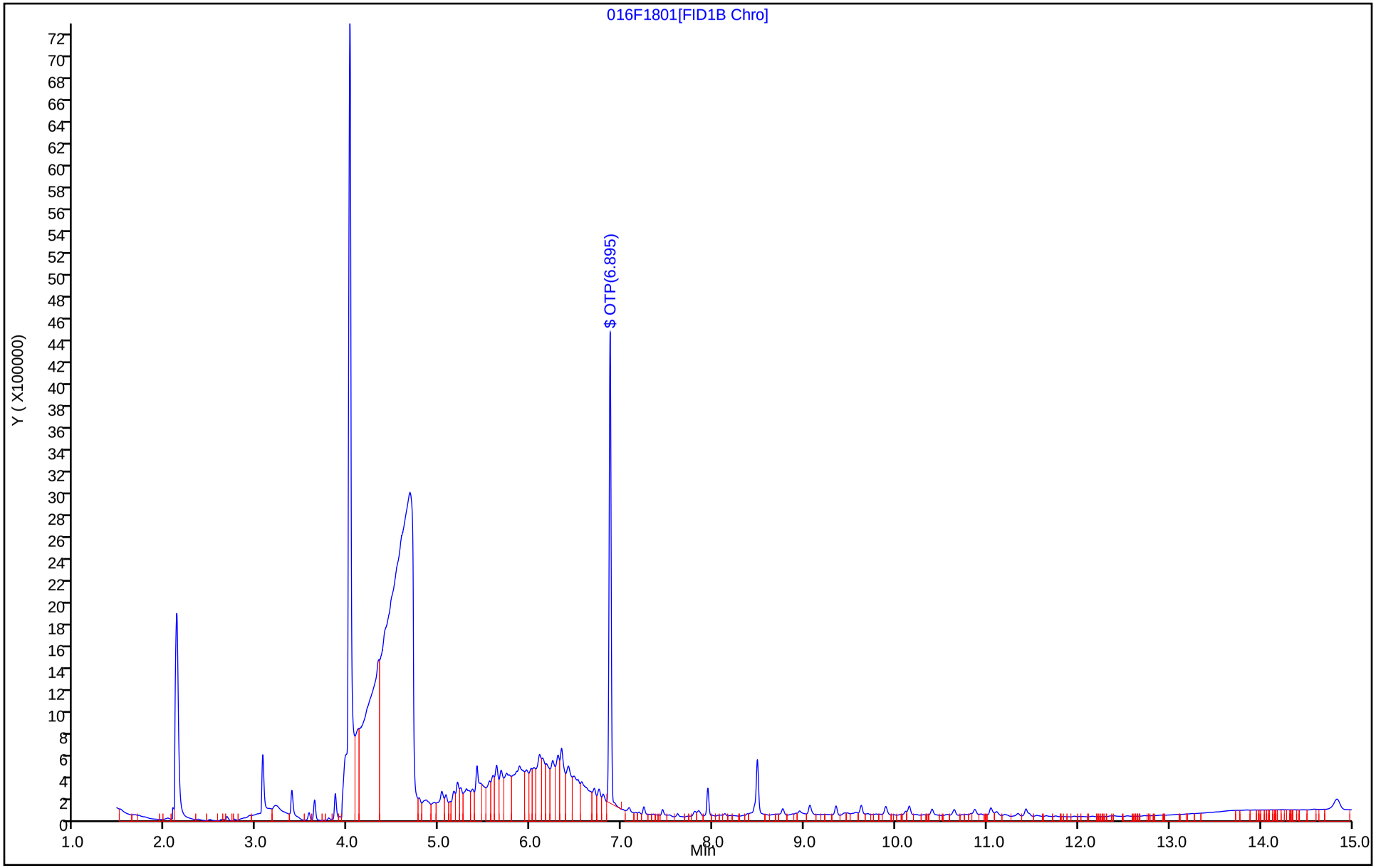
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\016F1801.D				
Injection Date:	09-Dec-2019 14:34:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-East-Soil-07-1	Lab ID:	UL05034-007		
Sample Info:	UL05034-007				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:34 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

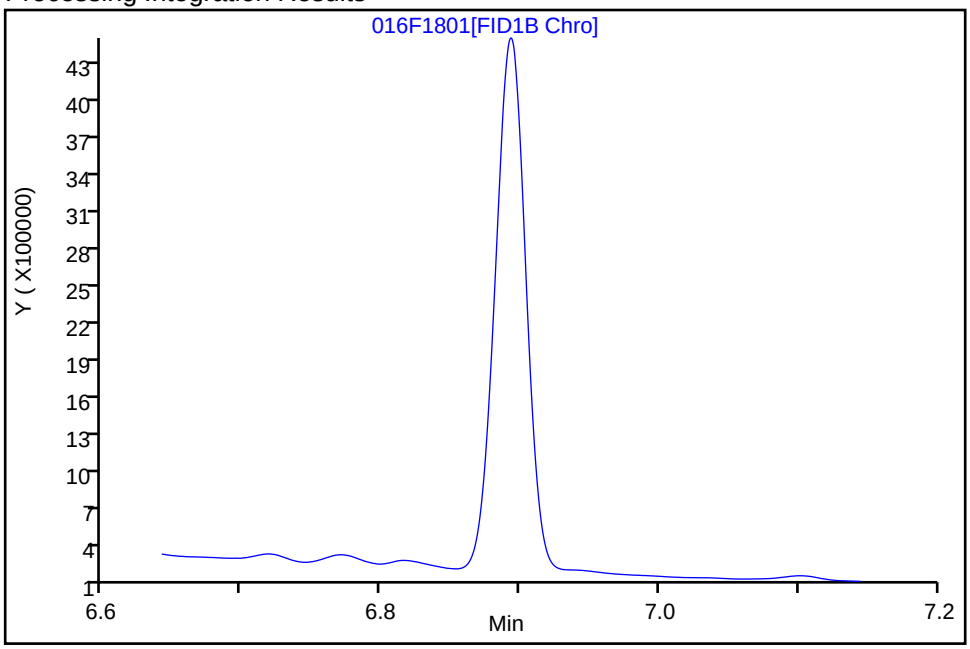
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\016F1801.D		
Injection Date:	09-Dec-2019 14:34:30	Inst. ID:	gc12.i
Client ID:	MPGI-East-Soil-07-1	Lab ID:	UL05034-007
Sample Info:	UL05034-007		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

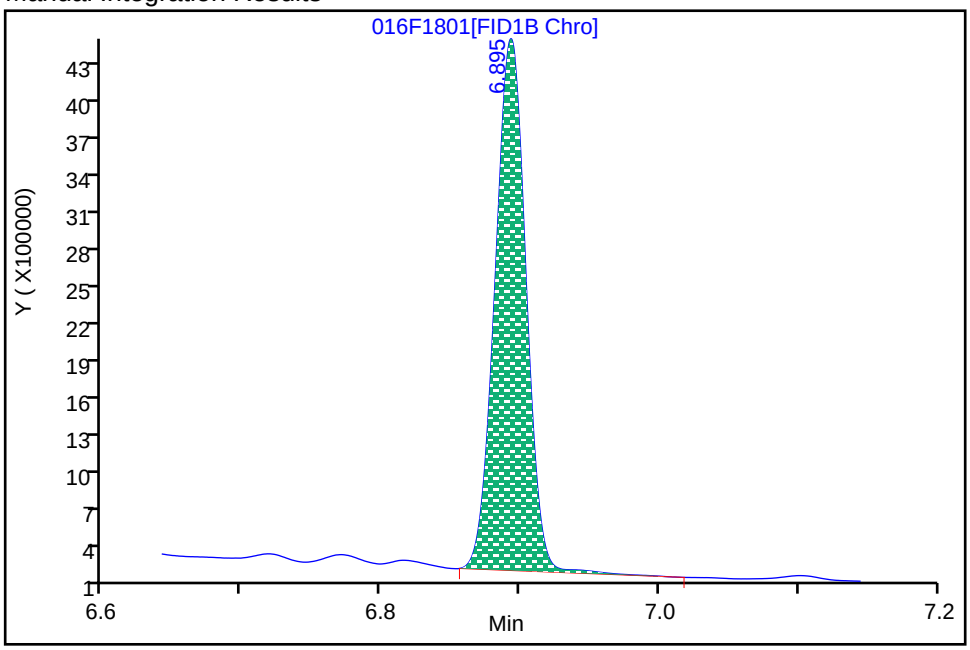
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 6484124
Conc: 7138.62
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 14:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-008
Description: MPGI-East-Soil-08-120419
Matrix: Solid
Date Sampled: 12/04/2019 1125
% Solids: 90.4 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1453	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	69000		7400	3500	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\017F1901.D		
Lab Sample ID:	UL05034-008	Client Sample ID:	MPGI-East-Soil-08-1
Injection Date:	09-Dec-2019 14:53:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-008		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	17
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 15:31:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	49193512	376.34	62724	M
$	1 OTP	6.895	6.895	0.000	7138940	47.346	7890.97	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

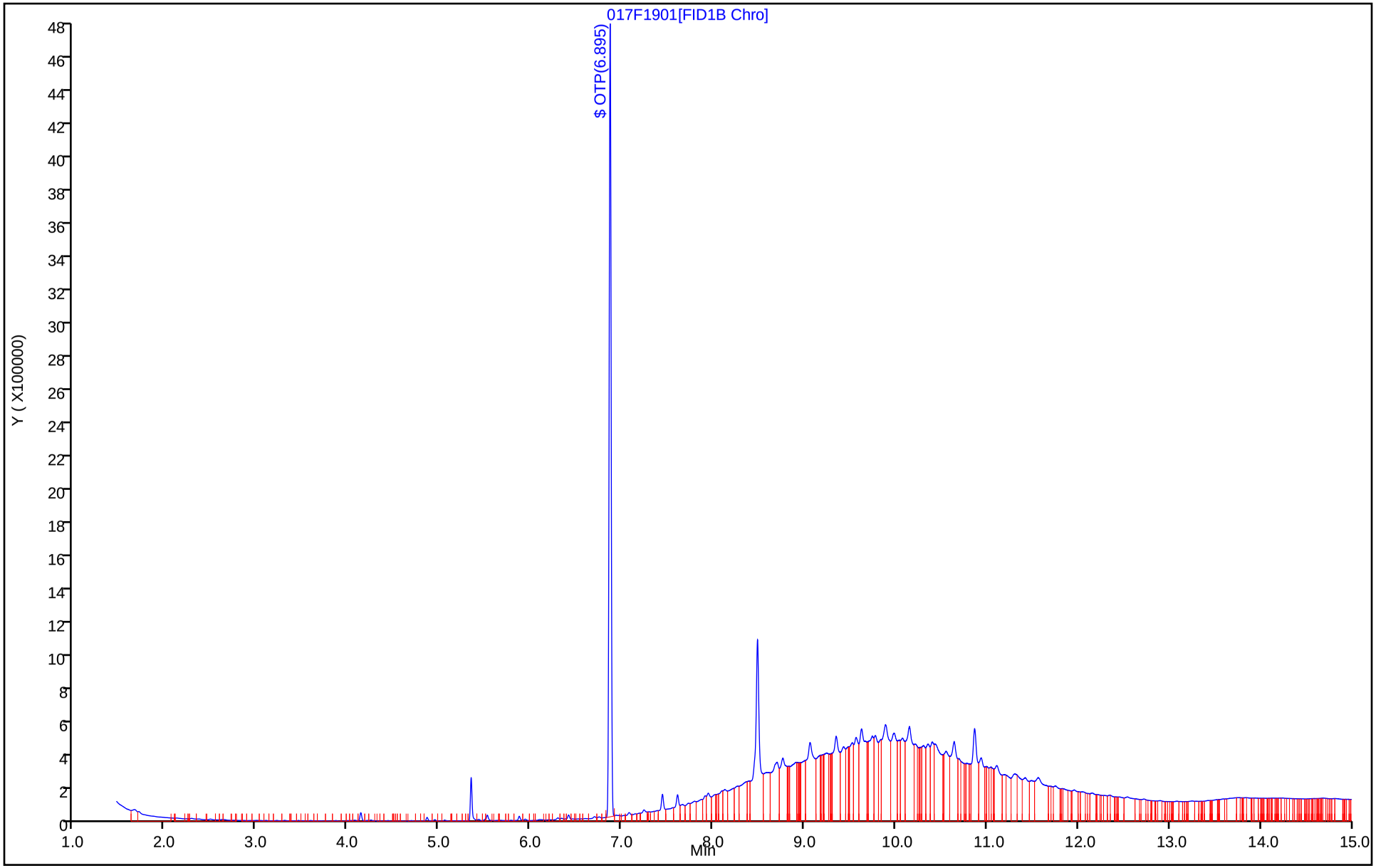
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:35 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\017F1901.D				
Injection Date:	09-Dec-2019 14:53:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-East-Soil-08-1	Lab ID:	UL05034-008		
Sample Info:	UL05034-008				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:35 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

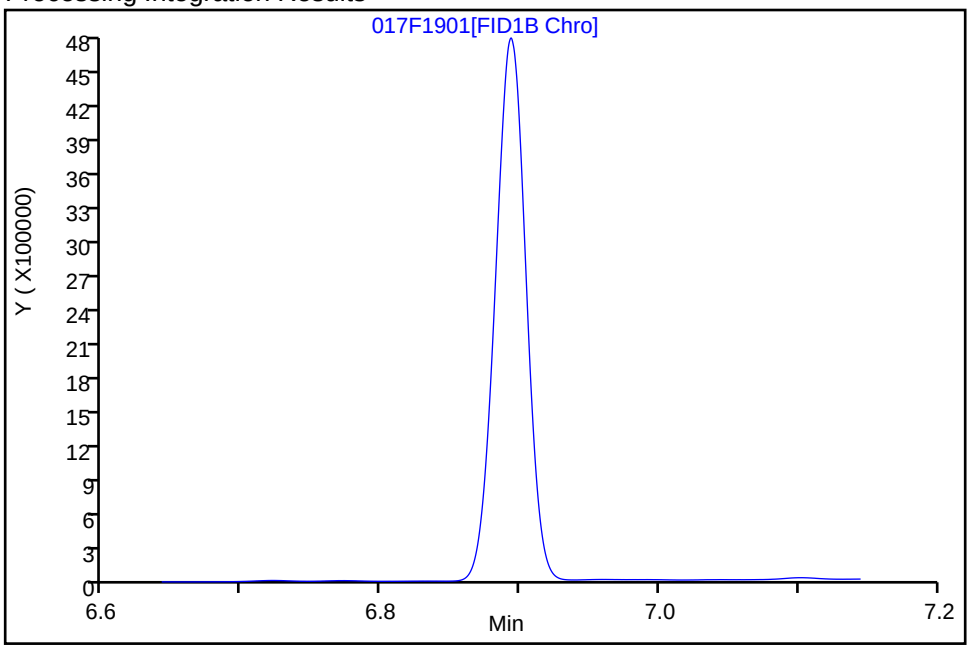
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\017F1901.D		
Injection Date:	09-Dec-2019 14:53:30	Inst. ID:	gc12.i
Client ID:	MPGI-East-Soil-08-1	Lab ID:	UL05034-008
Sample Info:	UL05034-008		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

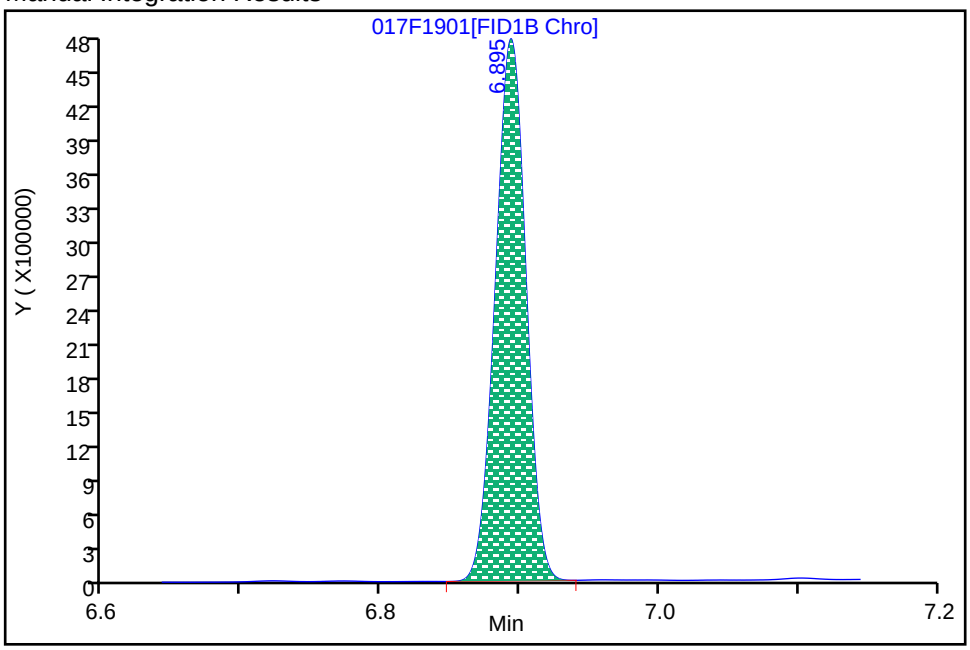
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 7138940
Conc: 7890.97
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 15:31:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL05034-009
Description: MPGI-East-Soil-09-120419
Matrix: Solid
Date Sampled: 12/04/2019 1257
% Solids: 94.9 12/06/2019 0032
Date Received: 12/05/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/09/2019 1512	CHG	12/05/2019 2318	38050

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	99000		7000	3300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		96	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\018F2001.D		
Lab Sample ID:	UL05034-009	Client Sample ID:	MPGI-East-Soil-09-1
Injection Date:	09-Dec-2019 15:12:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-009		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	18
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.420	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 15:31:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	74669756	571.24	93893	M
$	1 OTP	6.895	6.895	0.000	7213329	47.839	7863.11	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

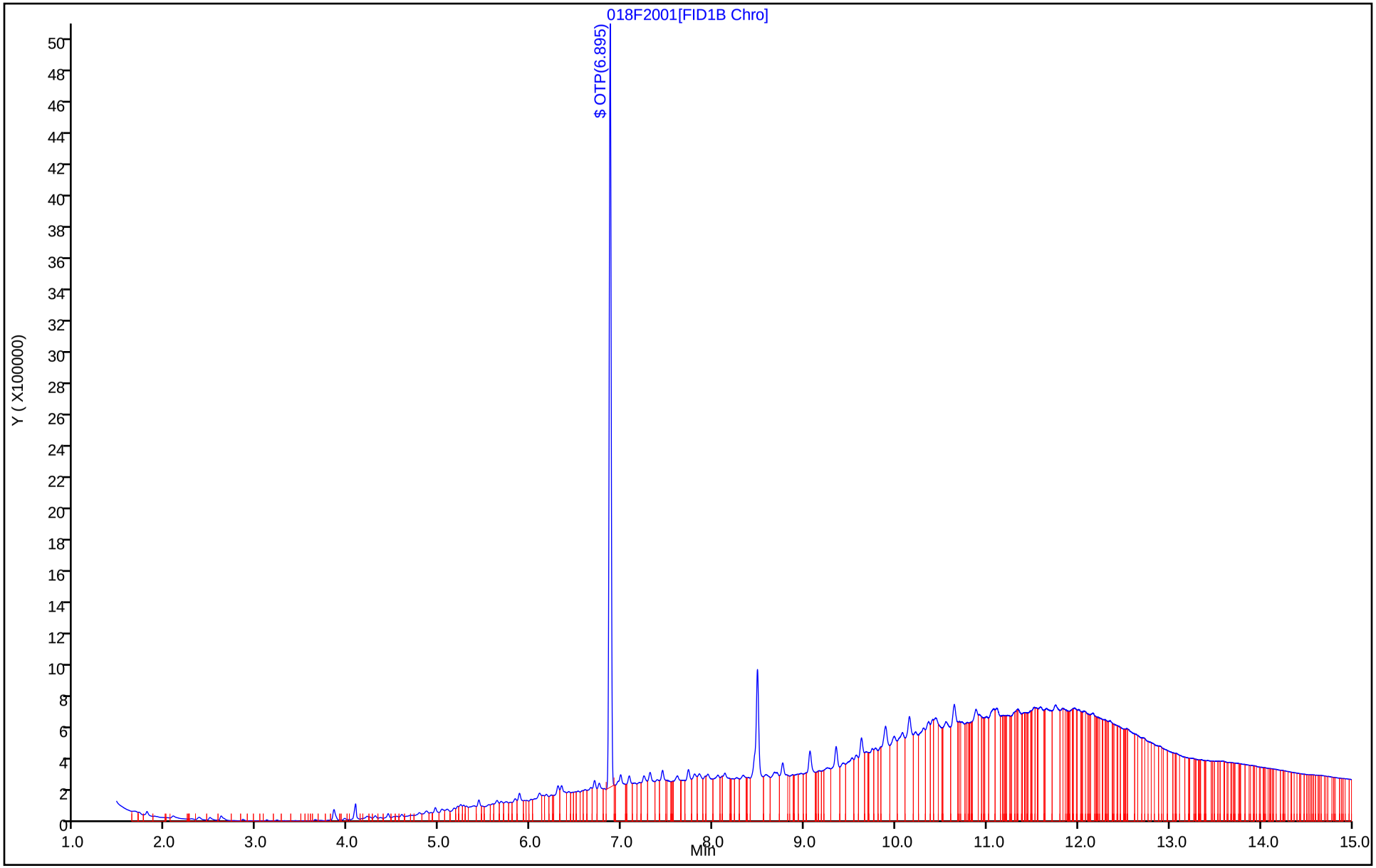
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:36 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\018F2001.D				
Injection Date:	09-Dec-2019 15:12:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-East-Soil-09-1	Lab ID:	UL05034-009		
Sample Info:	UL05034-009				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:36 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

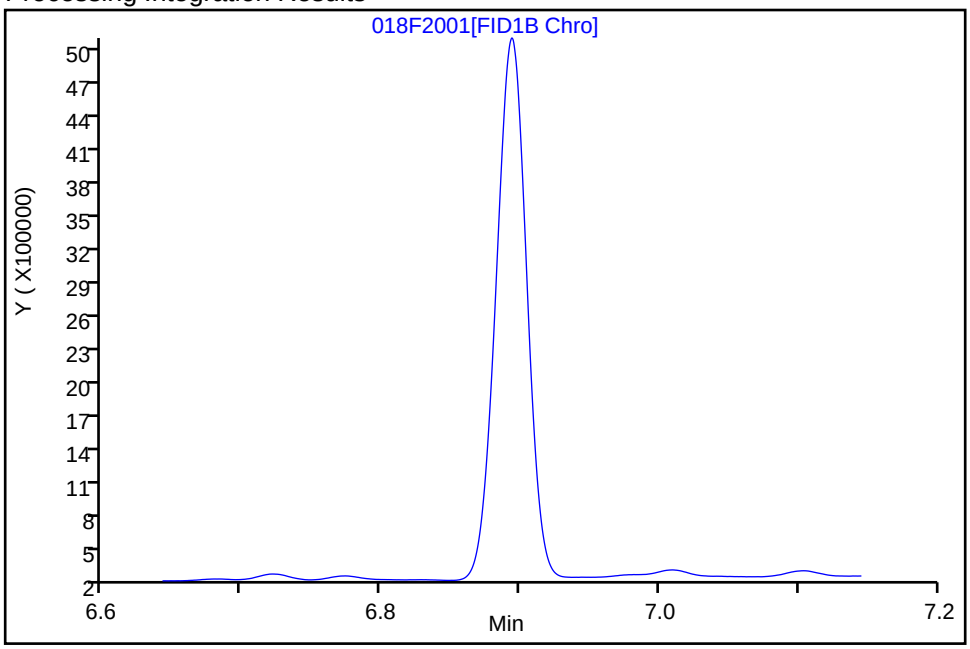
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\018F2001.D		
Injection Date:	09-Dec-2019 15:12:30	Inst. ID:	gc12.i
Client ID:	MPGI-East-Soil-09-1	Lab ID:	UL05034-009
Sample Info:	UL05034-009		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

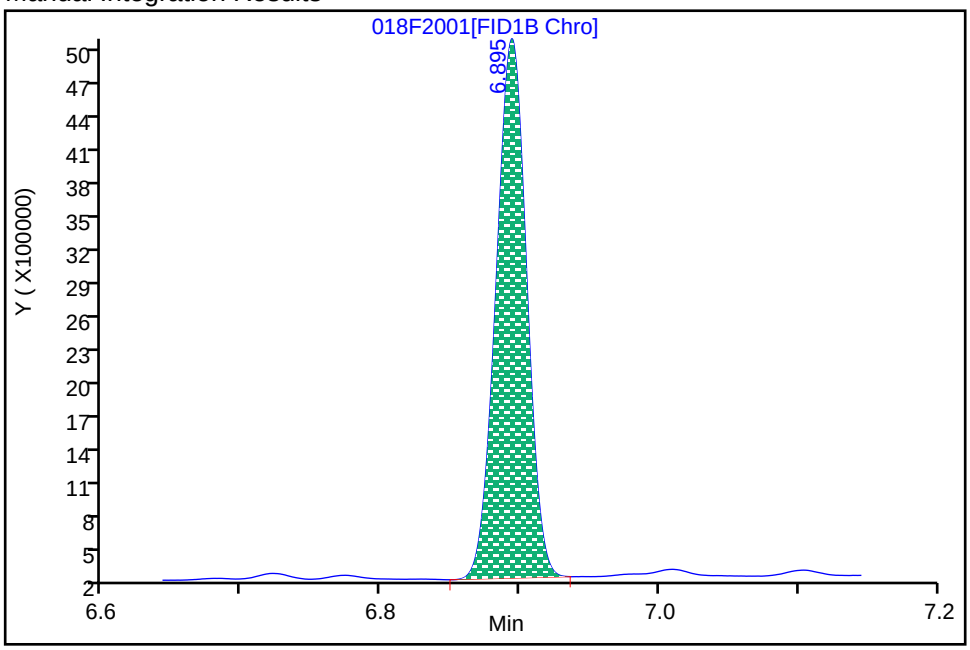
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 7213329
Conc: 7863.11
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 15:31:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

CALIBRATION DATA

Shealy Environmental Services
Form 6

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
3 #2 Diesel Fuel	145449	136976	125627	120961	124560		130715	Avg	7.8		
	11.3	4.8	-3.9	-7.5	-4.7						
$ 1 OTP	122521	143856	151437	160330	175770		150783	Avg	13.1		
	-18.7	-4.6	0.4	6.3	16.6						

Shealy Environmental Services
Initial Calibration RT Report

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Avg. RRT	%Rsd RT	Flags
3 #2 Diesel Fuel	6.211	6.211	6.211	6.211	6.211	6.211	0.000	
$ 1 OTP	6.893	6.892	6.895	6.897	6.902	6.896	0.056	

Shealy Environmental Services
Form 6 Response

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp
3 #2 Diesel Fuel	40.000	200.00	500.00	2500.00	10000
	5817979	27395229	62813543	302403095	1245597218
$ 1 OTP	5.0000	10.000	50.000	75.000	100.00
	612604	1438560	7571849	12024759	17577043

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

No. Cal Levels: 5 No. Cal Levels: 5

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	SVGC-1659	20-Nov-2019 10:20:30	112019F1.b	003F0401.D	Diesel.sub	48652367	48656830
2	2	SVGC-1660	20-Nov-2019 10:40:30	112019F1.b	004F0501.D	Diesel.sub	48652367	48659042
3	3	SVGC-1661	20-Nov-2019 10:59:30	112019F1.b	005F0601.D	Diesel.sub	48652367	48661209
4	4	SVGC-1662	20-Nov-2019 11:18:30	112019F1.b	006F0701.D	Diesel.sub	48652367	48661595
5	5	SVGC-1663	20-Nov-2019 11:37:30	112019F1.b	007F0801.D	Diesel.sub	48652367	48663631

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\003F0401.D		
Lab Sample ID:	SVGC-1659	Client Sample ID:	D1H1
Injection Date:	20-Nov-2019 10:20:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1659		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 1	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:14:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	5817979	40.000	44.509	M
$	1 OTP	6.893	6.893	0.000	612604	5.0000	3.1225	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

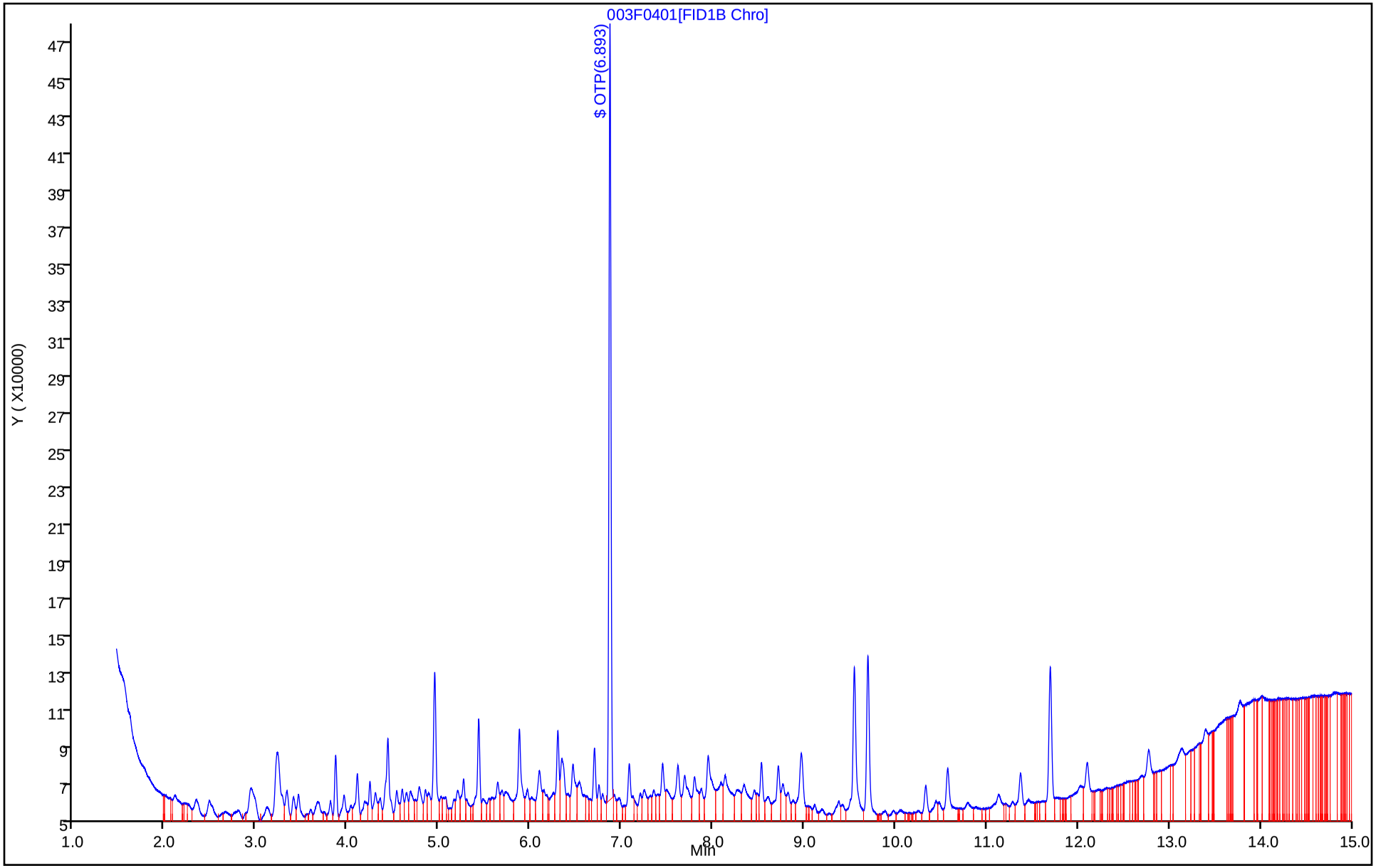
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\003F0401.D				
Injection Date:	20-Nov-2019 10:20:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D1H1	Lab ID:	SVGC-1659		
Sample Info:	SVGC-1659				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

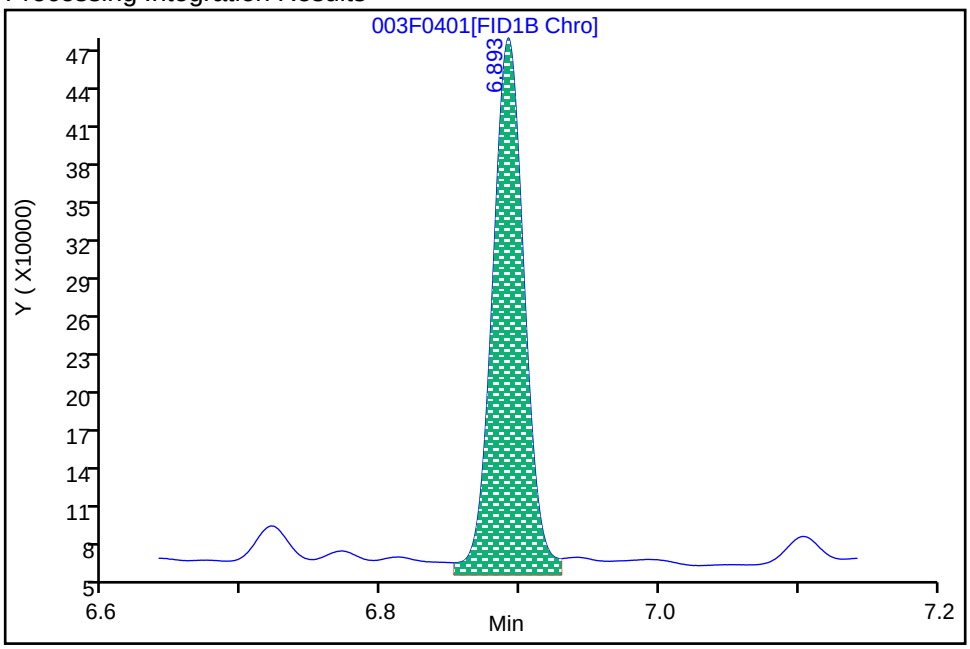
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\003F0401.D		
Injection Date:	20-Nov-2019 10:20:30	Inst. ID:	gc12.i
Client ID:	D1H1	Lab ID:	SVGC-1659
Sample Info:	SVGC-1659		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

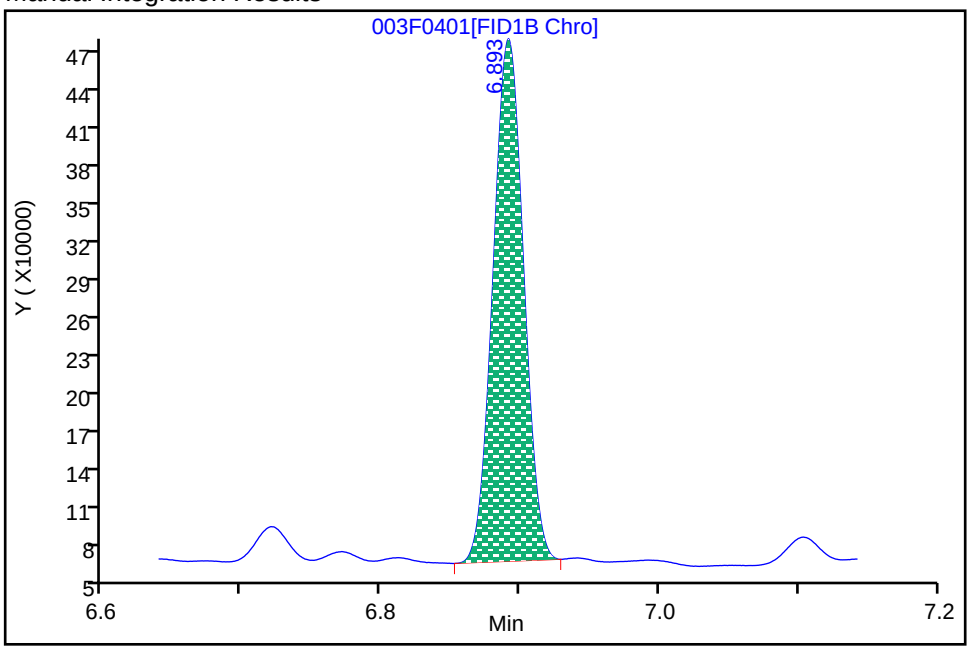
Processing Integration Results

RT: 6.893
Area: 664212
Amount: 5.0000
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.893
Area: 612604
Amount: 3.1225
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:14:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\004F0501.D		
Lab Sample ID:	SVGC-1660	Client Sample ID:	D2H1
Injection Date:	20-Nov-2019 10:40:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1660		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 2	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:14:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	27395229	200.00	209.58	M
$	1 OTP	6.892	6.892	0.000	1438560	10.000	7.5703	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

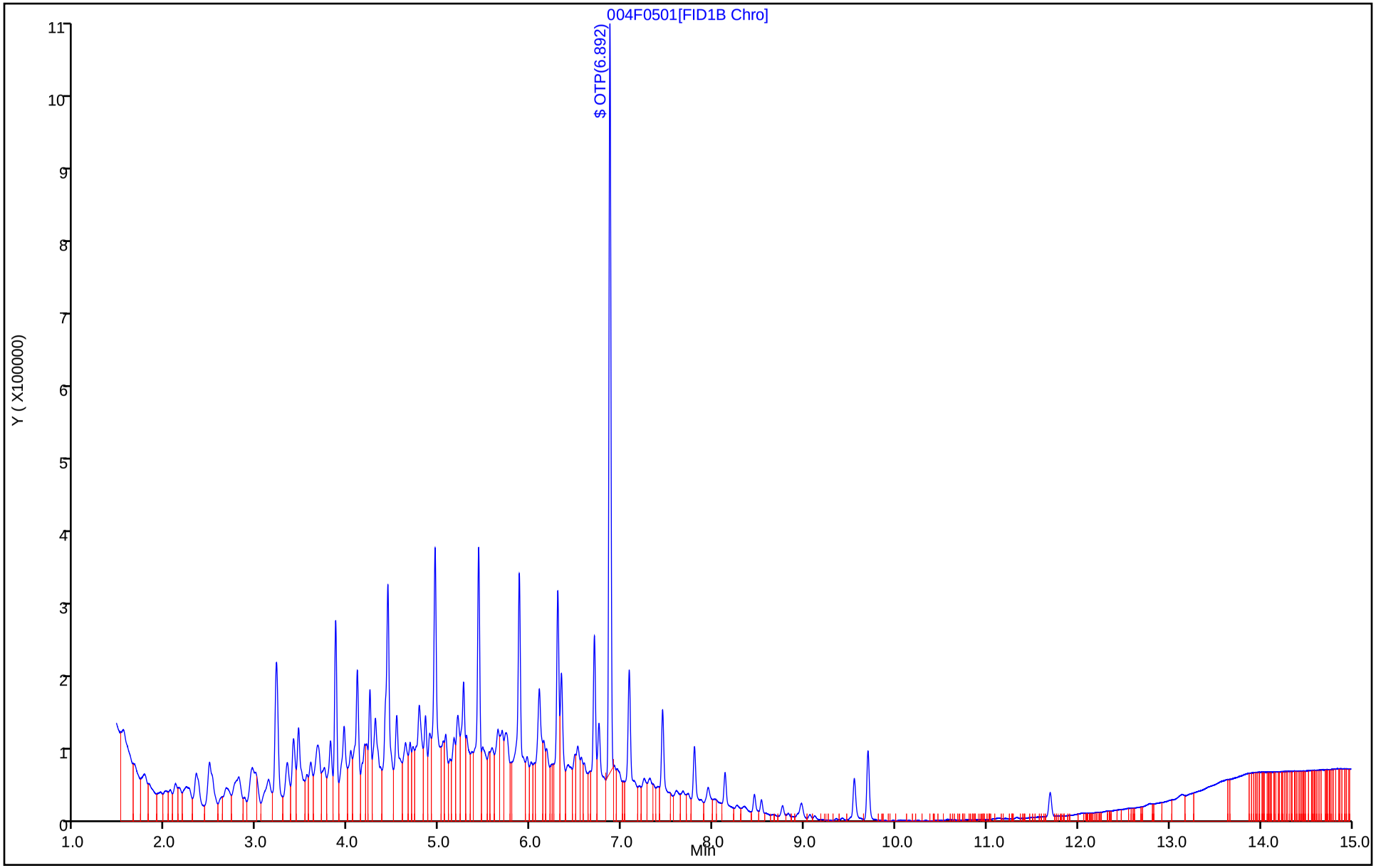
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\004F0501.D				
Injection Date:	20-Nov-2019 10:40:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D2H1	Lab ID:	SVGC-1660		
Sample Info:	SVGC-1660				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

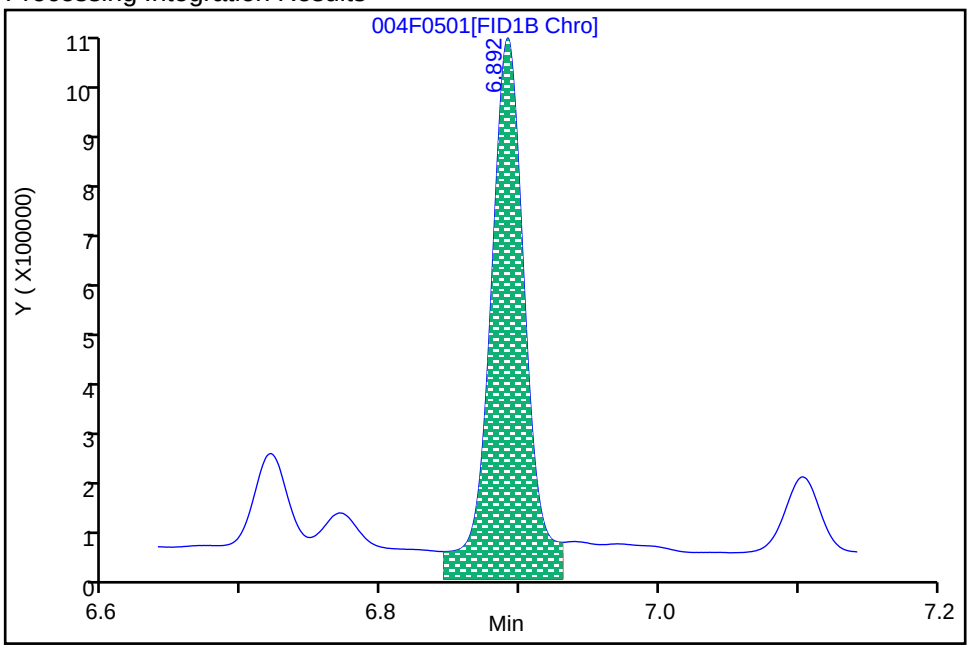
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\004F0501.D		
Injection Date:	20-Nov-2019 10:40:30	Inst. ID:	gc12.i
Client ID:	D2H1	Lab ID:	SVGC-1660
Sample Info:	SVGC-1660		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

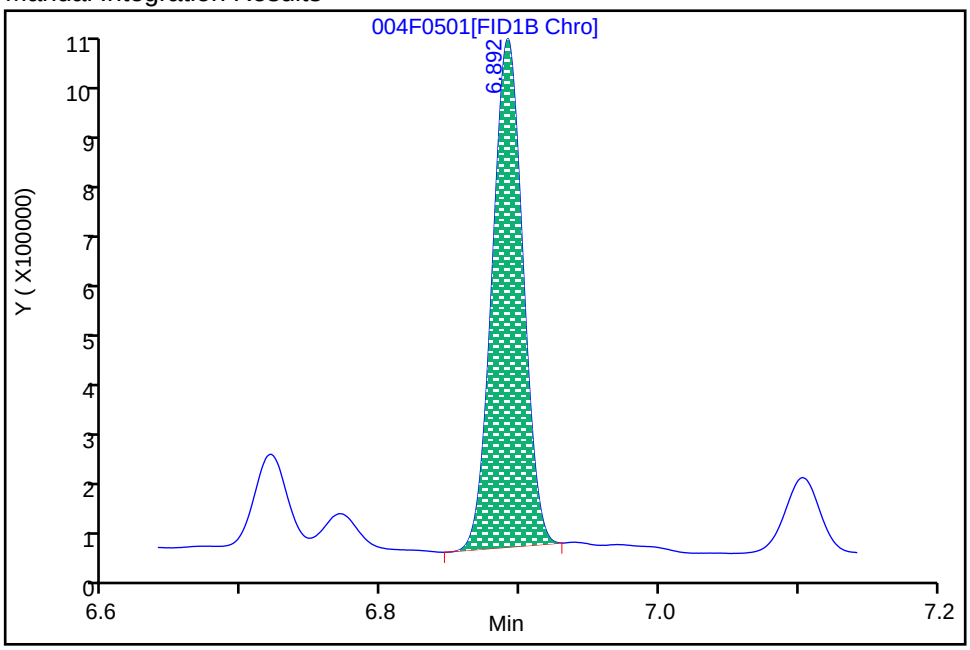
Processing Integration Results

RT: 6.892
Area: 1746694
Amount: 11.360
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.892
Area: 1438560
Amount: 7.5703
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:14:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\005F0601.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H1
Injection Date:	20-Nov-2019 10:59:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 3	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:15:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	62813543	500.00	480.54	M
$	1 OTP	6.895	6.895	0.000	7571849	50.000	50.217	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

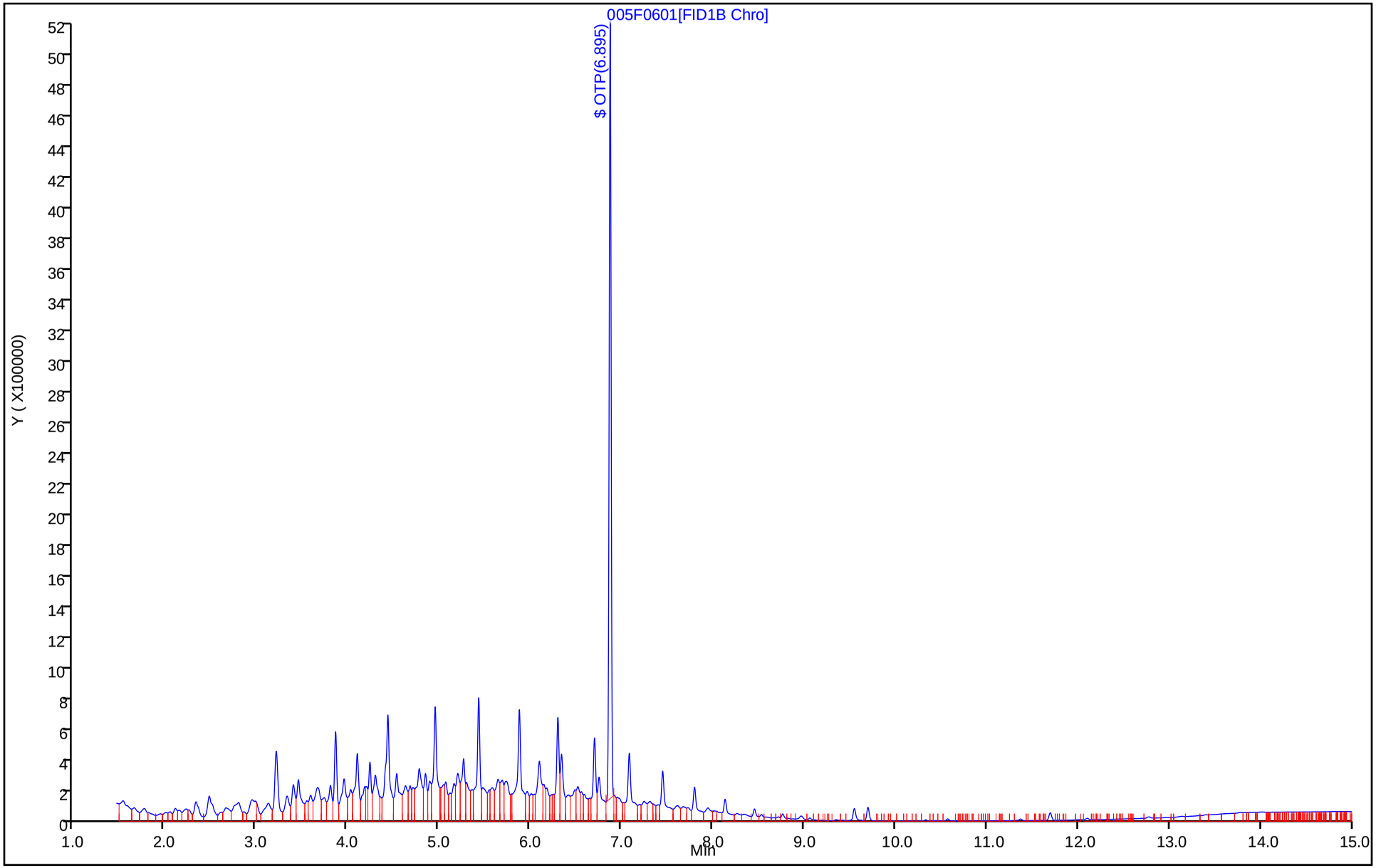
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\005F0601.D				
Injection Date:	20-Nov-2019 10:59:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H1	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

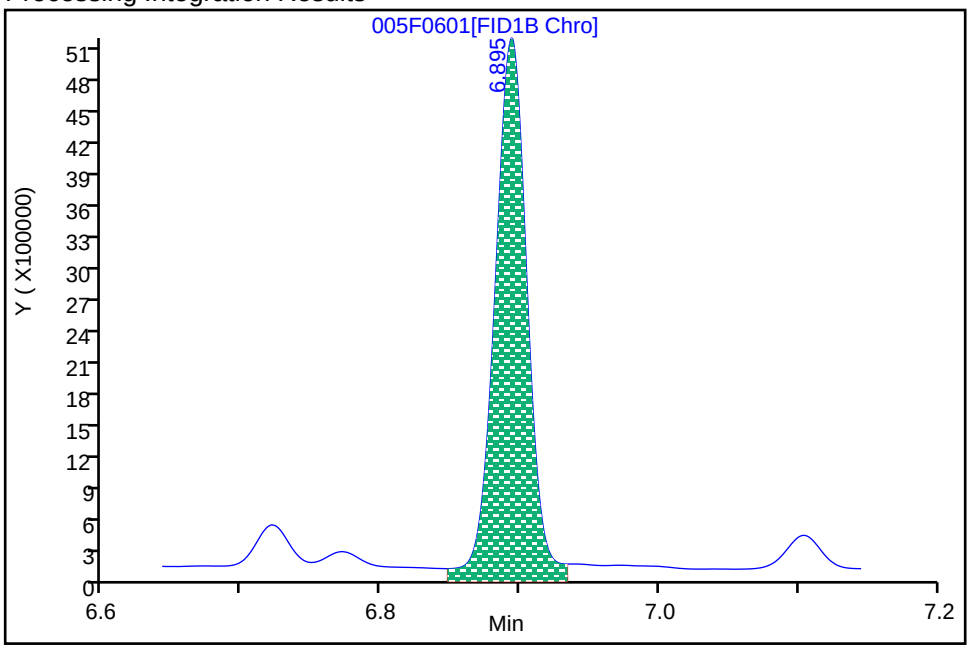
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\005F0601.D		
Injection Date:	20-Nov-2019 10:59:30	Inst. ID:	gc12.i
Client ID:	D3H1	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

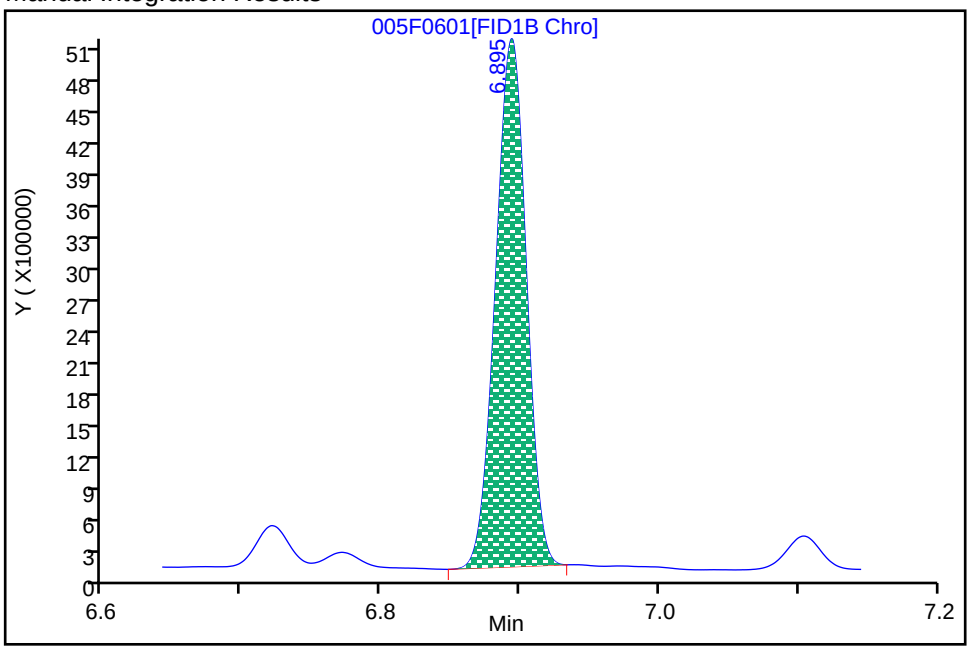
Processing Integration Results

RT: 6.895
Area: 8314254
Amount: 52.644
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.895
Area: 7571849
Amount: 50.217
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:15:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\006F0701.D		
Lab Sample ID:	SVGC-1662	Client Sample ID:	D4H1
Injection Date:	20-Nov-2019 11:18:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1662		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 4	ALS Bottle:	6
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:15:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	302403095	2500.00	2313.46	M
$	1 OTP	6.897	6.897	0.000	12024759	75.000	67.600	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

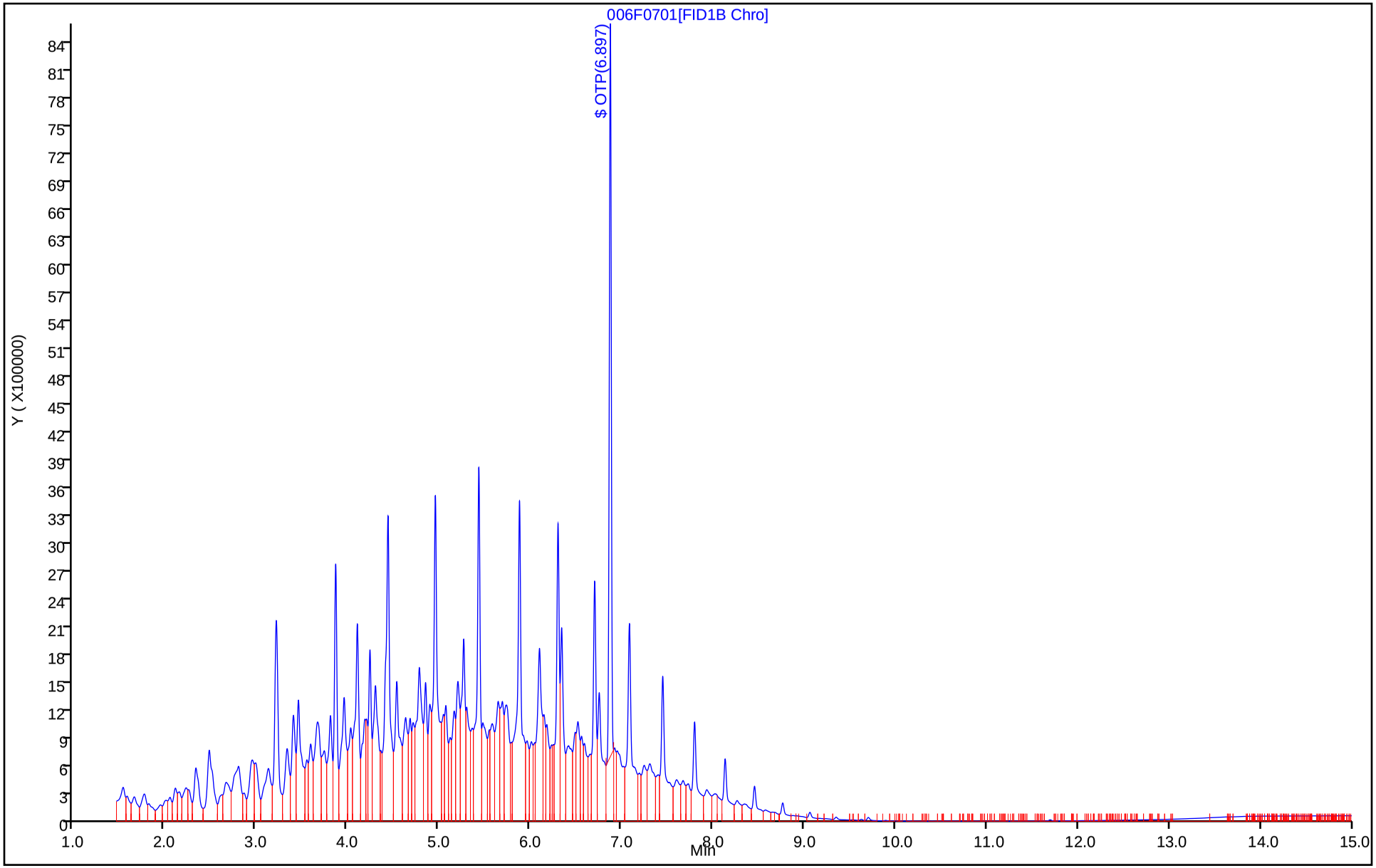
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\006F0701.D				
Injection Date:	20-Nov-2019 11:18:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D4H1	Lab ID:	SVGC-1662		
Sample Info:	SVGC-1662				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

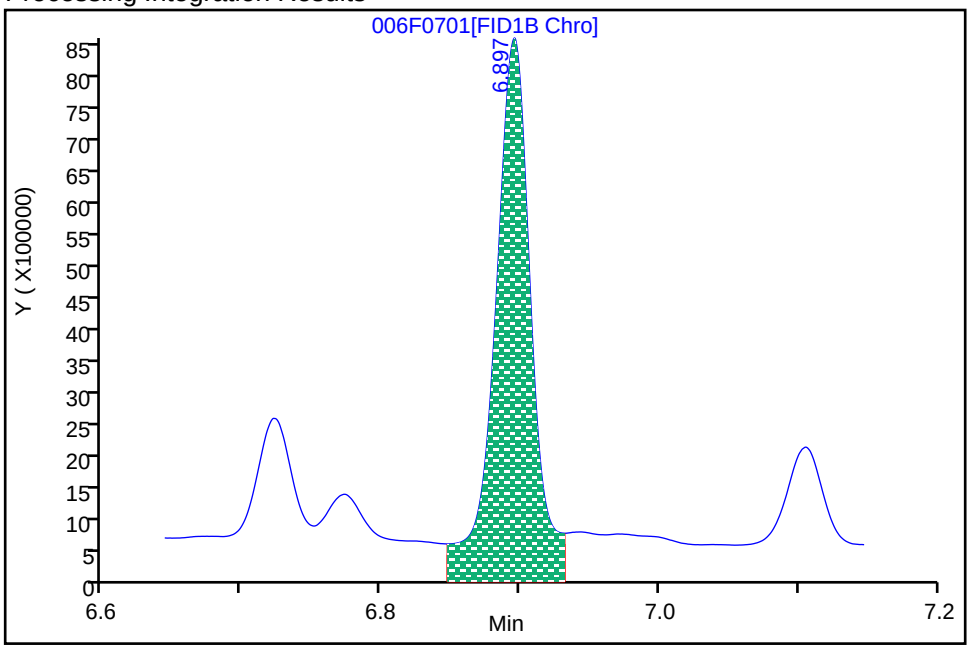
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\006F0701.D		
Injection Date:	20-Nov-2019 11:18:30	Inst. ID:	gc12.i
Client ID:	D4H1	Lab ID:	SVGC-1662
Sample Info:	SVGC-1662		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

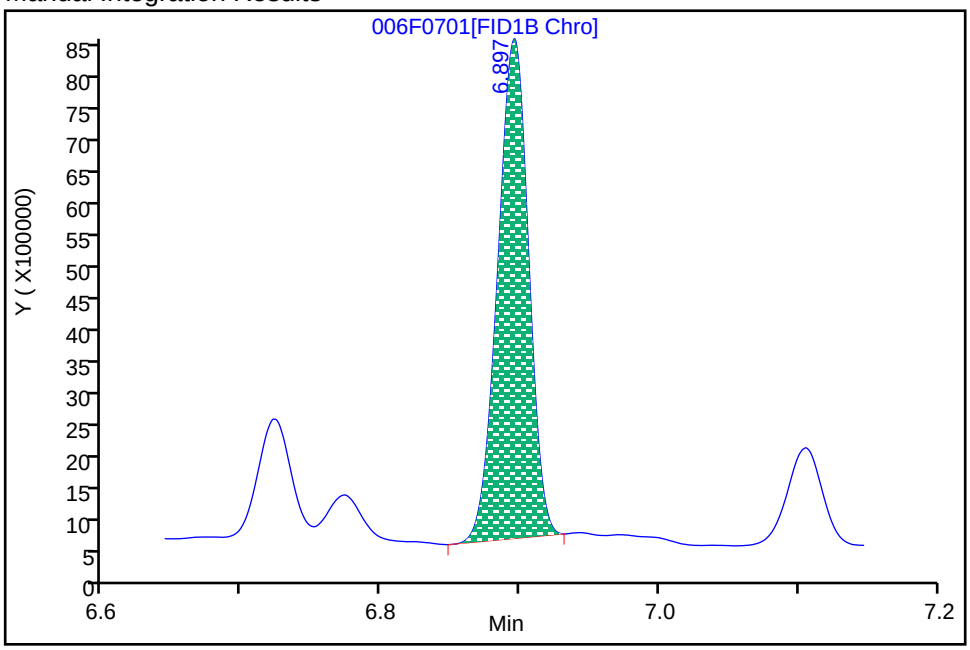
Processing Integration Results

RT: 6.897
Area: 15465755
Amount: 90.974
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.897
Area: 12024759
Amount: 67.600
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:15:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\007F0801.D		
Lab Sample ID:	SVGC-1663	Client Sample ID:	D5H1
Injection Date:	20-Nov-2019 11:37:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1663		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 5	ALS Bottle:	7
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:15:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1245597218	10000	9529.13	M
$	1 OTP	6.902	6.902	0.000	17577043	100.00	116.57	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

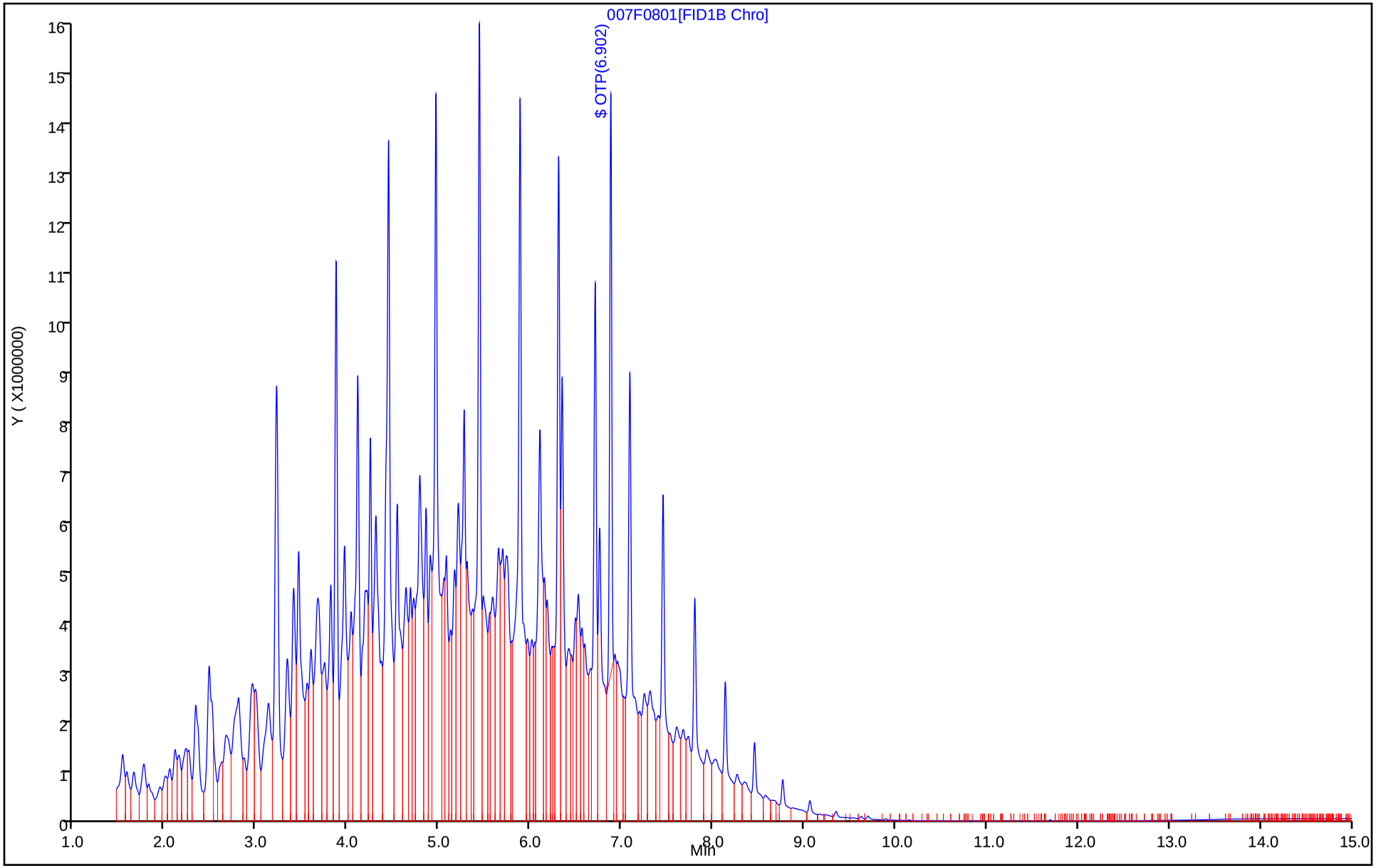
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\007F0801.D				
Injection Date:	20-Nov-2019 11:37:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D5H1	Lab ID:	SVGC-1663		
Sample Info:	SVGC-1663				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

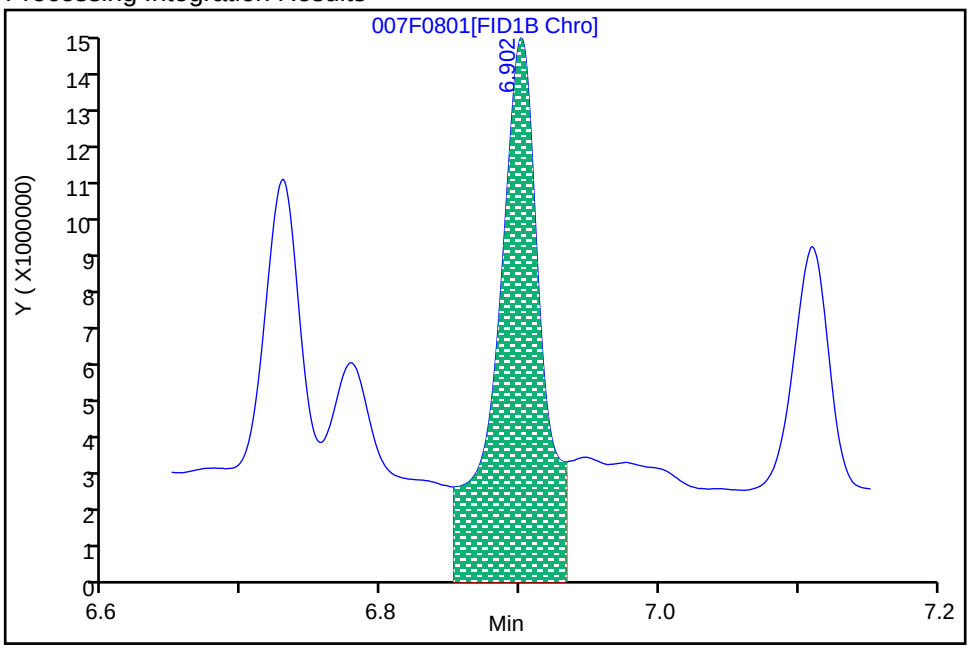
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\007F0801.D		
Injection Date:	20-Nov-2019 11:37:30	Inst. ID:	gc12.i
Client ID:	D5H1	Lab ID:	SVGC-1663
Sample Info:	SVGC-1663		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

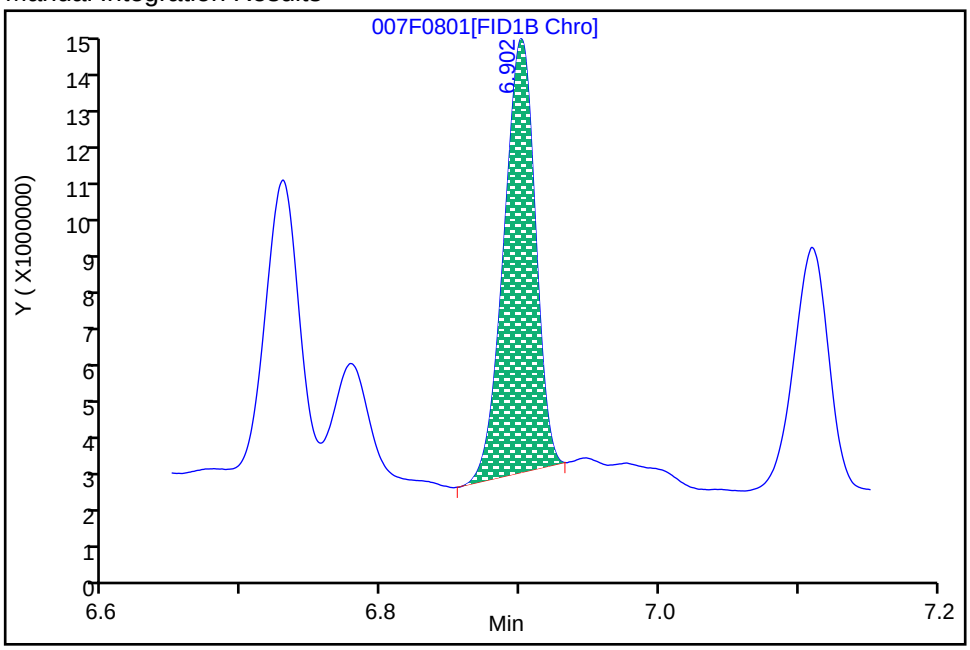
Processing Integration Results

RT: 6.902
Area: 31126074
Amount: 157.00
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.902
Area: 17577043
Amount: 116.57
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:15:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D		
Lab Sample ID:	SVGC-1711	Client Sample ID:	DICVH
Injection Date:	20-Nov-2019 12:15:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1711		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	8
Cpnd Sublist:	Diesel.sub	Spike List File:	DODICV.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	250000	247404	-1	99	80- 120

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D		
Lab Sample ID:	SVGC-1711	Client Sample ID:	DICVH
Injection Date:	20-Nov-2019 12:15:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1711		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	8
Cpnd Sublist:	Diesel.sub	Spike List File:	DODICV.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	64678782	494.81	247404	M
$	1 OTP	6.895	6.895	0.000	7707418	51.116	25558	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

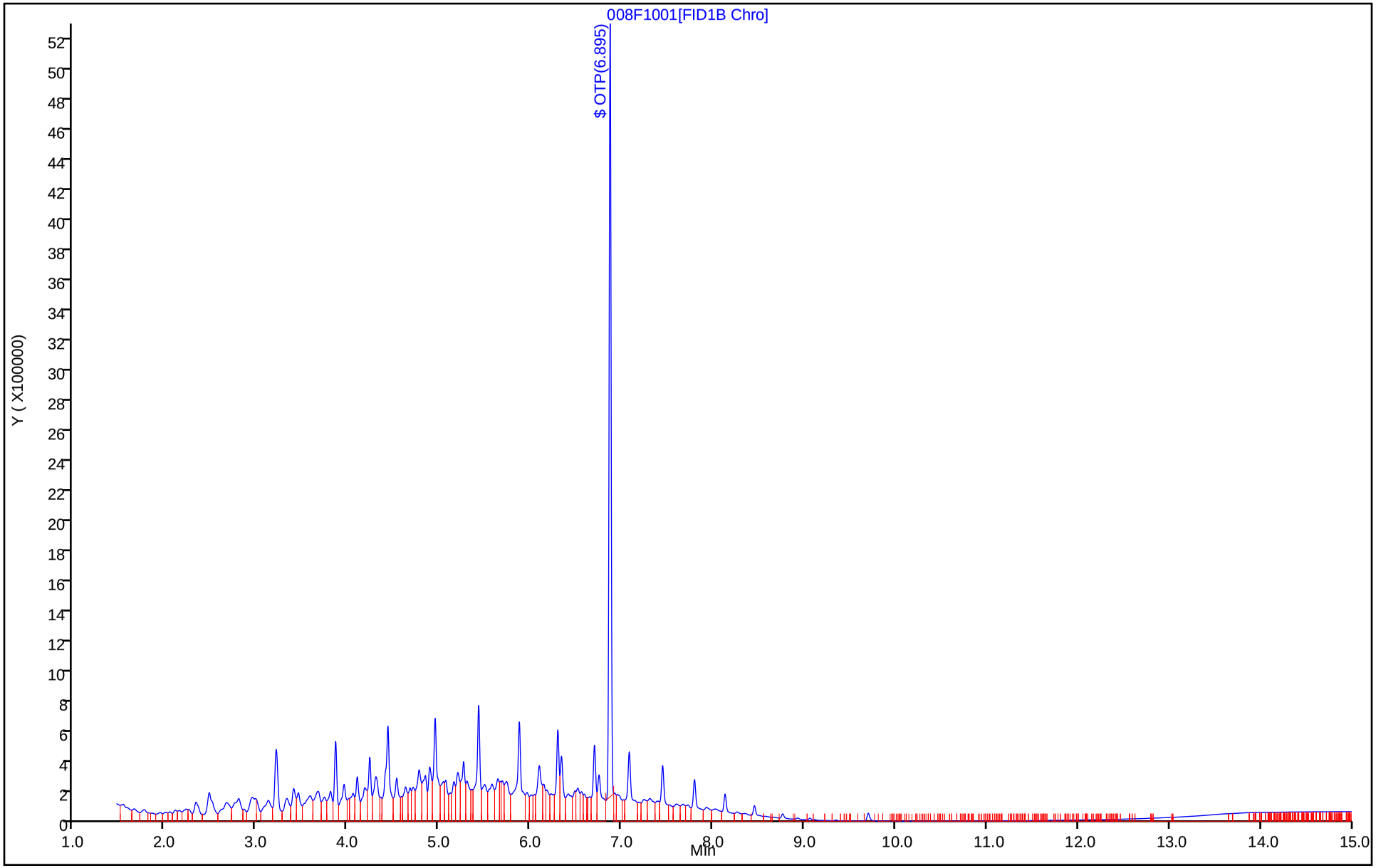
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D				
Injection Date:	20-Nov-2019 12:15:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DICVH	Lab ID:	SVGC-1711		
Sample Info:	SVGC-1711				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

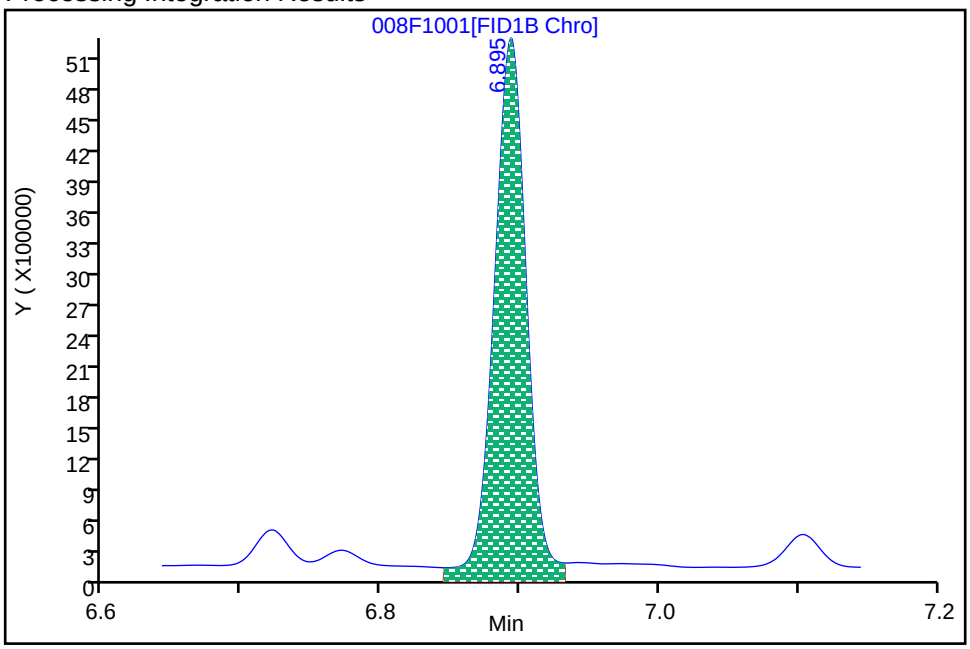
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D		
Injection Date:	20-Nov-2019 12:15:30	Inst. ID:	gc12.i
Client ID:	DICVH	Lab ID:	SVGC-1711
Sample Info:	SVGC-1711		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

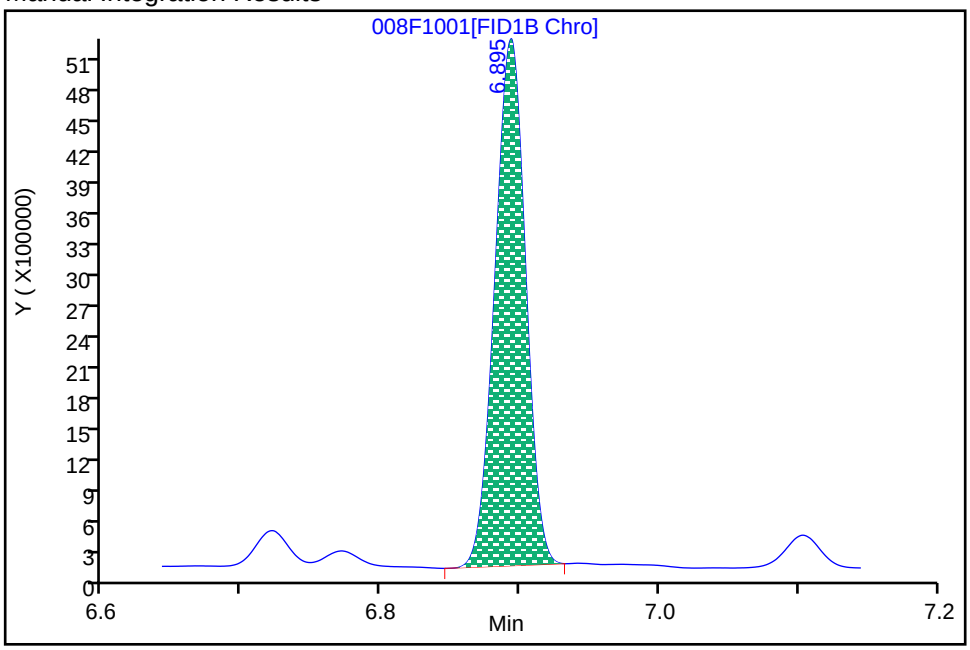
Processing Integration Results

RT: 6.895
Area: 8533074
Conc: 28296
Conc Units: ug/Kg
Conc:



Manual Integration Results

RT: 6.895
Area: 7707418
Conc: 25558
Conc Units: ug/Kg



Data Editor: chg, 20-Nov-2019 13:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H14
Injection Date:	09-Dec-2019 10:05:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	153669	0.01	1.9	20	102
3 #2 Diesel Fuel	130715	123323	0.01	-5.7	20	94

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H14
Injection Date:	09-Dec-2019 10:05:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 10:50:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	61661273	500.00	471.72	M
$	1 OTP	6.894	6.895	-0.001	7683437	50.000	50.957	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

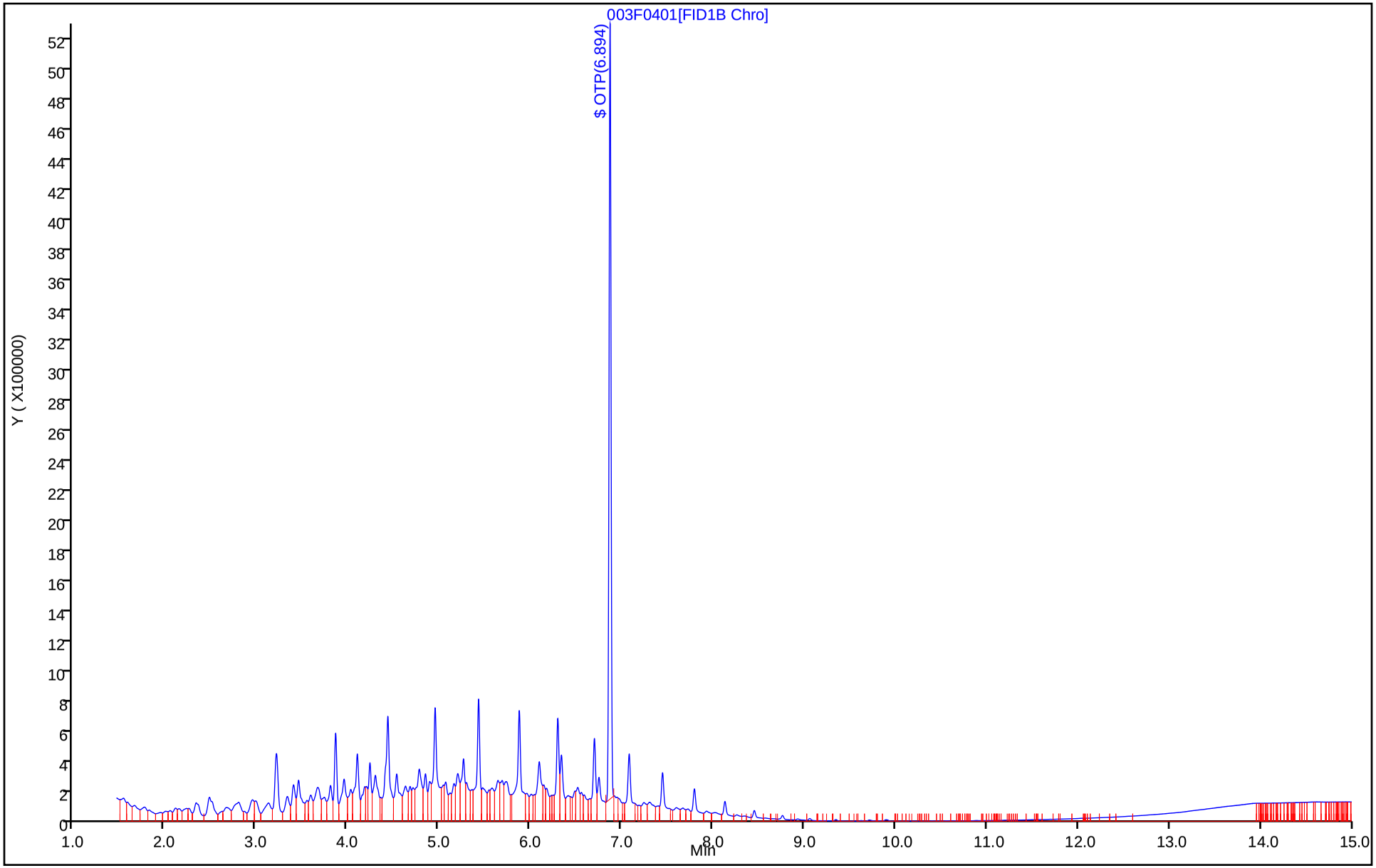
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0401.D				
Injection Date:	09-Dec-2019 10:05:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H14	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:19 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

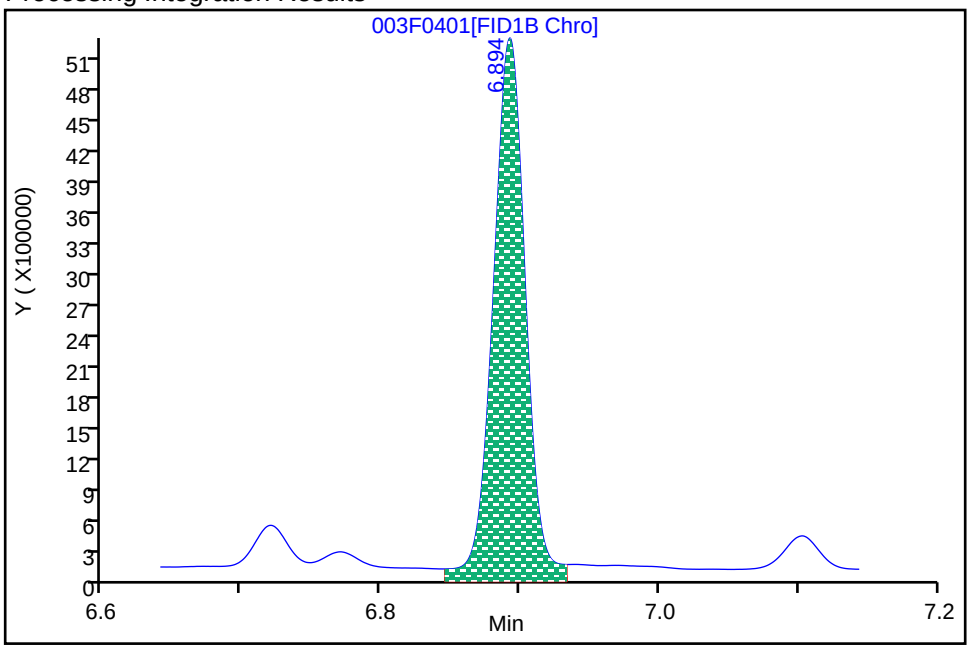
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0401.D		
Injection Date:	09-Dec-2019 10:05:30	Inst. ID:	gc12.i
Client ID:	D3H14	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

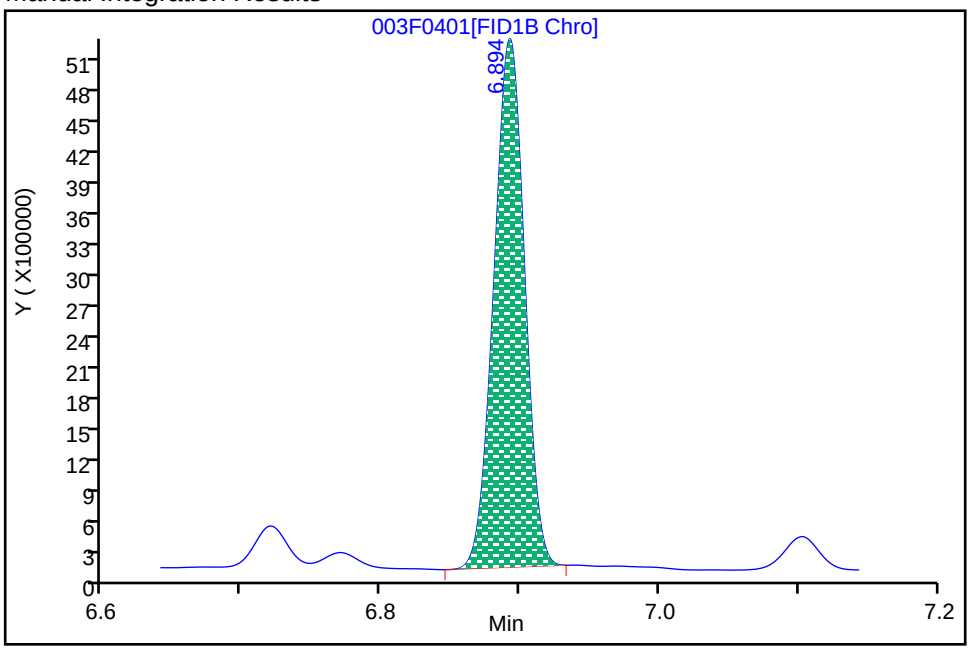
Processing Integration Results

RT: 6.894
Area: 8436750
Amount: 55.953
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.894
Area: 7683437
Amount: 50.957
Amount Units: ng



Data Editor: chg, 09-Dec-2019 10:50:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0901.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H15
Injection Date:	09-Dec-2019 11:41:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	157056	0.01	4.2	20	104
3 #2 Diesel Fuel	130715	128438	0.01	-1.7	20	98

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0901.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H15
Injection Date:	09-Dec-2019 11:41:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 12:03:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	64218792	500.00	491.29	M
$	1 OTP	6.894	6.895	-0.001	7852815	50.000	52.080	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

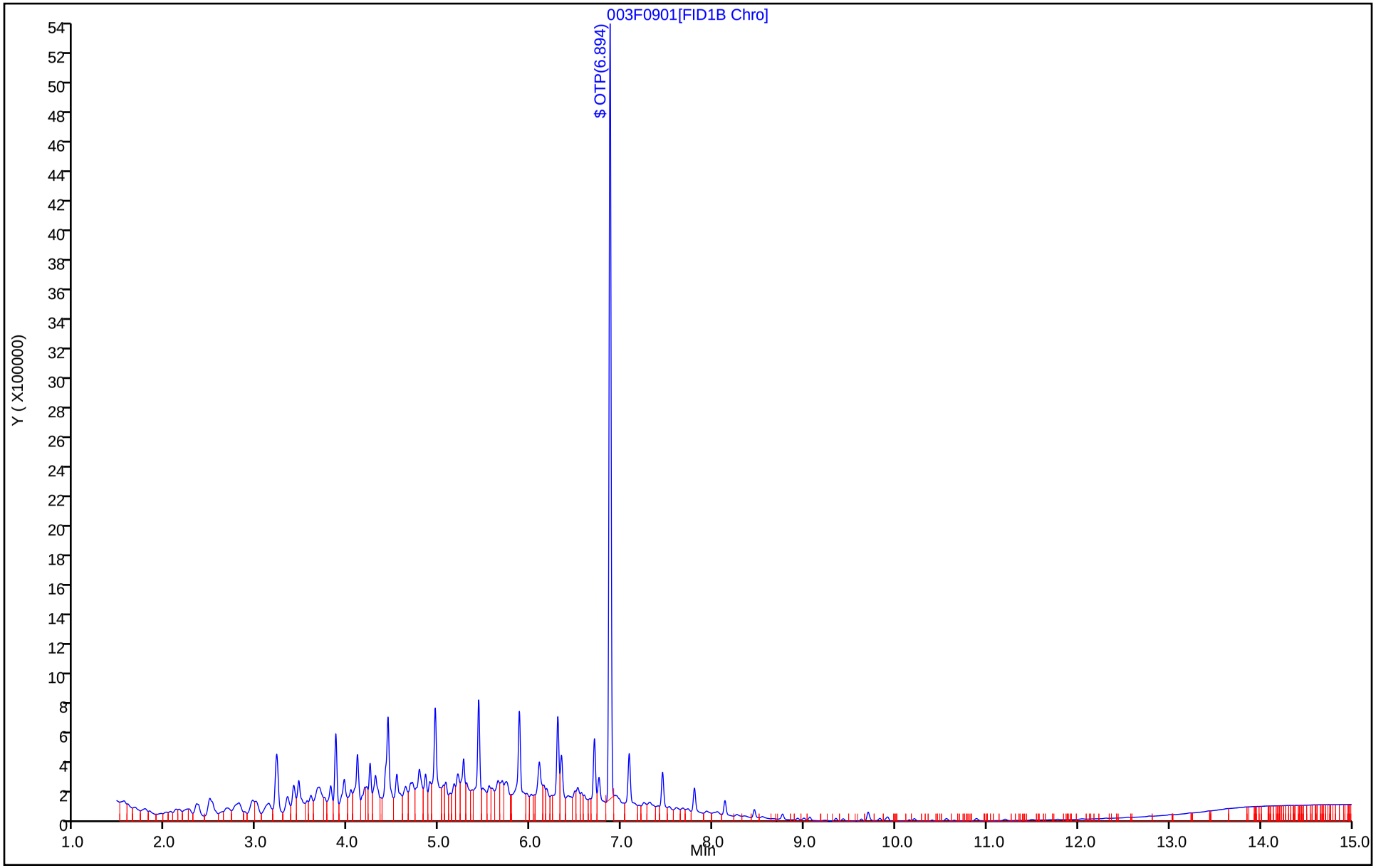
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0901.D				
Injection Date:	09-Dec-2019 11:41:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H15	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

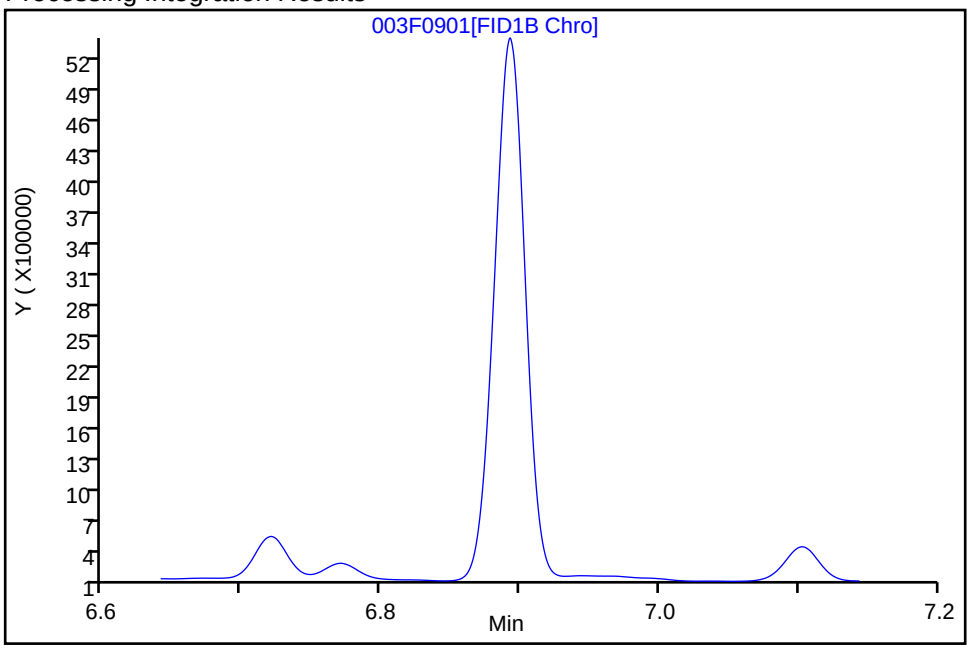
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F0901.D		
Injection Date:	09-Dec-2019 11:41:30	Inst. ID:	gc12.i
Client ID:	D3H15	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

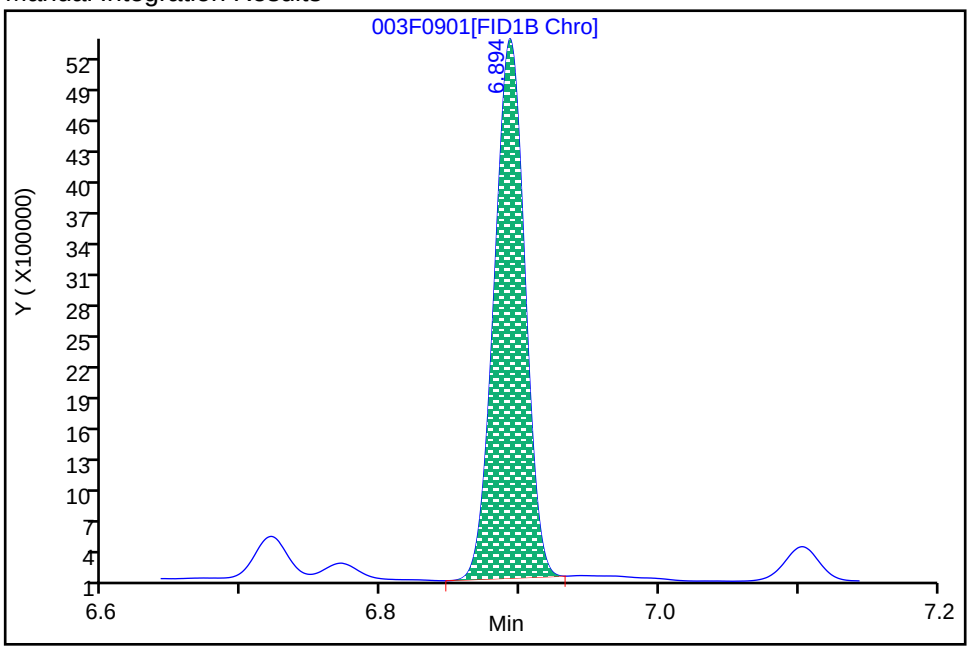
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.894
Area: 7852815
Amount: 52.080
Amount Units: ng



Data Editor: chg, 09-Dec-2019 12:03:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F2401.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H15
Injection Date:	09-Dec-2019 16:30:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	150492	0.01	-0.2	20	100
3 #2 Diesel Fuel	130715	126117	0.01	-3.5	20	96

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F2401.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H15
Injection Date:	09-Dec-2019 16:30:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	10-Dec-2019 10:07:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	63058593	500.00	482.41	M
$	1 OTP	6.895	6.895	0.000	7524618	50.000	49.904	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

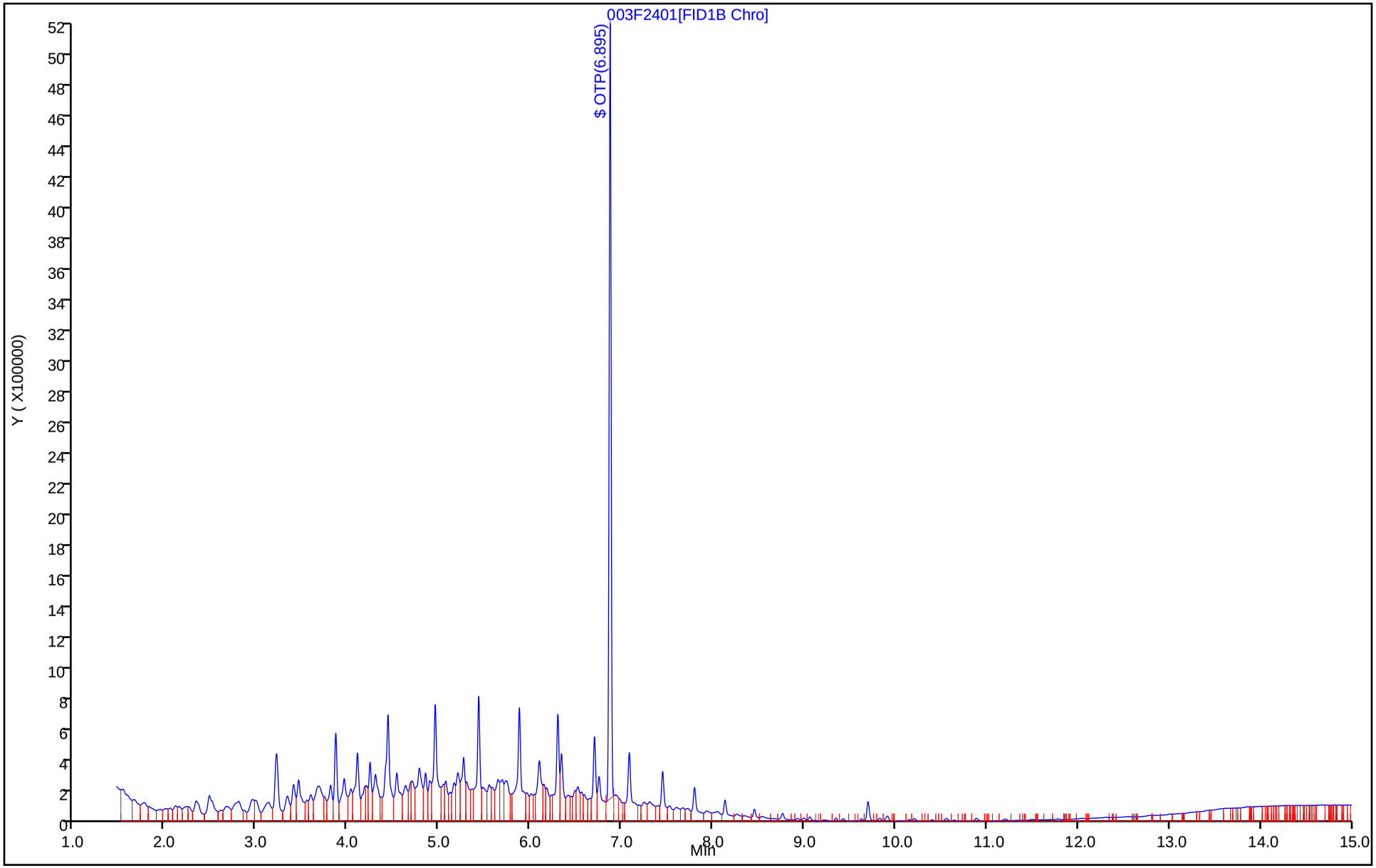
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F2401.D				
Injection Date:	09-Dec-2019 16:30:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H15	Lab ID:	SVGC-1852		
Sample Info:	SVGC-1852				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

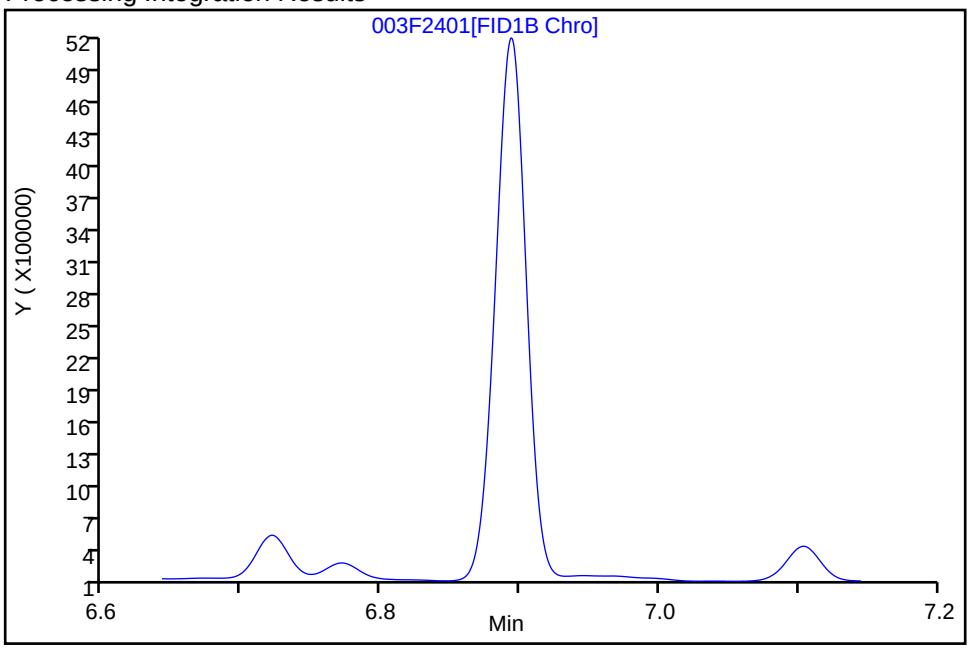
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F2401.D		
Injection Date:	09-Dec-2019 16:30:30	Inst. ID:	gc12.i
Client ID:	D3H15	Lab ID:	SVGC-1852
Sample Info:	SVGC-1852		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

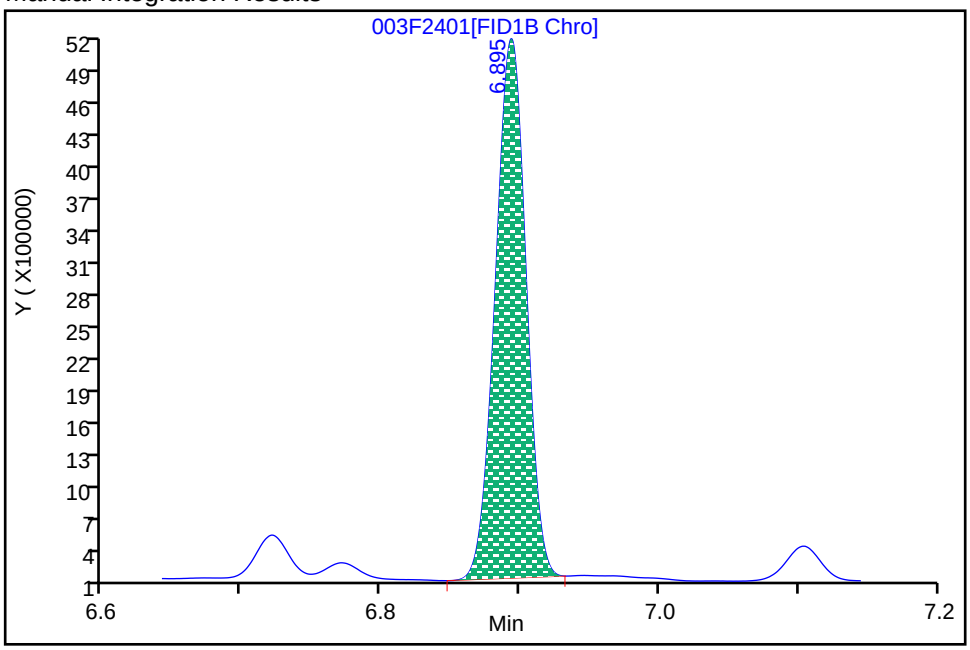
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 7524618
Amount: 49.904
Amount Units: ng



Data Editor: chg, 10-Dec-2019 10:07:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4401.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H16
Injection Date:	09-Dec-2019 22:54:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	155279	0.01	3	20	103
3 #2 Diesel Fuel	130715	129833	0.01	-0.7	20	99

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4401.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H16
Injection Date:	09-Dec-2019 22:54:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	10-Dec-2019 10:08:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	64916604	500.00	496.63	M
$	1 OTP	6.895	6.895	0.000	7763945	50.000	51.491	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

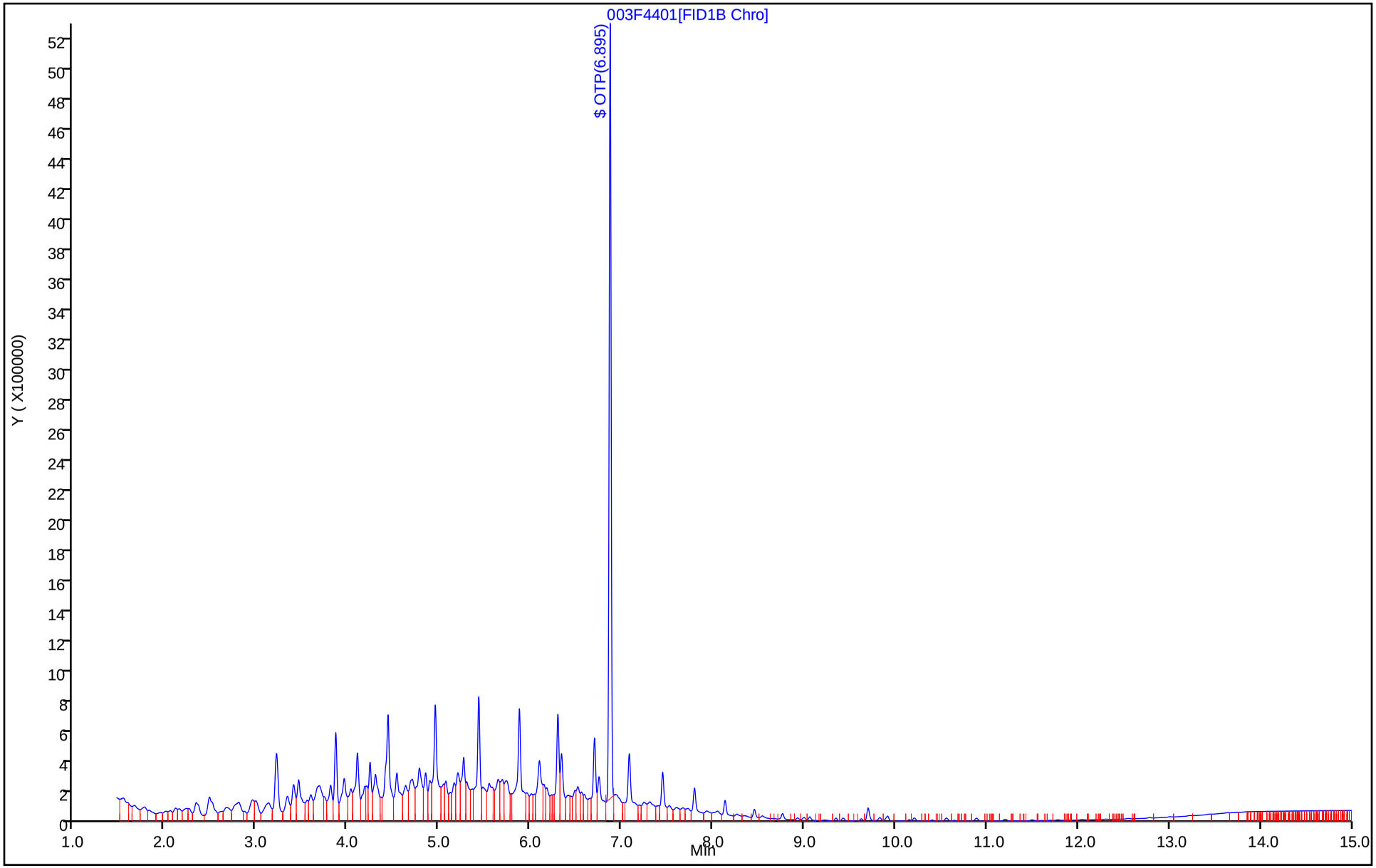
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4401.D				
Injection Date:	09-Dec-2019 22:54:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H16	Lab ID:	SVGC-1852		
Sample Info:	SVGC-1852				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

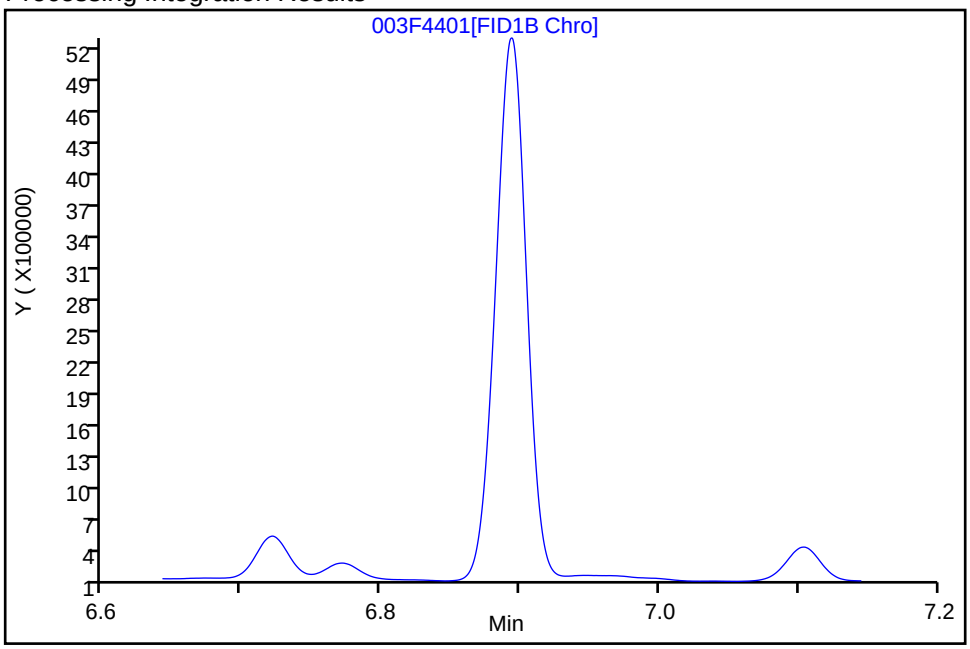
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4401.D		
Injection Date:	09-Dec-2019 22:54:30	Inst. ID:	gc12.i
Client ID:	D3H16	Lab ID:	SVGC-1852
Sample Info:	SVGC-1852		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

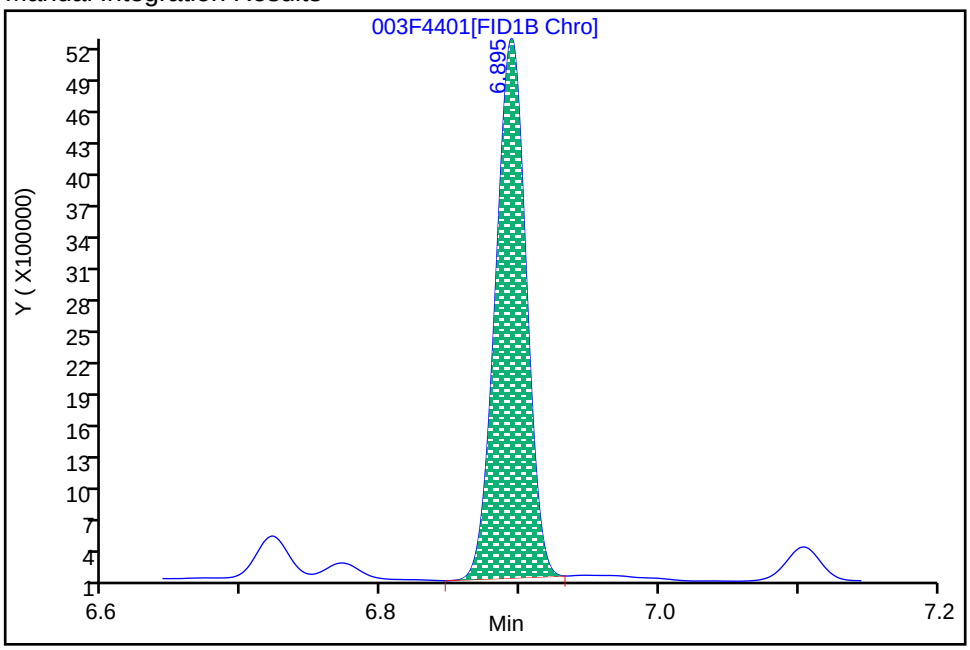
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 7763945
Amount: 51.491
Amount Units: ng



Data Editor: chg, 10-Dec-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4701.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H17
Injection Date:	09-Dec-2019 23:51:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	157886	0.01	4.7	20	105
3 #2 Diesel Fuel	130715	133430	0.01	2.1	20	102

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4701.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H17
Injection Date:	09-Dec-2019 23:51:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	10-Dec-2019 10:08:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	66714950	500.00	510.39	M
$	1 OTP	6.895	6.895	0.000	7894296	50.000	52.355	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

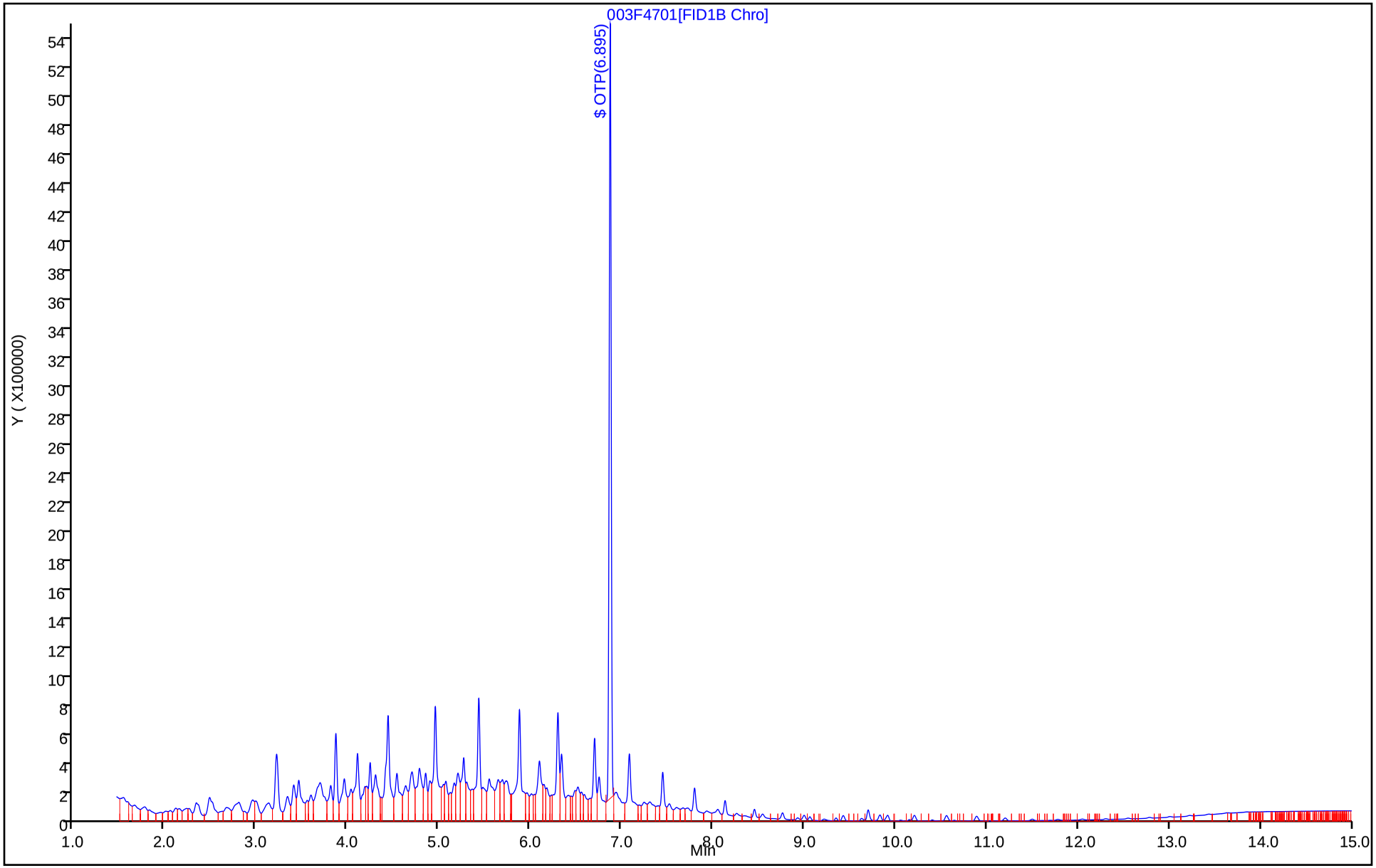
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4701.D				
Injection Date:	09-Dec-2019 23:51:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H17	Lab ID:	SVGC-1852		
Sample Info:	SVGC-1852				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

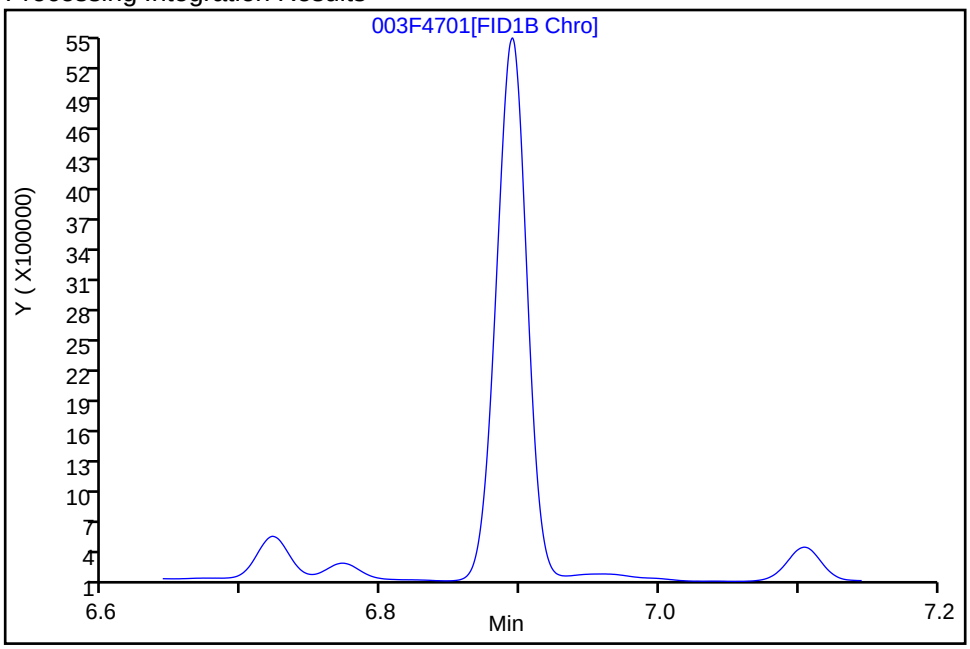
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\003F4701.D		
Injection Date:	09-Dec-2019 23:51:30	Inst. ID:	gc12.i
Client ID:	D3H17	Lab ID:	SVGC-1852
Sample Info:	SVGC-1852		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

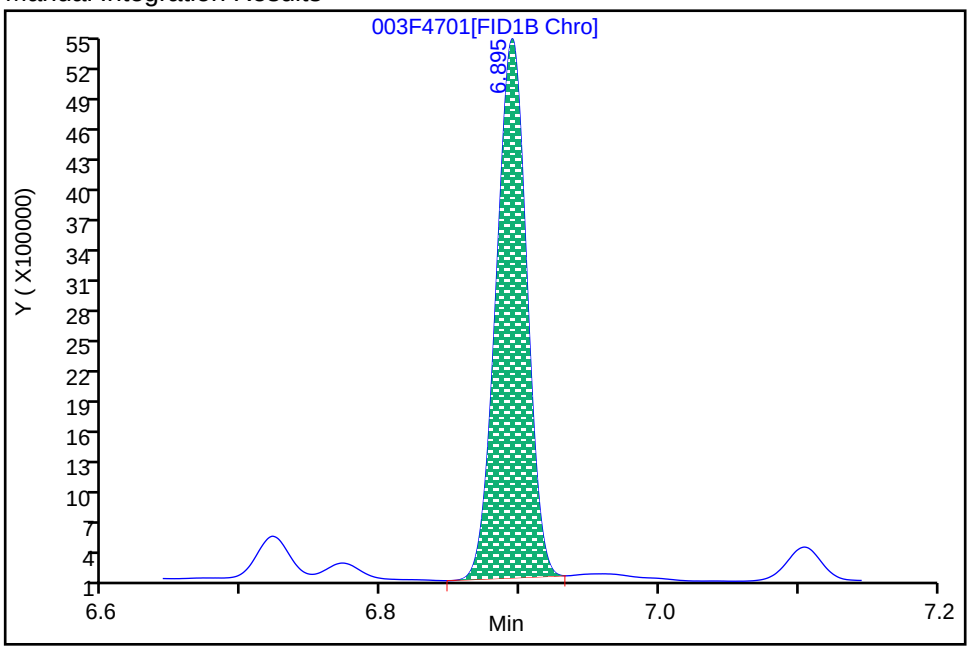
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 7894296
Amount: 52.355
Amount Units: ng



Data Editor: chg, 10-Dec-2019 10:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H18
Injection Date:	10-Dec-2019 12:27:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	153267	0.01	1.6	20	102
3 #2 Diesel Fuel	130715	124059	0.01	-5.1	20	95

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H18
Injection Date:	10-Dec-2019 12:27:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	62029283	500.00	474.54	M
$	1 OTP	6.895	6.895	0.000	7663349	50.000	50.824	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

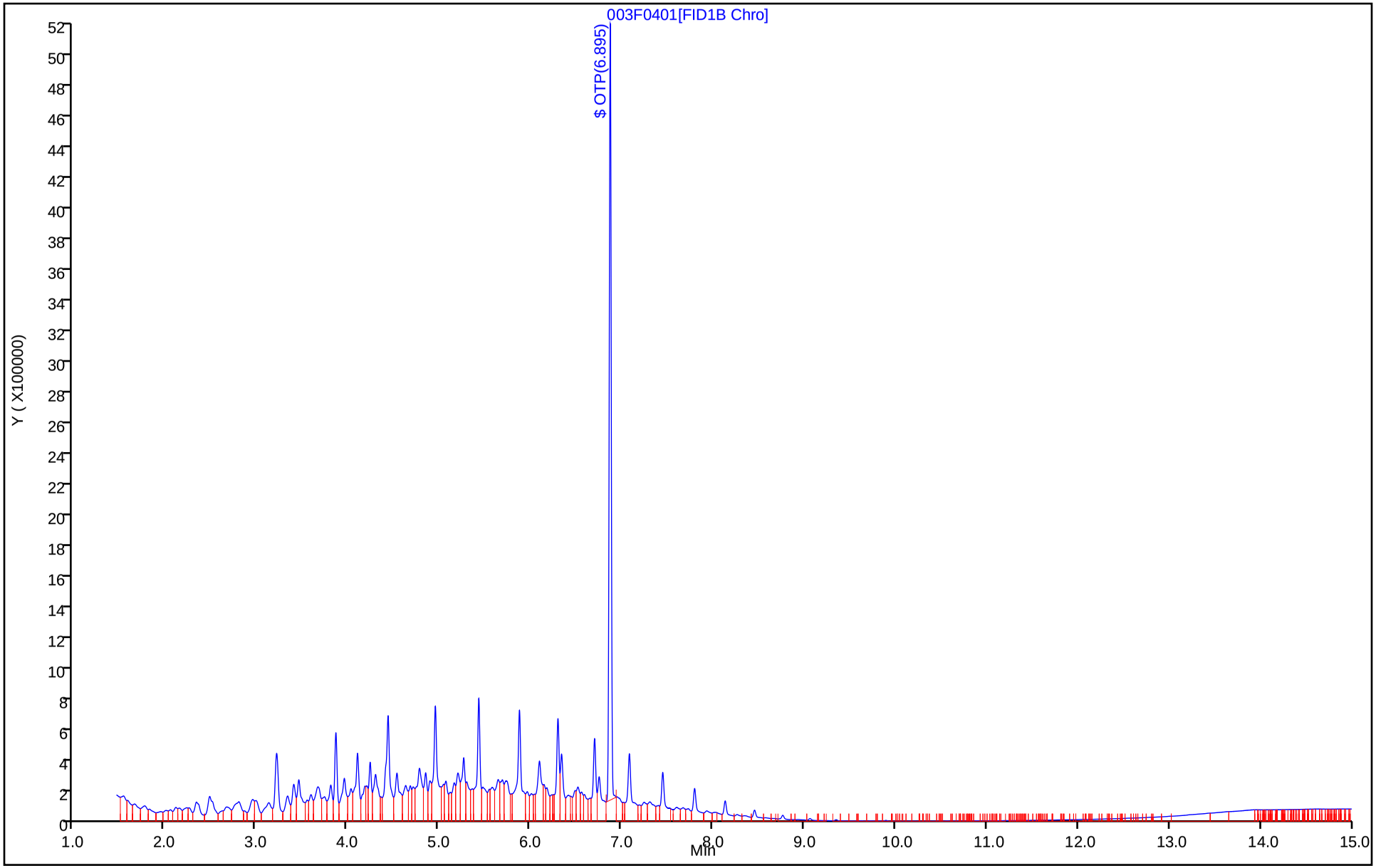
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0401.D				
Injection Date:	10-Dec-2019 12:27:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H18	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

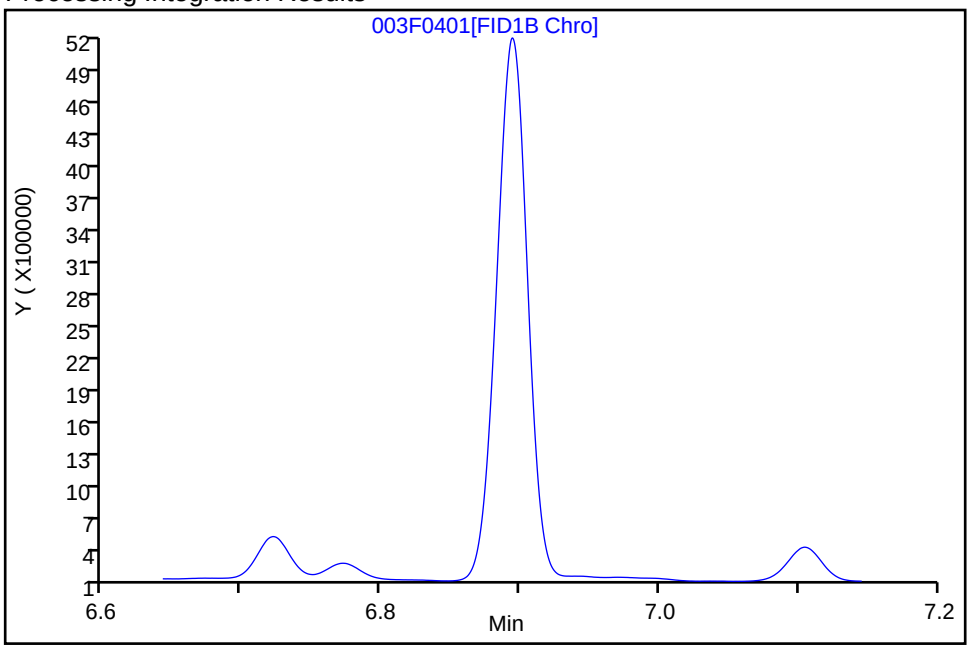
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0401.D		
Injection Date:	10-Dec-2019 12:27:30	Inst. ID:	gc12.i
Client ID:	D3H18	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

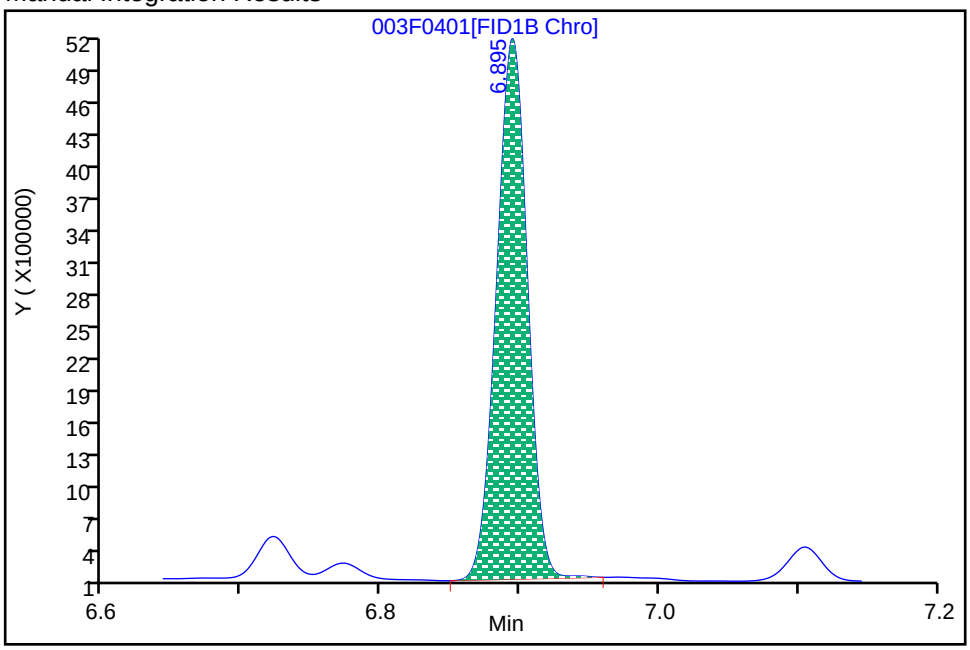
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 7663349
Amount: 50.824
Amount Units: ng



Data Editor: chg, 11-Dec-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0901.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H19
Injection Date:	10-Dec-2019 14:03:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	153235	0.01	1.6	20	102
3 #2 Diesel Fuel	130715	127535	0.01	-2.4	20	98

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0901.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H19
Injection Date:	10-Dec-2019 14:03:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:02:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	63767727	500.00	487.84	M
$	1 OTP	6.896	6.895	0.000	7661766	50.000	50.813	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

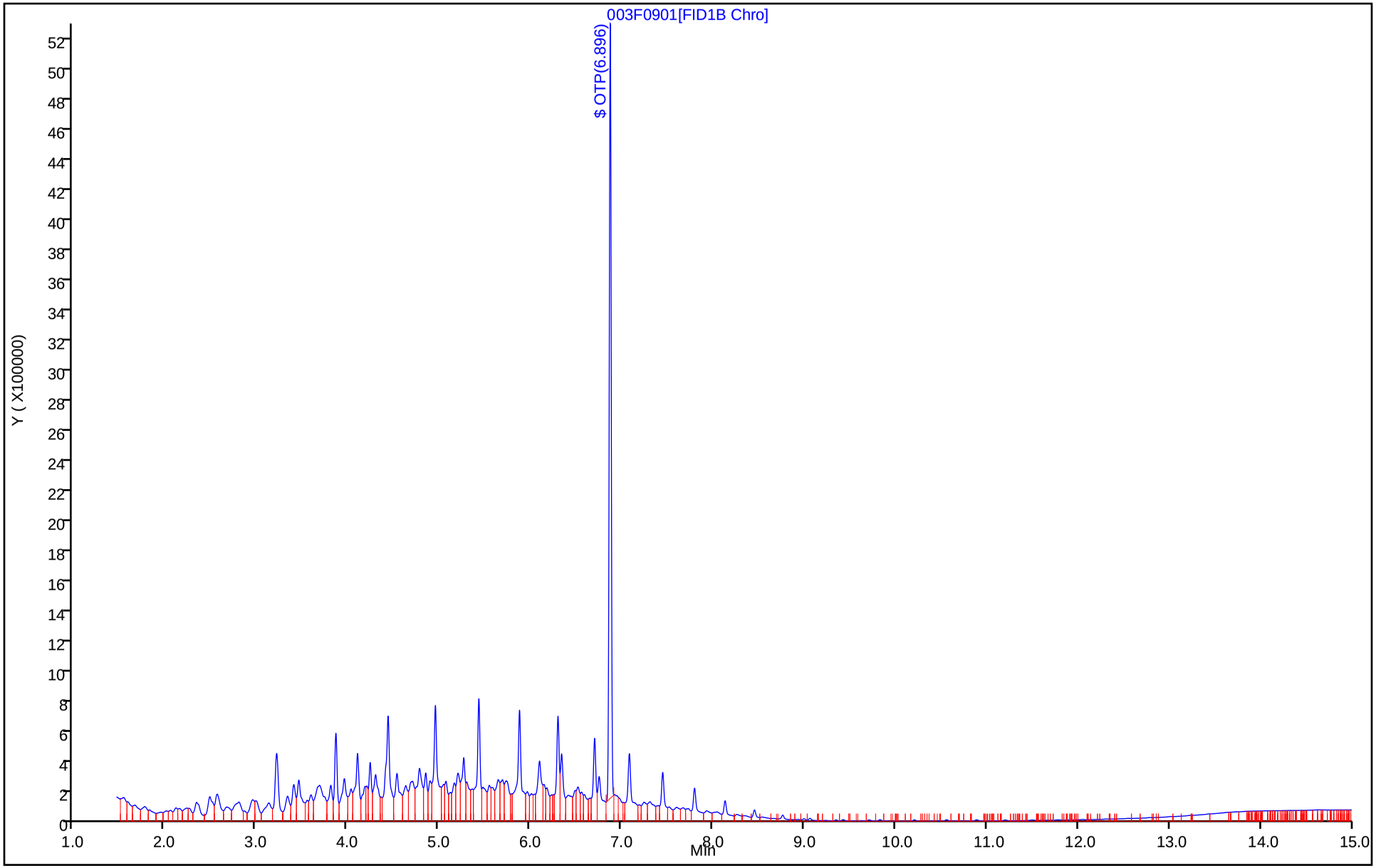
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0901.D				
Injection Date:	10-Dec-2019 14:03:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H19	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:15 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

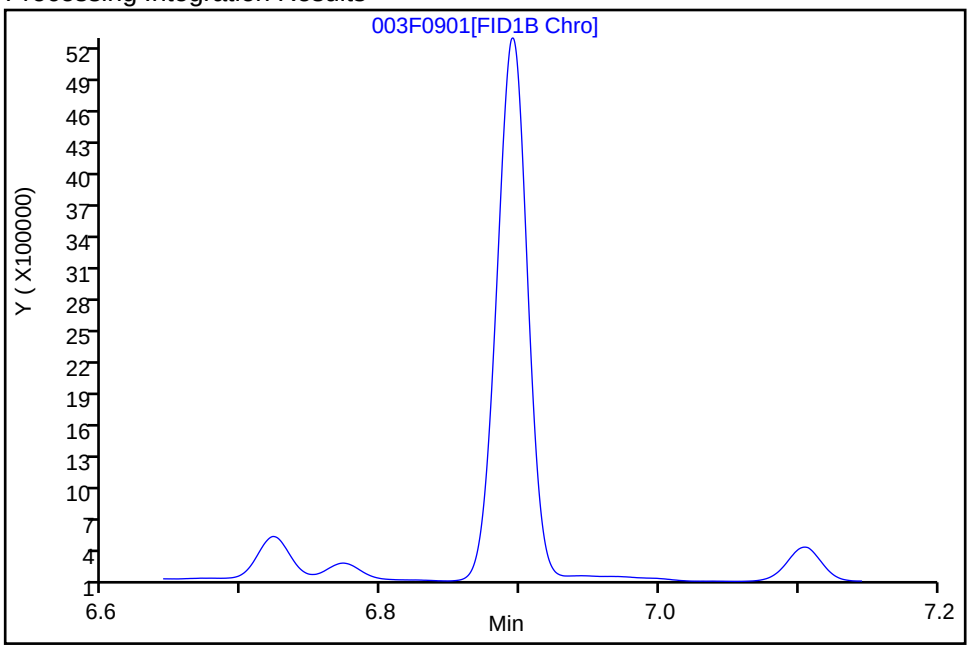
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F0901.D		
Injection Date:	10-Dec-2019 14:03:30	Inst. ID:	gc12.i
Client ID:	D3H19	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

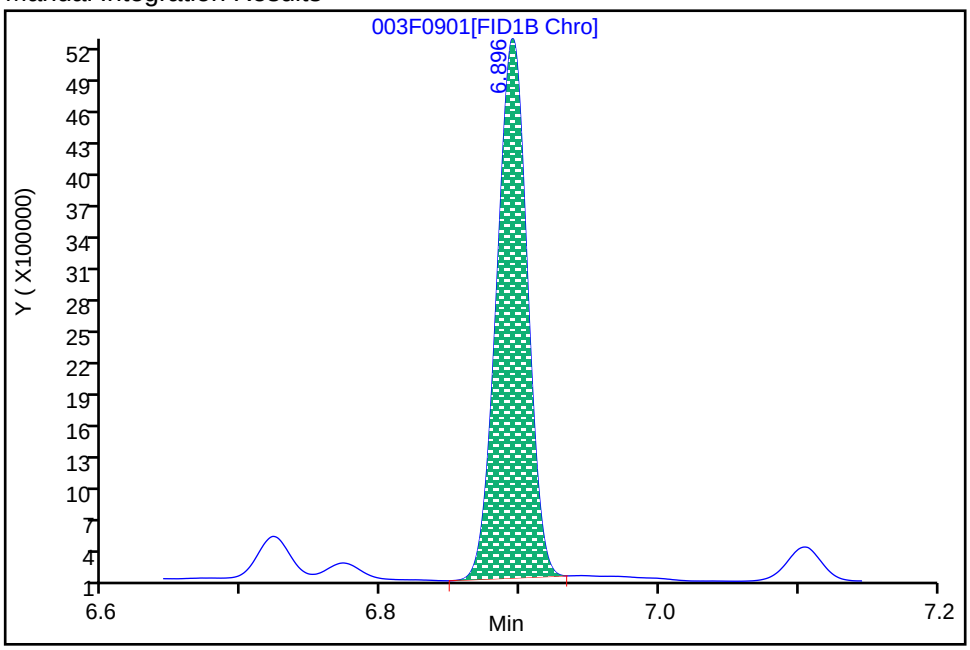
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.896
Area: 7661766
Amount: 50.813
Amount Units: ng



Data Editor: chg, 11-Dec-2019 10:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F1701.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H20
Injection Date:	10-Dec-2019 16:37:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	153495	0.01	1.8	20	102
3 #2 Diesel Fuel	130715	130135	0.01	-0.4	20	100

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F1701.D		
Lab Sample ID:	SVGC-1852	Client Sample ID:	D3H20
Injection Date:	10-Dec-2019 16:37:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1852		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:02:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	65067539	500.00	497.78	M
$	1 OTP	6.896	6.895	0.000	7674725	50.000	50.899	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

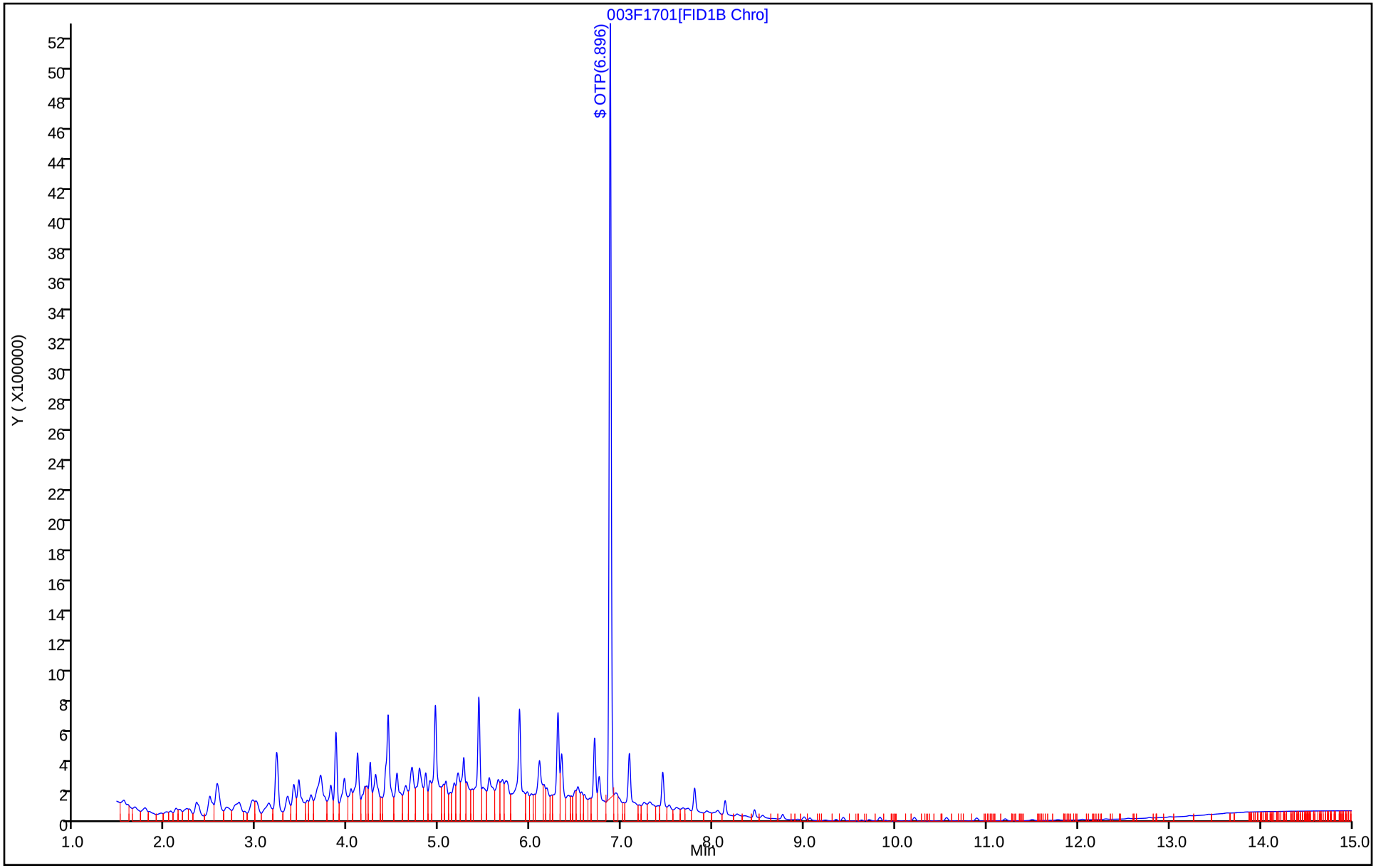
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F1701.D				
Injection Date:	10-Dec-2019 16:37:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H20	Lab ID:	SVGC-1852		
Sample Info:	SVGC-1852				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

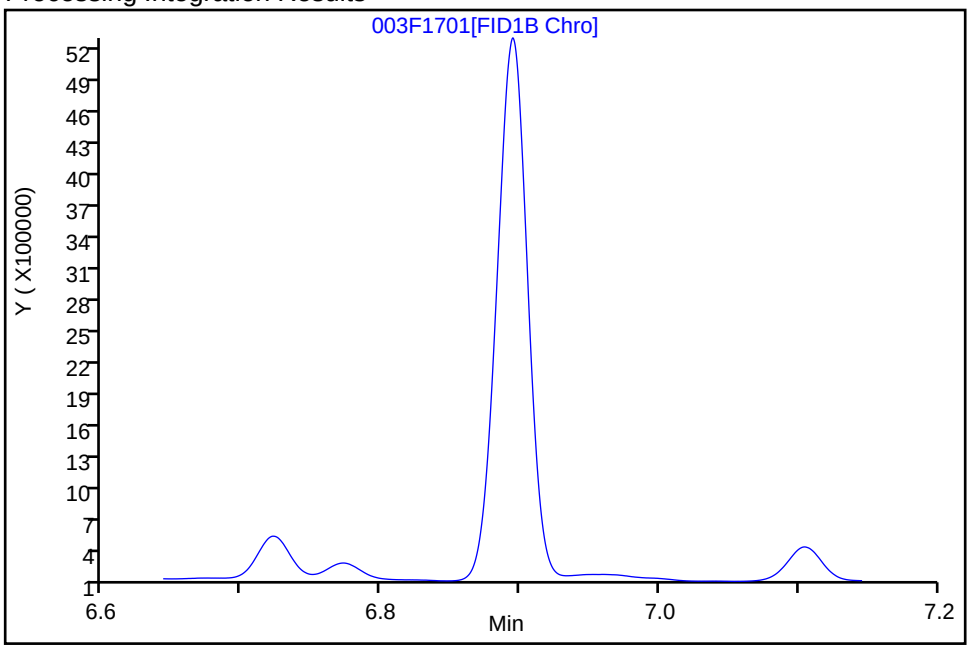
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\003F1701.D		
Injection Date:	10-Dec-2019 16:37:30	Inst. ID:	gc12.i
Client ID:	D3H20	Lab ID:	SVGC-1852
Sample Info:	SVGC-1852		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

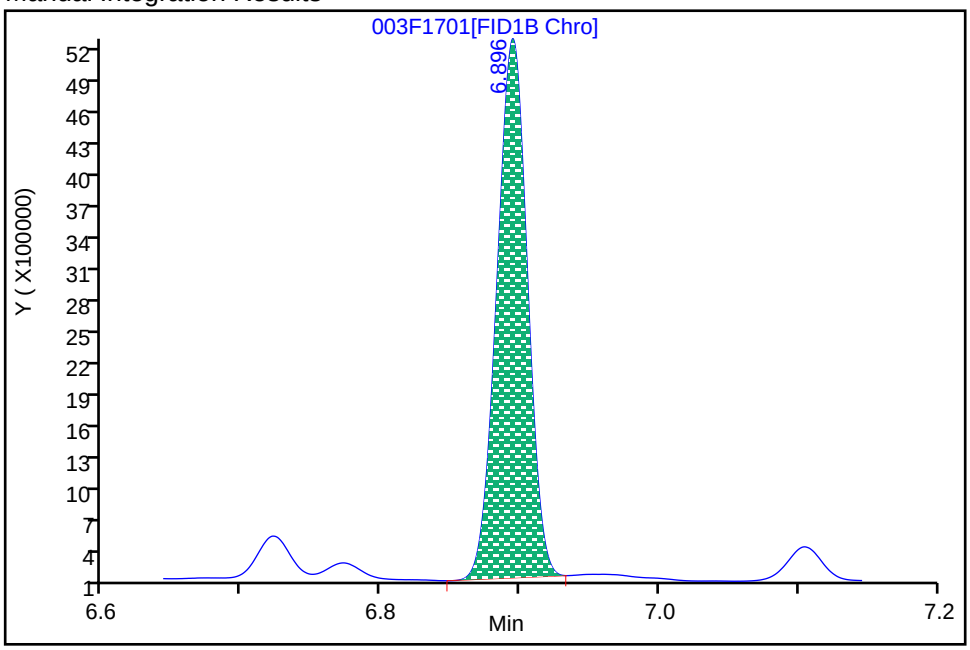
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.896
Area: 7674725
Amount: 50.899
Amount Units: ng



Data Editor: chg, 11-Dec-2019 10:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

RAW QC DATA

TPH - DRO - MB

Sample ID: UQ38050-001
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/09/2019 1024

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		97	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\004F0501.D		
Lab Sample ID:	UQ38050-001	Client Sample ID:	DBLK50
Injection Date:	09-Dec-2019 10:24:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ38050-001		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 10:50:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1414761	10.823	1803.88	eM
$	1 OTP	6.893	6.895	-0.002	7316424	48.523	8087.15	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

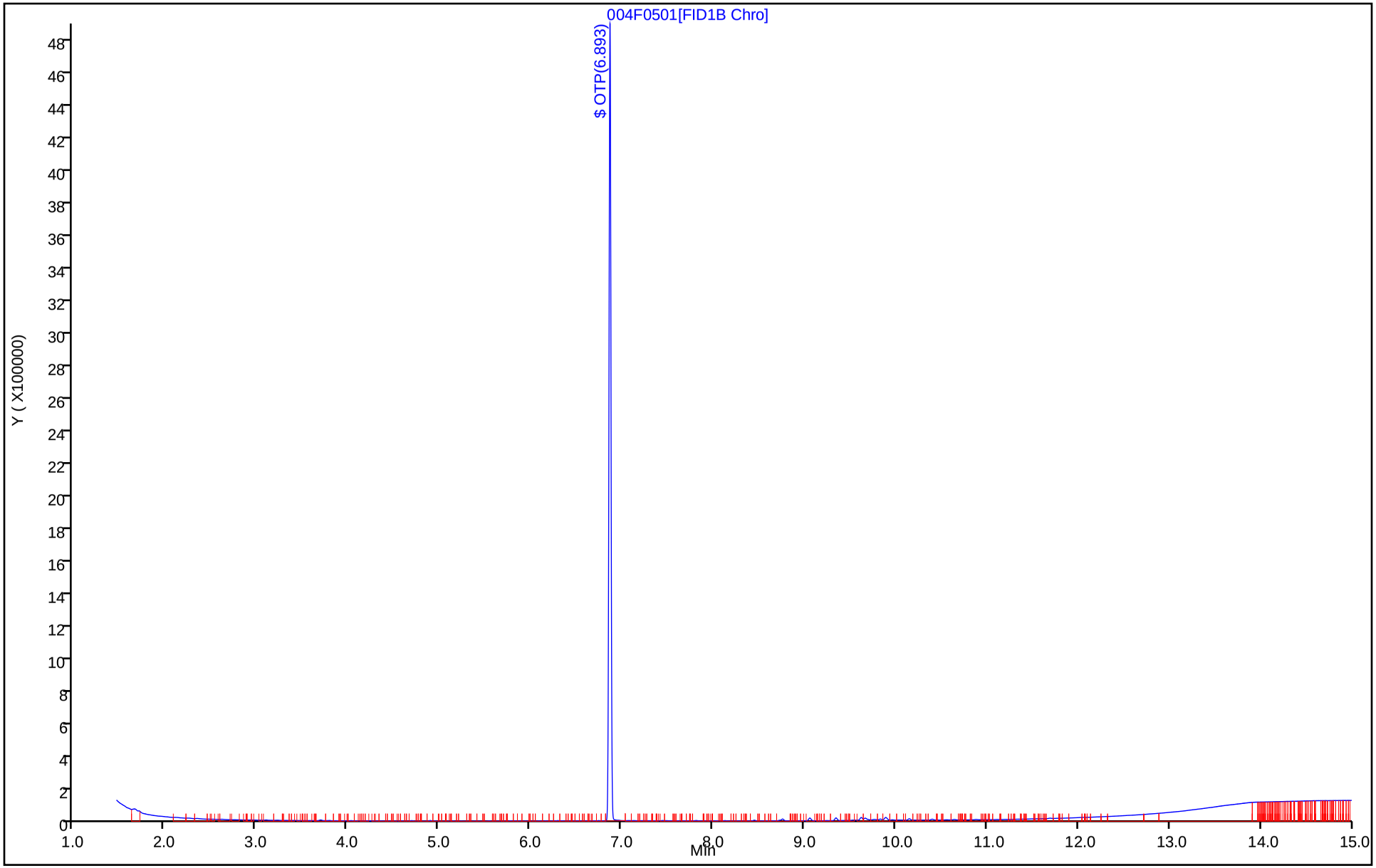
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\004F0501.D				
Injection Date:	09-Dec-2019 10:24:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DBLK50	Lab ID:	UQ38050-001		
Sample Info:	UQ38050-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

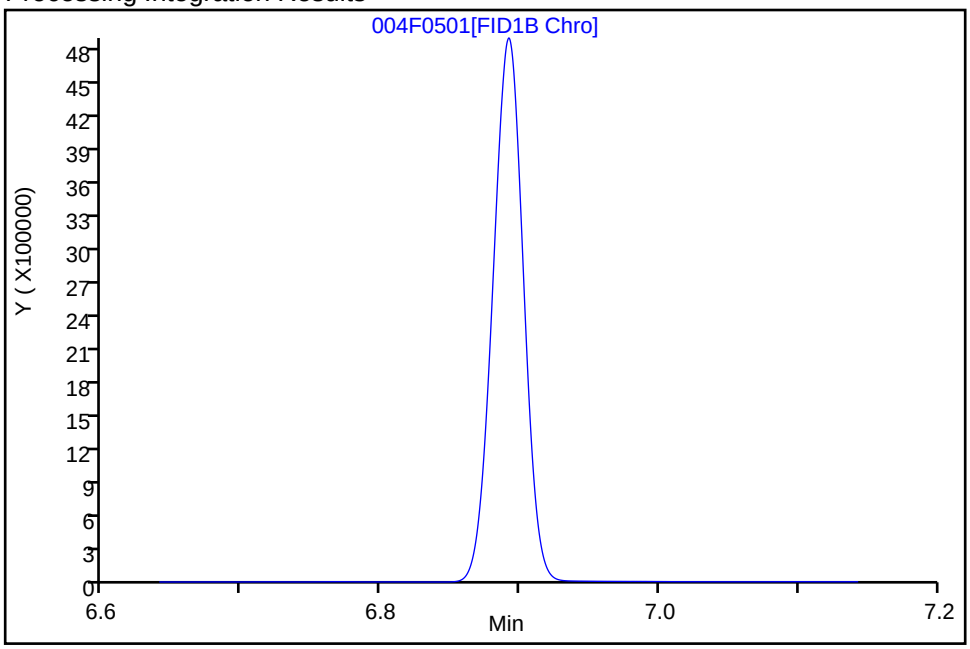
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\004F0501.D		
Injection Date:	09-Dec-2019 10:24:30	Inst. ID:	gc12.i
Client ID:	DBLK50	Lab ID:	UQ38050-001
Sample Info:	UQ38050-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

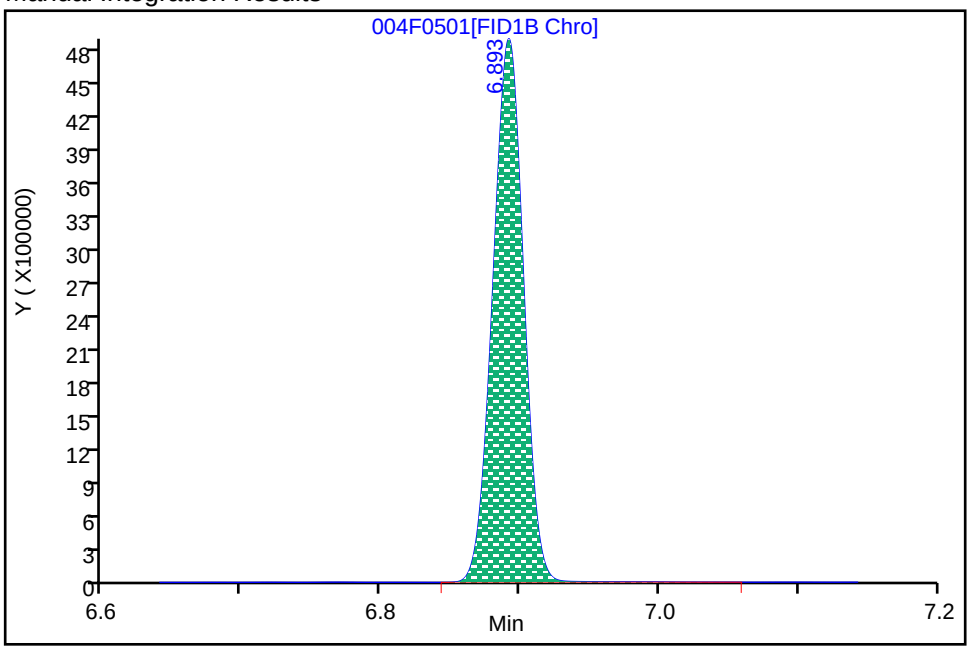
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.893
Area: 7316424
Conc: 8087.15
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 10:50:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - MB

Sample ID: UQ38432-001
Batch: 38432
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/10/2019 0935

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/10/2019 1246

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\004F0501.D		
Lab Sample ID:	UQ38432-001	Client Sample ID:	DBLK32
Injection Date:	10-Dec-2019 12:46:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ38432-001		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.100	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1246159	9.5334	1583.63	eM
$	1 OTP	6.896	6.895	0.000	7183002	47.638	7913.30	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

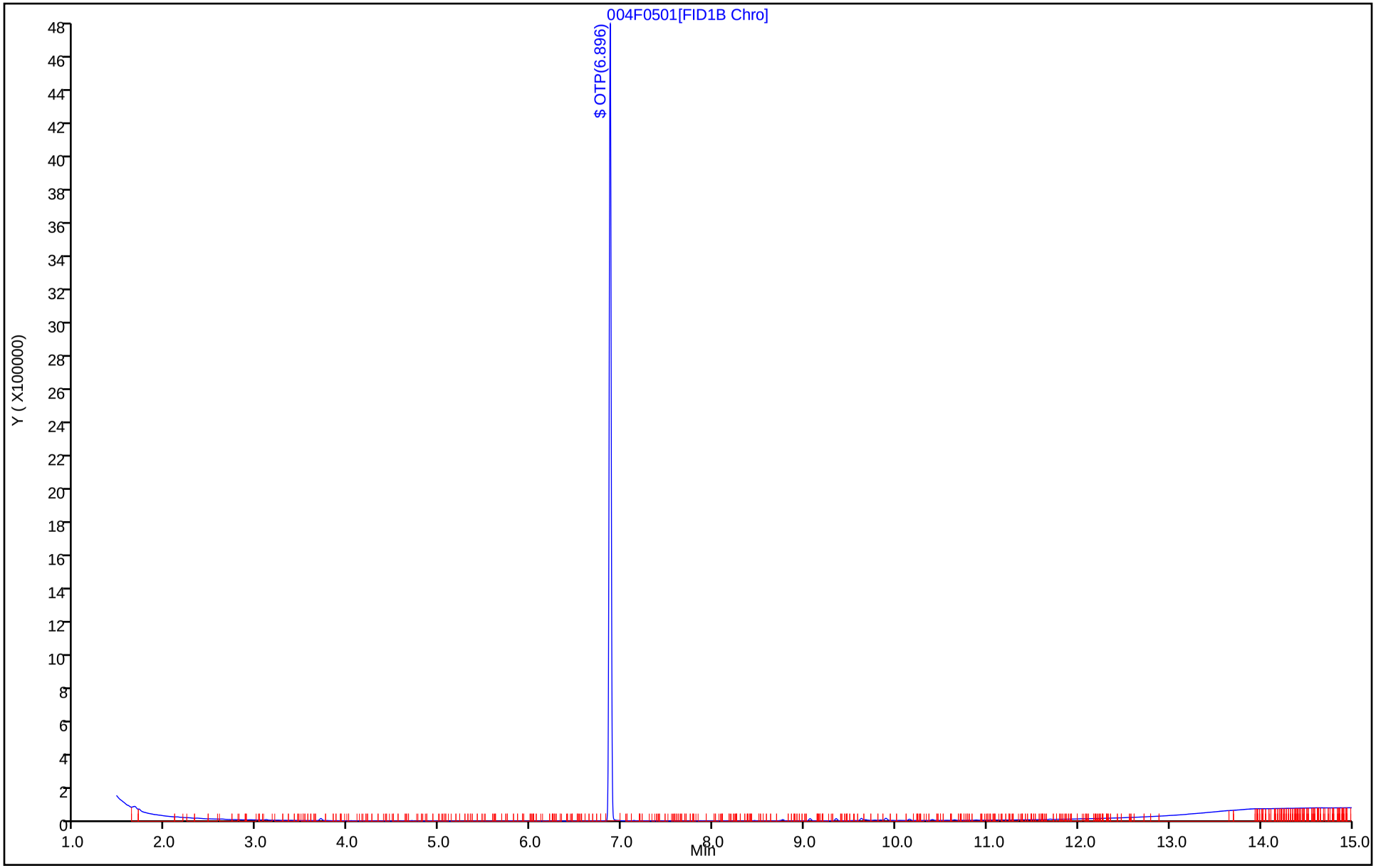
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\004F0501.D				
Injection Date:	10-Dec-2019 12:46:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DBLK32	Lab ID:	UQ38432-001		
Sample Info:	UQ38432-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

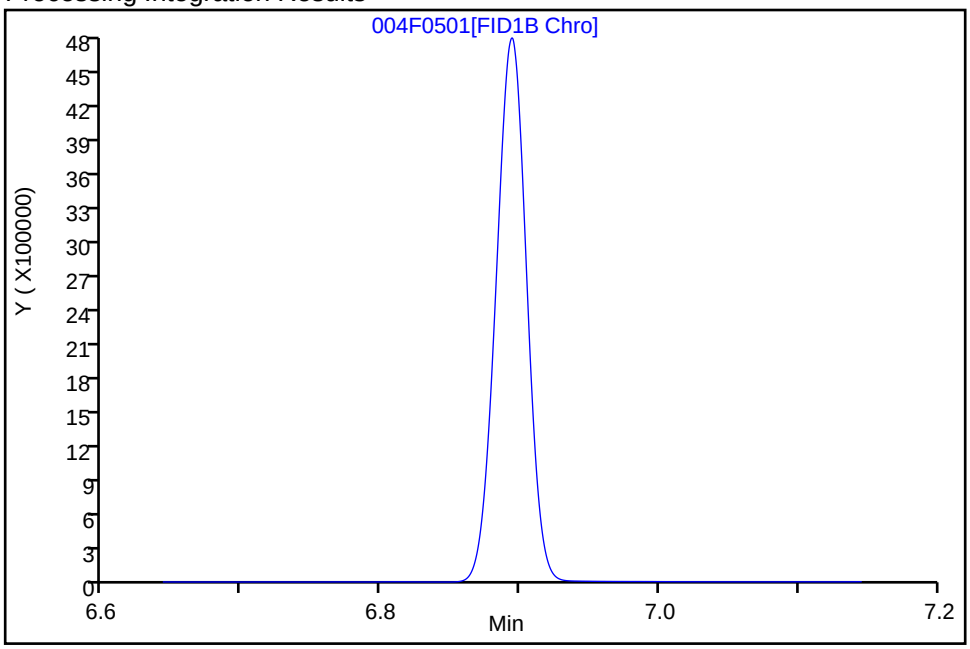
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\004F0501.D		
Injection Date:	10-Dec-2019 12:46:30	Inst. ID:	gc12.i
Client ID:	DBLK32	Lab ID:	UQ38432-001
Sample Info:	UQ38432-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

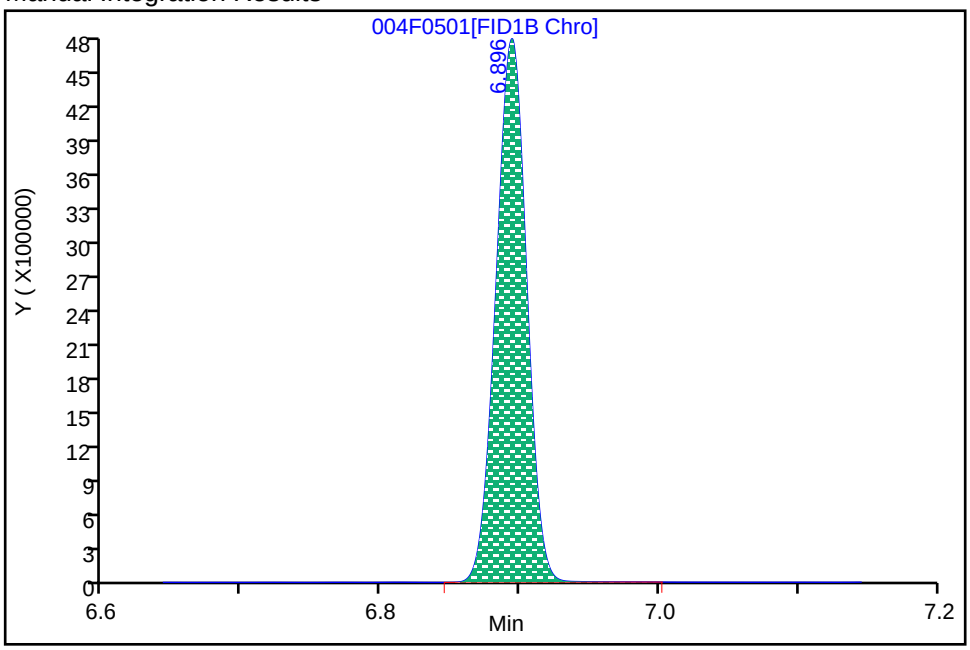
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.896
Area: 7183002
Conc: 7913.30
Conc Units: ug/Kg



Data Editor: chg, 11-Dec-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - LCS

Sample ID: UQ38050-002
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	61000		1	74	70-130	12/09/2019 1043

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		95	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\005F0601.D		
Lab Sample ID:	UQ38050-002	Client Sample ID:	DLCS50
Injection Date:	09-Dec-2019 10:43:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ38050-002		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	83333	61481	-26.2	73.8	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\005F0601.D		
Lab Sample ID:	UQ38050-002	Client Sample ID:	DLCS50
Injection Date:	09-Dec-2019 10:43:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ38050-002		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 11:14:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	48219012	368.89	61481	M
$	1 OTP	6.894	6.895	-0.001	7173793	47.577	7929.50	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

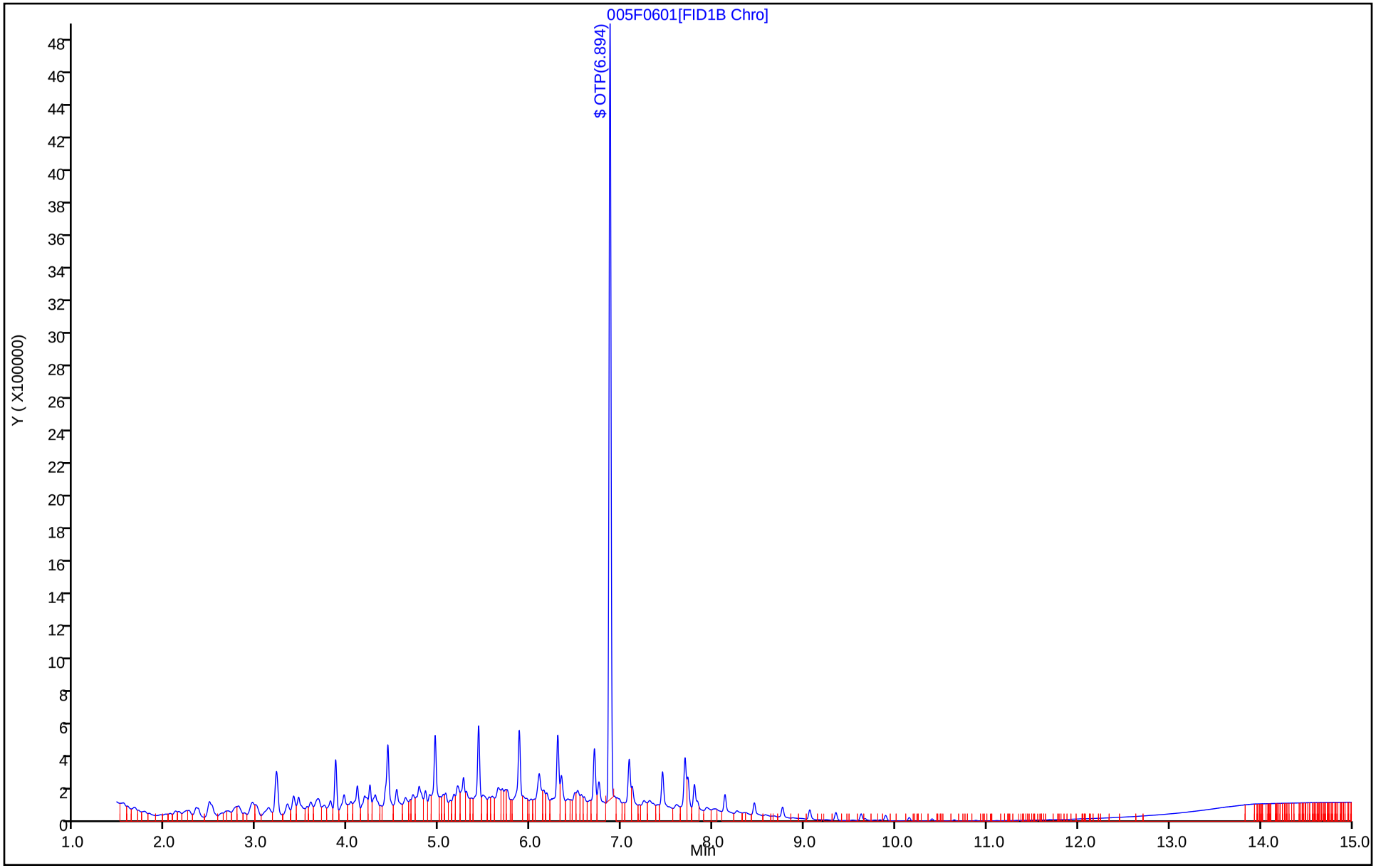
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\005F0601.D				
Injection Date:	09-Dec-2019 10:43:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DLCS50	Lab ID:	UQ38050-002		
Sample Info:	UQ38050-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:25 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

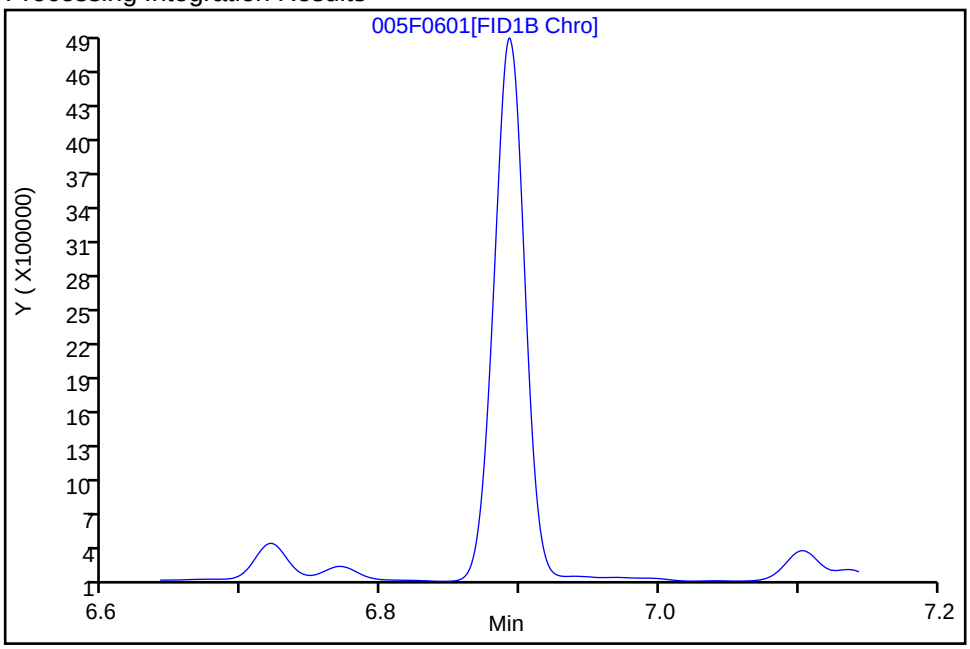
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\005F0601.D		
Injection Date:	09-Dec-2019 10:43:30	Inst. ID:	gc12.i
Client ID:	DLCS50	Lab ID:	UQ38050-002
Sample Info:	UQ38050-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

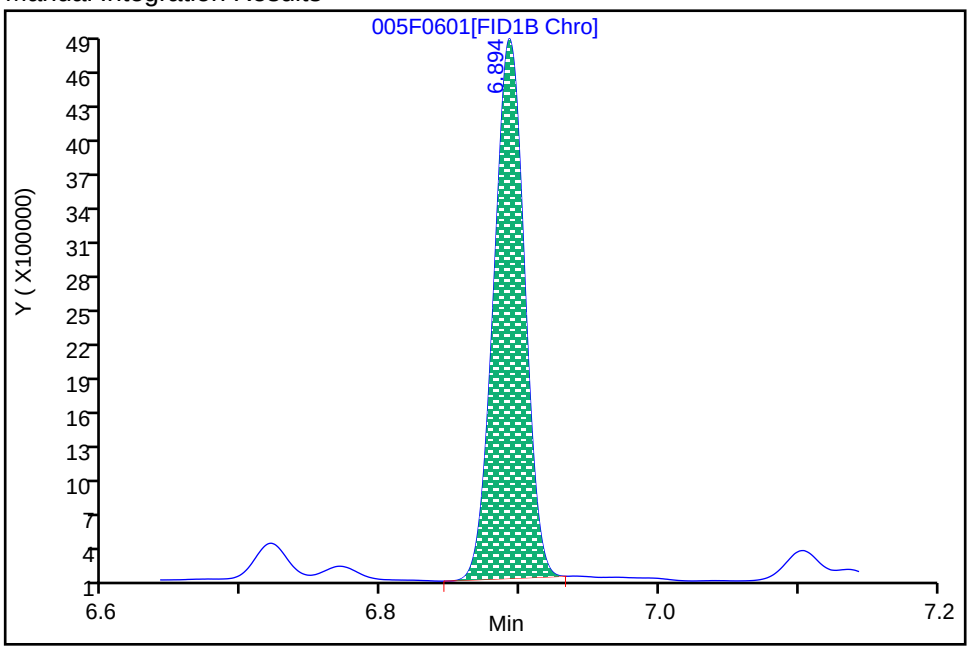
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.894
Area: 7173793
Conc: 7929.50
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 11:14:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - LCS

Sample ID: UQ38432-002
Batch: 38432
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/10/2019 0935

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	67000		1	81	70-130	12/10/2019 1305

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		97	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\005F0601.D		
Lab Sample ID:	UQ38432-002	Client Sample ID:	DLCS32
Injection Date:	10-Dec-2019 13:05:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ38432-002		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	83333	67212	-19.3	80.7	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\005F0601.D		
Lab Sample ID:	UQ38432-002	Client Sample ID:	DLCS32
Injection Date:	10-Dec-2019 13:05:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ38432-002		
Method:	\\Organics\EE\chem\gc12.i\121019F1.b\8015CLVI.m		
Method Date:	11-Dec-2019 10:02:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	11-Dec-2019 10:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	52713640	403.27	67212	M
$	1 OTP	6.895	6.895	0.000	7327414	48.596	8099.30	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

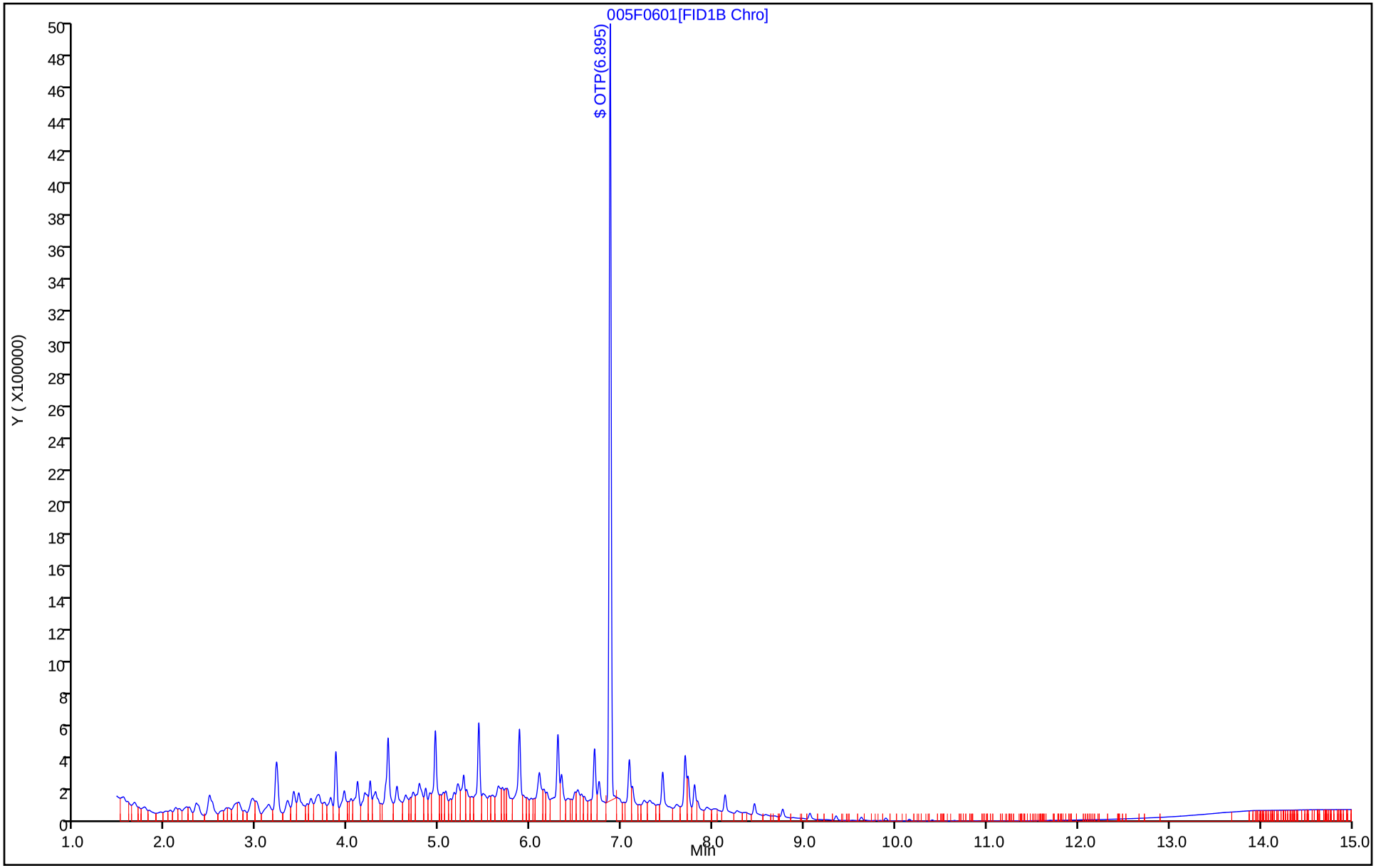
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 11-Dec-2019 10:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\005F0601.D				
Injection Date:	10-Dec-2019 13:05:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DLCS32	Lab ID:	UQ38432-002		
Sample Info:	UQ38432-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 11-Dec-2019 10:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

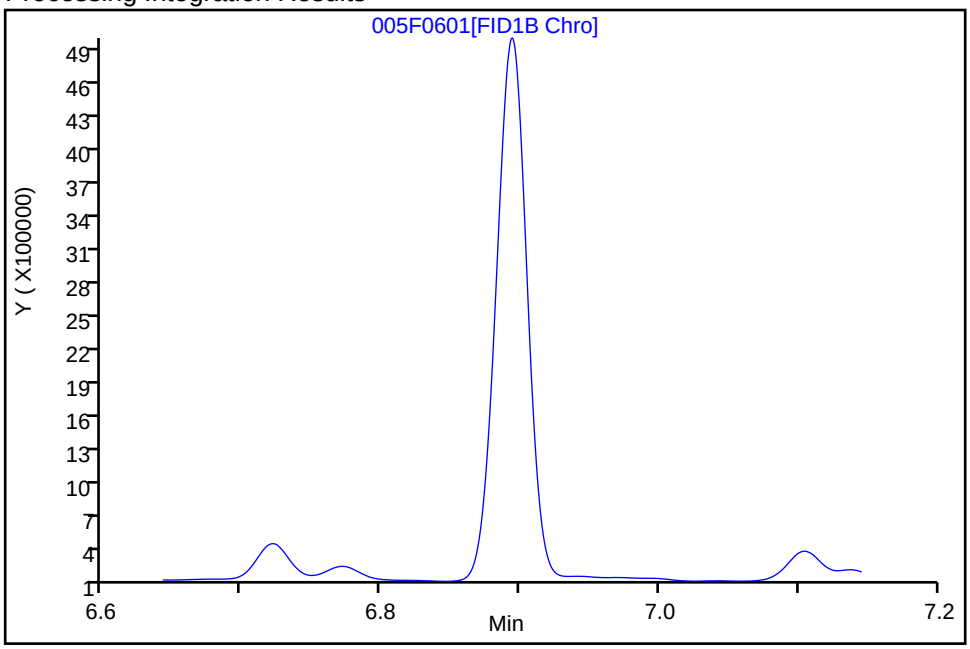
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\121019F1.b\005F0601.D		
Injection Date:	10-Dec-2019 13:05:30	Inst. ID:	gc12.i
Client ID:	DLCS32	Lab ID:	UQ38432-002
Sample Info:	UQ38432-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

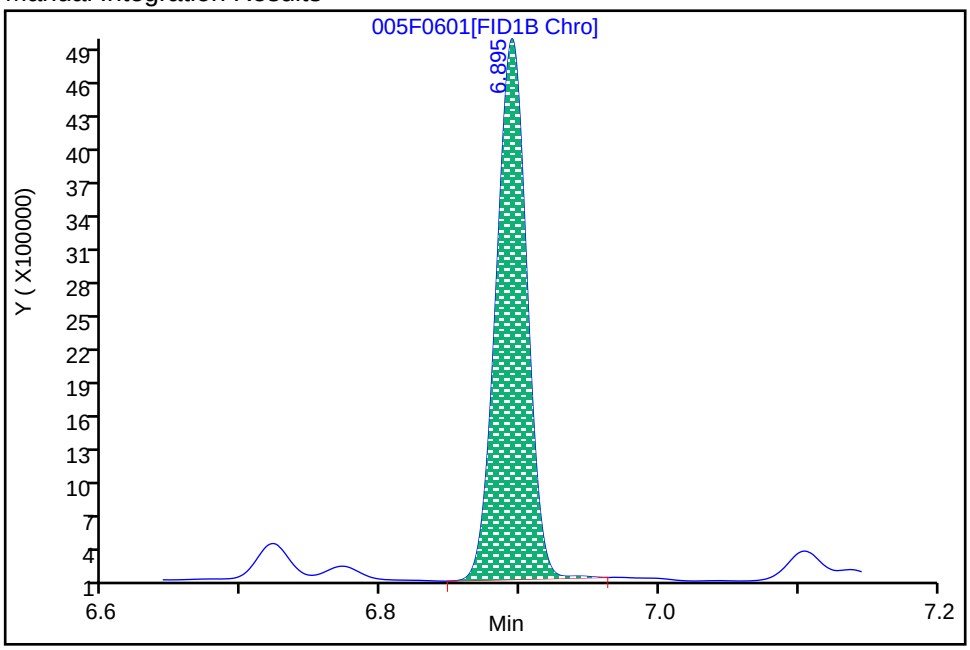
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 7327414
Conc: 8099.30
Conc Units: ug/Kg



Data Editor: chg, 11-Dec-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - MS

Sample ID: UL05034-006MS
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	69000	110000	110000	N	1	34	70-130	12/09/2019 1355

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		77	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\014F1601.D		
Lab Sample ID:	UL05034-006MS	Client Sample ID:	MPGI-East-Soil-06MS
Injection Date:	09-Dec-2019 13:55:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-006MS		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	MS	ALS Bottle:	14
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.410	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 14:52:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	64899281	496.50	81634	M
$	1 OTP	6.894	6.895	0.000	5771839	38.279	6293.84	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

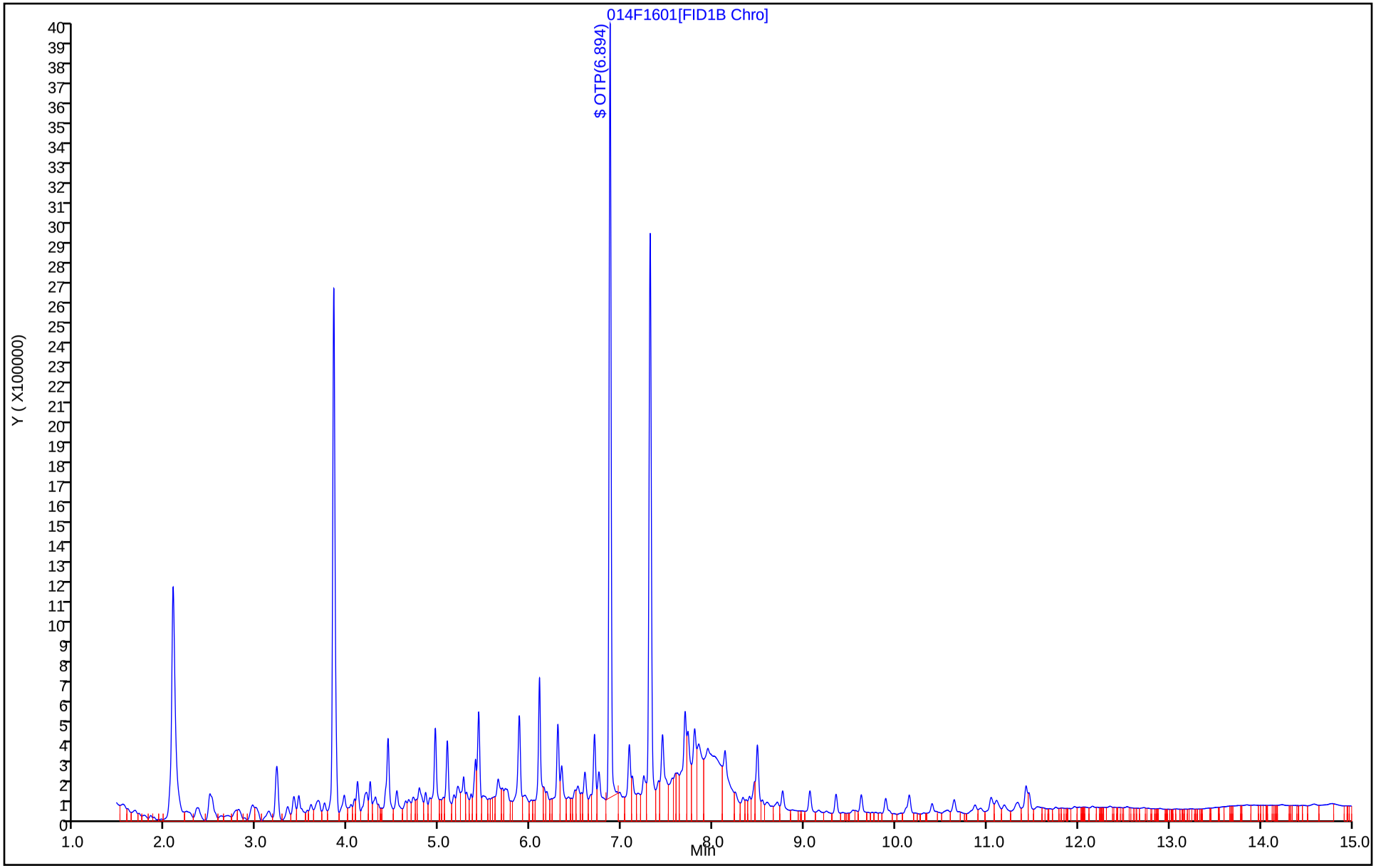
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:31 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\014F1601.D				
Injection Date:	09-Dec-2019 13:55:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-East-Soil-06MS	Lab ID:	UL05034-006MS		
Sample Info:	UL05034-006MS				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:31 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

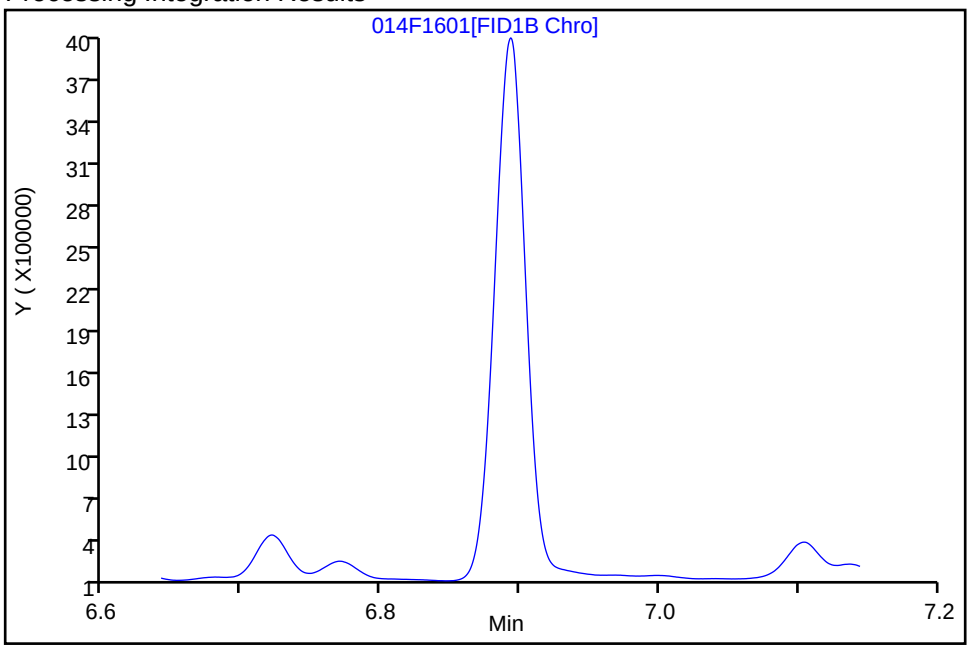
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\014F1601.D		
Injection Date:	09-Dec-2019 13:55:30	Inst. ID:	gc12.i
Client ID:	MPGI-East-Soil-06MS	Lab ID:	UL05034-006MS
Sample Info:	UL05034-006MS		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

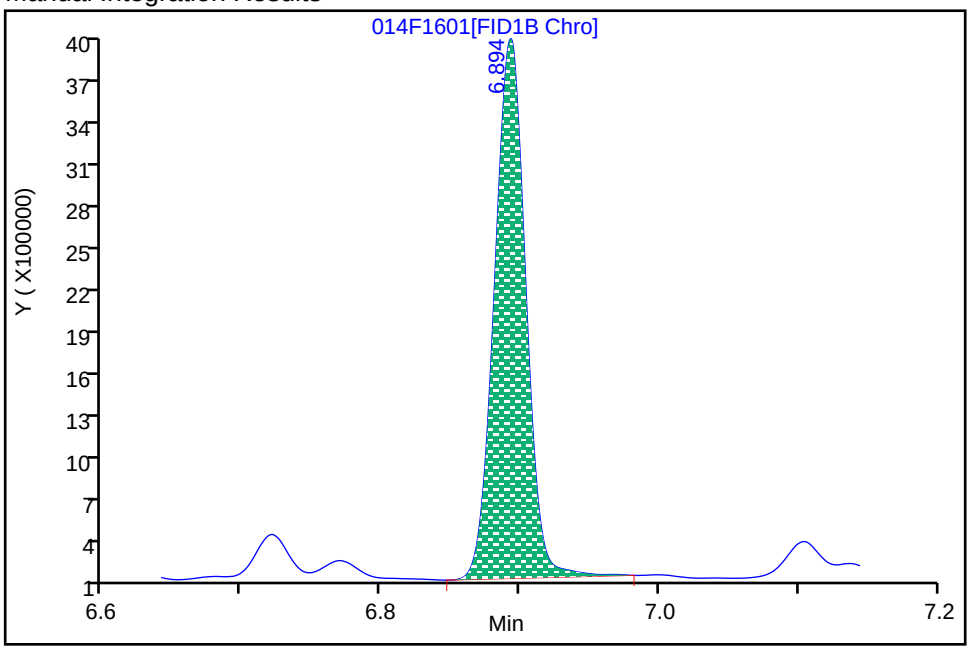
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.894
Area: 5771839
Conc: 6293.84
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 14:52:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - MSD

Sample ID: UL05034-006MD
Batch: 38050
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/05/2019 2318

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	69000	110000	150000	+	1	77	36	70-130	20	12/09/2019 1415

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		78	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\015F1701.D		
Lab Sample ID:	UL05034-006MD	Client Sample ID:	MPGI-East-Soil-06MD
Injection Date:	09-Dec-2019 14:15:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL05034-006MD		
Method:	\\Organics\EE\chem\gc12.i\120919F1.b\8015CLVI.m		
Method Date:	10-Dec-2019 10:08:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	MSD	ALS Bottle:	15
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.120	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	09-Dec-2019 17:08:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	92501235	707.66	117473	MR
$	1 OTP	6.895	6.895	0.000	5857505	38.847	6448.75	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

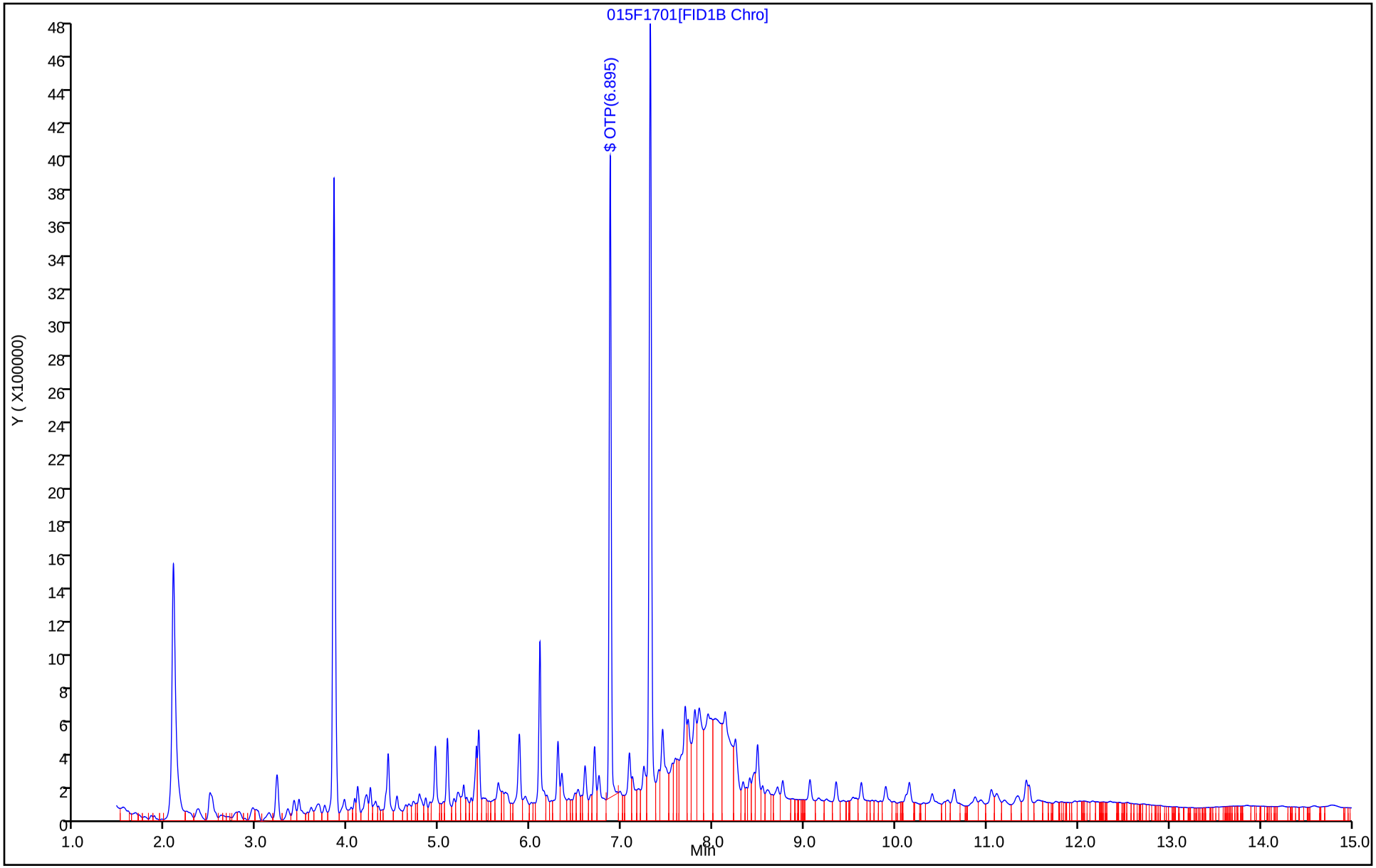
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 10-Dec-2019 10:08:32 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\015F1701.D				
Injection Date:	09-Dec-2019 14:15:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-East-Soil-06MD	Lab ID:	UL05034-006MD		
Sample Info:	UL05034-006MD				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 10-Dec-2019 10:08:33 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

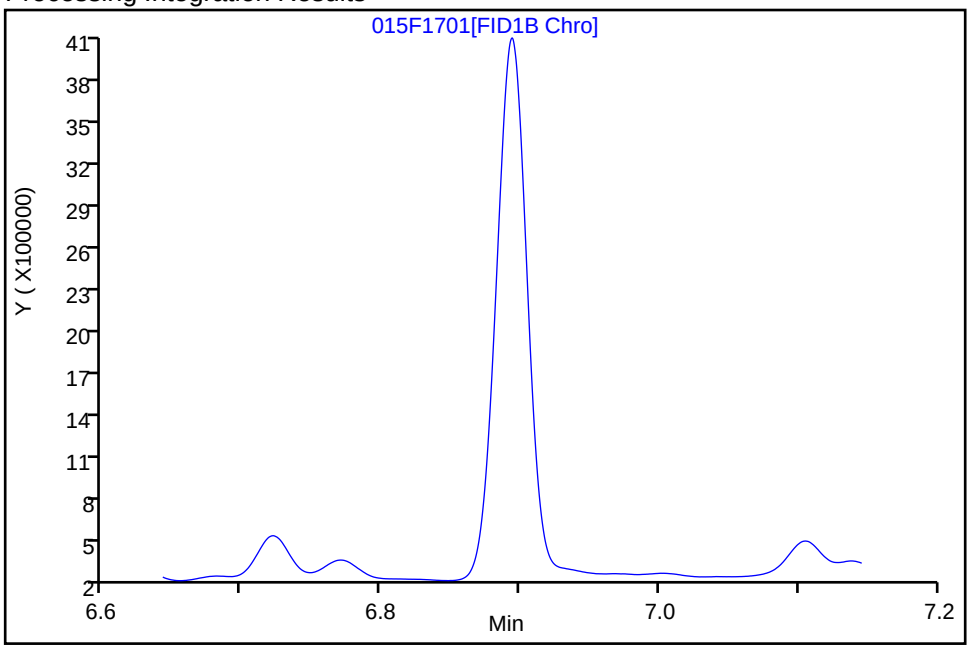
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\120919F1.b\015F1701.D		
Injection Date:	09-Dec-2019 14:15:30	Inst. ID:	gc12.i
Client ID:	MPGI-East-Soil-06MD	Lab ID:	UL05034-006MD
Sample Info:	UL05034-006MD		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

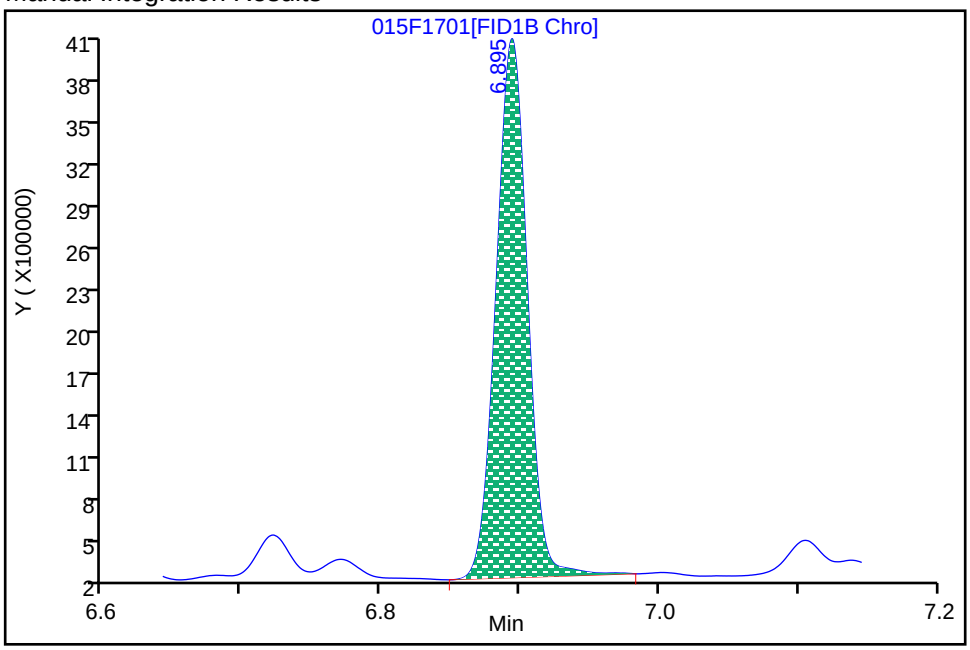
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 5857505
Conc: 6448.75
Conc Units: ug/Kg



Data Editor: chg, 09-Dec-2019 17:08:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

MISC. DATA

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\112019F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK	20-Nov-2019 09:23:30	001F0101.D	Client			Soil	1	Diesel						8015CLVI
1	IBLK	20-Nov-2019 09:42:30	001F0201.D	Client			Soil	1	Diesel						8015CLVI
2	SVGC-1832	20-Nov-2019 10:01:30	002F0301.D	Client		RTH1	Soil	1	rtstudy						8015CLVI
3	SVGC-1659	20-Nov-2019 10:20:30	003F0401.D	Ical	1	D1H1	Soil	1	Diesel						8015CLVI
4	SVGC-1660	20-Nov-2019 10:40:30	004F0501.D	Ical	2	D2H1	Soil	1	Diesel						8015CLVI
5	SVGC-1661	20-Nov-2019 10:59:30	005F0601.D	Ical	3	D3H1	Soil	1	Diesel						8015CLVI
6	SVGC-1662	20-Nov-2019 11:18:30	006F0701.D	Ical	4	D4H1	Soil	1	Diesel						8015CLVI
7	SVGC-1663	20-Nov-2019 11:37:30	007F0801.D	Ical	5	D5H1	Soil	1	Diesel						8015CLVI
2	SVGC-1832	20-Nov-2019 11:56:30	002F0901.D	Client		RTH2	Soil	1	rtstudy						8015CLVI
8	SVGC-1711	20-Nov-2019 12:15:30	008F1001.D	LCS		DICVH	Soil	1	Diesel	DODICV					8015CLVI
2	SVGC-1832	20-Nov-2019 12:34:30	002F1101.D	Client		RTH3	Soil	1	rtstudy						8015CLVI

Report Date: 10-Dec-2019 10:09:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\120919F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK	09-Dec-2019 09:08:30	001F0101.D	Client		Soil	1	Diesel						8015CLVI
1	IBLK	09-Dec-2019 09:27:30	001F0201.D	Client		Soil	1	Diesel						8015CLVI
2	SVGC-1832	09-Dec-2019 09:46:30	002F0301.D	Client	RTH11	Soil	1	rtstudy						8015CLVI
3	SVGC-1661	09-Dec-2019 10:05:30	003F0401.D	Ccv	D3H14	Soil	1	Diesel						8015CLVI
4	UQ38050-001	09-Dec-2019 10:24:30	004F0501.D	BLANK	DBLK50	Soil	1	Diesel					38300	8015CLVI
5	UQ38050-002	09-Dec-2019 10:43:30	005F0601.D	LCS	DLCS50	Soil	1	Diesel	diesel					8015CLVI
6	UL02035-001	09-Dec-2019 11:03:30	006F0701.D	Client	10389 Creek 1	Soil	1	Diesel						8015CLVI
7	UL02035-002	09-Dec-2019 11:22:30	007F0801.D	Client	10389 Creek 2	Soil	1	Diesel						8015CLVI
3	SVGC-1661	09-Dec-2019 11:41:30	003F0901.D	Ccv	D3H15	Soil	1	Diesel						8015CLVI
8	UL05034-001	09-Dec-2019 12:00:30	008F1001.D	Client	MPGI-North-Soil-01-	Soil	1	Diesel					RX	8015CLVI
9	UL05034-002	09-Dec-2019 12:19:30	009F1101.D	Client	MPGI-North-Soil-02-	Soil	1	Diesel						8015CLVI
10	UL05034-003	09-Dec-2019 12:38:30	010F1201.D	Client	MPGI-North-Soil-03-	Soil	1	Diesel					RX	8015CLVI
11	UL05034-004	09-Dec-2019 12:58:30	011F1301.D	Client	MPGI-North-Soil-04-	Soil	1	Diesel						8015CLVI
12	UL05034-005	09-Dec-2019 13:17:30	012F1401.D	Client	MPGI-North-Soil-04-	Soil	1	Diesel						8015CLVI
13	UL05034-006	09-Dec-2019 13:36:30	013F1501.D	Client	MPGI-East-Soil-06-1	Soil	1	Diesel						8015CLVI
14	UL05034-006MS	09-Dec-2019 13:55:30	014F1601.D	MS	MPGI-East-Soil-06MS	Soil	1	Diesel	diesel					8015CLVI
15	UL05034-006MD	09-Dec-2019 14:15:30	015F1701.D	MSD	MPGI-East-Soil-06MD	Soil	1	Diesel	diesel					8015CLVI
16	UL05034-007	09-Dec-2019 14:34:30	016F1801.D	Client	MPGI-East-Soil-07-1	Soil	1	Diesel						8015CLVI
17	UL05034-008	09-Dec-2019 14:53:30	017F1901.D	Client	MPGI-East-Soil-08-1	Soil	1	Diesel						8015CLVI
18	UL05034-009	09-Dec-2019 15:12:30	018F2001.D	Client	MPGI-East-Soil-09-1	Soil	1	Diesel						8015CLVI
19	UL05034-001	09-Dec-2019 15:32:30	019F2101.D	Client	MPGI-North-Soil-01-	Soil	1	Diesel						8015CLVI
20	UL05034-003	09-Dec-2019 15:51:30	020F2201.D	Client	MPGI-North-Soil-03-	Soil	1	Diesel						8015CLVI
2	SVGC-1832	09-Dec-2019 16:10:30	002F2301.D	Client	RTH12	Soil	1	rtstudy						8015CLVI
3	SVGC-1852	09-Dec-2019 16:30:30	003F2401.D	Ccv	D3H15	Soil	1	Diesel						8015CLVI
21	UQ37982-001	09-Dec-2019 16:49:30	021F2501.D	BLANK	DBLK82	Water	1	Diesel					38300	8015CLVI
22	UQ37982-002	09-Dec-2019 17:08:30	022F2601.D	LCS	DLCS82	Water	1	Diesel	diesel					8015CLVI
23	UL04116-002	09-Dec-2019 17:27:30	023F2701.D	Client	2019036317	Water	1	Diesel						8015CLVI
24	UL04116-002MS	09-Dec-2019 17:46:30	024F2801.D	MS	201903617MS	Water	1	Diesel	diesel					8015CLVI
25	UL04116-002MD	09-Dec-2019 18:06:30	025F2901.D	MSD	201903617MD	Water	1	Diesel	diesel					8015CLVI
26	UL04116-003	09-Dec-2019 18:25:30	026F3001.D	Client	2019036318	Water	1	Diesel						8015CLVI
27	UL04116-004	09-Dec-2019 18:44:30	027F3101.D	Client	2019036319	Water	1	Diesel						8015CLVI
28	UL04116-005	09-Dec-2019 19:03:30	028F3201.D	Client	2019036320	Water	1	Diesel						8015CLVI
29	UL04116-006	09-Dec-2019 19:23:30	029F3301.D	Client	2019036321	Water	1	Diesel						8015CLVI
30	UL04116-007	09-Dec-2019 19:42:30	030F3401.D	Client	2019036322	Water	1	Diesel						8015CLVI
31	UL04116-008	09-Dec-2019 20:01:30	031F3501.D	Client	2019036323	Water	1	Diesel						8015CLVI
32	UL04116-009	09-Dec-2019 20:20:30	032F3601.D	Client	2019036324	Water	1	Diesel						8015CLVI
33	UL04116-010	09-Dec-2019 20:40:30	033F3701.D	Client	2019036325	Water	1	Diesel						8015CLVI
34	UL04116-011	09-Dec-2019 20:59:30	034F3801.D	Client	2019036326	Water	1	Diesel						8015CLVI
35	UL04116-012	09-Dec-2019 21:18:30	035F3901.D	Client	2019036327	Water	1	Diesel						8015CLVI
36	UL04116-013	09-Dec-2019 21:37:30	036F4001.D	Client	2019036328	Water	1	Diesel						8015CLVI
37	UL04116-014	09-Dec-2019 21:56:30	037F4101.D	Client	2019036329	Water	1	Diesel						8015CLVI
38	UL04116-015	09-Dec-2019 22:16:30	038F4201.D	Client	2019036331	Water	1	Diesel						8015CLVI
39	UL04130-002	09-Dec-2019 22:35:30	039F4301.D	Client	INF #319	Water	1	Diesel						8015CLVI
3	SVGC-1852	09-Dec-2019 22:54:30	003F4401.D	Ccv	D3H16	Soil	1	Diesel						8015CLVI
40	UQ38055-001	09-Dec-2019 23:13:30	040F4501.D	BLANK	DBLK55	Soil	1	Diesel						8015CLVI
41	UK05007-048	09-Dec-2019 23:32:30	041F4601.D	Client	MDLv GC12 8015C DRO	Soil	1	Diesel						8015CLVI

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
3	SVGC-1852	09-Dec-2019 23:51:30	003F4701.D	Ccv	D3H17	Soil	1	Diesel						8015CLVI

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\121019F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK	10-Dec-2019 11:29:30	001F0101.D	Client		Soil	1	Diesel						8015CLVI
1	IBLK	10-Dec-2019 11:48:30	001F0201.D	Client		Soil	1	Diesel						8015CLVI
2	SVGC-1832	10-Dec-2019 12:07:30	002F0301.D	Client	RTH13	Soil	1	rtstudy						8015CLVI
3	SVGC-1661	10-Dec-2019 12:27:30	003F0401.D	Ccv	D3H18	Soil	1	Diesel						8015CLVI
4	UQ38432-001	10-Dec-2019 12:46:30	004F0501.D	BLANK	DBLK32	Soil	1	Diesel					38515	8015CLVI
5	UQ38432-002	10-Dec-2019 13:05:30	005F0601.D	LCS	DLCS32	Soil	1	Diesel	diesel					8015CLVI
6	UL05034-001	10-Dec-2019 13:24:30	006F0701.D	Client	MPGI-North-Soil-01-	Soil	1	Diesel						8015CLVI
7	UL05034-003	10-Dec-2019 13:44:30	007F0801.D	Client	MPGI-North-Soil-03-	Soil	1	Diesel						8015CLVI
3	SVGC-1661	10-Dec-2019 14:03:30	003F0901.D	Ccv	D3H19	Soil	1	Diesel						8015CLVI
8	UL06039-047	10-Dec-2019 14:22:30	008F1001.D	Client	MDLv GC12 8015C DRO	Soil	1	Diesel						8015CLVI
9	UL07014-001	10-Dec-2019 14:41:30	009F1101.D	Client	SB-01	Soil	1	Diesel						8015CLVI
10	UL07014-002	10-Dec-2019 15:01:30	010F1201.D	Client	SB-02	Soil	1	Diesel						8015CLVI
11	UL07014-003	10-Dec-2019 15:20:30	011F1301.D	Client	SB-03	Soil	1	Diesel						8015CLVI
12	UL07014-004	10-Dec-2019 15:39:30	012F1401.D	Client	SB-04	Soil	1	Diesel						8015CLVI
13	UL07014-004MS	10-Dec-2019 15:59:30	013F1501.D	MS	SB-04MS	Soil	1	Diesel	diesel					8015CLVI
14	UL07014-004MD	10-Dec-2019 16:18:30	014F1601.D	MSD	SB-04MD	Soil	1	Diesel	diesel					8015CLVI
3	SVGC-1852	10-Dec-2019 16:37:30	003F1701.D	Ccv	D3H20	Soil	1	Diesel						8015CLVI

Analyst: SMA **Level 2 Analyst:** DAL1
Status: Level 2 review released
Matrix: Solid

Prep Batch: 38050
3550C DRO - Ultrasonic Extraction

Printed: 12/11/19 1100

Start Date: 12/05/2019 2318
End Date: 12/06/2019 0018

Conc Analyst: SMA
Conc Start Date: 12/06/2019 0000
Conc End Date: 12/06/2019 0105

Equipment: Ultrasonic Processor #2

Surrogate: Extw-5524exp051120
Surrogate Vol. (mL): 1.0
Filter Paper Lot Num: 19-2528

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 19-2577>19-2577

Sodium Sulfate ID: 19-5439
Balance ID: Balance #13-1016

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ88050-001	MB		1	8015C	30.00		0.0	5.0			Witness:GLT
UQ88050-002	LCS		1	8015C	30.00	Extw-5524exp0410	1.0	5.0			
UL02035-001	Sample	10389 Creek 1	1	8015C	30.26		0.0	5.0	12/14/2019 2359	12/09/2019	
UL02035-002	Sample	10389 Creek 2	1	8015C	30.06		0.0	5.0	12/14/2019 2359	12/09/2019	
UL05034-001	Sample	MPG1-North-Soil-01-120419	1	8015C	30.09		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-002	Sample	MPG1-North-Soil-02-120419	1	8015C	30.74		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-003	Sample	MPG1-North-Soil-03-120419	1	8015C	30.21		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-004	Sample	MPG1-North-Soil-04-120419	1	8015C	30.43		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-005	Sample	MPG1-North-Soil-04-120419-D	1	8015C	30.64		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-006	Sample	MPG1-East-Soil-06-120419	1	8015C	30.31		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-006MS	MS		1	8015C	30.41	Extw-5524exp0410	1.0	5.0			
UL05034-006MD	MSD		1	8015C	30.12	Extw-5524exp0410	1.0	5.0			
UL05034-007	Sample	MPG1-East-Soil-07-120419	1	8015C	30.12		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-008	Sample	MPG1-East-Soil-08-120419	1	8015C	30.00		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-009	Sample	MPG1-East-Soil-09-120419	1	8015C	30.42		0.0	5.0	12/18/2019 2359	12/10/2019	

(end of report) **Total Samples: 11**

Analyst: JBK **Level 2 Analyst:** NFB

Status: Level 2 review released

Matrix: Solid

Printed: 12/11/19 1101

Prep Batch: 38432
3550C DRO - Ultrasonic Extraction

Start Date: 12/10/2019 0935
End Date: 12/10/2019 1011

Conc Analyst: JBK
Conc Start Date: 12/10/2019 0948
Conc End Date: 12/10/2019 1118

Surrogate: EXTW-5524 EXP051120
Surrogate Vol. (mL): 1.0

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 19-2577 >19-2577

Sodium Sulfate ID: EXTR-5439
Balance ID: Balance #13-1016

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ88432-001	MB		1	8015C	30.10		0.0	5.0			Witness: BFP
UQ88432-002	LCS		1	8015C	30.00	EXTW-5505 EXP041020	1.0	5.0			Glass wool: 19-668/Sand: 19-2349
UL06039-047	Sample	MDLv GC12 8015C DRO 3550C SOIL	1	8015C	30.00	EXTW-5505 EXP041020	0.0	5.0	12/20/2019 2359	12/18/2019	@80uL
UL05034-001	Sample	MPGI-North-Soil-01-120419	2	8015C	30.00		0.0	5.0	12/18/2019 2359	12/10/2019	
UL05034-003	Sample	MPGI-North-Soil-03-120419	2	8015C	30.30		0.0	5.0	12/18/2019 2359	12/10/2019	
UL07014-001	Sample	SB-01	1	8015C	30.30		0.0	5.0	12/20/2019 2359	12/13/2019	
UL07014-002	Sample	SB-02	1	8015C	30.80		0.0	5.0	12/20/2019 2359	12/13/2019	
UL07014-003	Sample	SB-03	1	8015C	30.70		0.0	5.0	12/20/2019 2359	12/13/2019	
UL07014-004	Sample	SB-04	1	8015C	30.30		0.0	5.0	12/20/2019 2359	12/13/2019	
UL07014-004MS	MS		1	8015C	30.30	EXTW-5505 EXP041020	1.0	5.0			
UL07014-004MD	MSD		1	8015C	30.50	EXTW-5505 EXP041020	1.0	5.0			

(end of report) **Total Samples: 7**

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL20021**

Date Completed:12/27/2019
Revision Date: 02/25/2020

N. Saikaly

02/25/2020 3:52 PM
Approved and released by:
Project Manager: **Nisreen Saikaly**

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL20021

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

TPH-DRO
Sample -017 was extracted using SW-846 prep method 3510C: separatory funnel liquid-liquid extraction instead of method 3520C: continuous liquid-liquid extraction.

The laboratory control sample (LCS) and matrix spike/matrix spike duplicate (MS/MSD) associated with batch 40144 had TPH-DRO recovered below the acceptance limits. There was insufficient sample volume remaining for re-extraction/re-analysis.

The MS/MSD associated with sample -001 had TPH-DRO recovered outside of the acceptance limits. The LCS was recovered within the required acceptance limits; therefore, this likely demonstrates a matrix effect.

Samples -006, -011, and -012 had the surrogate recovered outside of the acceptance limits due to confirmed matrix interference.

Sample -017 had the surrogate recovered outside of the acceptance limits. There was insufficient sample volume remaining for re-extraction/re-analysis.

Sample -017 was not preserved to a pH<2; the pH was adjusted in the laboratory.

TAL Metals
The method blank associated with batch 39905 had cadmium detected at a concentration that was below ½ the LOQ. All samples associated with this method blank that have detections for cadmium have been flagged with a “B” qualifier.

Report Revision (02/25/2020)

This report supersedes and replaces any prior reports issued under this lot number. The details of the applicable revisions are detailed in a Report Revision Notice provided under separate cover.

Report Revision Notice

Revision Date:	02/25/2020
Initial Report Submission Date:	12/27/2019
Lot Number:	UL20021
Client:	Tetra Tech
PM:	NMS
Classification of Report Revision:	☒Client identified ☐Non-conformance

What changed from original report: (please be specific)

This report is revised to update the sample ID for UL20021-017. It was entered as MPG1-RB-121719 and is updated to MPGI-RB-121719.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL20021

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-SF-Soil-09-121719	Solid	12/17/2019 0940	12/20/2019
002	MPGI-SF-Soil-10A-121719	Solid	12/17/2019 1140	12/20/2019
003	MPGI-SF-Soil-10B-121719	Solid	12/17/2019 1144	12/20/2019
004	MPGI-SF-Soil-10C-121719	Solid	12/17/2019 1146	12/20/2019
005	MPGI-SF-Soil-11A-121919	Solid	12/19/2019 1240	12/20/2019
006	MPGI-SF-Soil-11B-121919	Solid	12/19/2019 1242	12/20/2019
007	MPGI-SF-Soil-11C-121919	Solid	12/19/2019 1244	12/20/2019
008	MPGI-SF-Soil-12A-121919	Solid	12/19/2019 1310	12/20/2019
009	MPGI-SF-Soil-12B-121819	Solid	12/18/2019 1001	12/20/2019
010	MPGI-SF-Soil-12C-121919	Solid	12/19/2019 1312	12/20/2019
011	MPGI-SF-Soil-13A-121719	Solid	12/17/2019 1410	12/20/2019
012	MPGI-SF-Soil-13B-121719	Solid	12/17/2019 1414	12/20/2019
013	MPGI-SF-Soil-14A-121919	Solid	12/19/2019 1210	12/20/2019
014	MPGI-SF-Soil-14A-121919-D	Solid	12/19/2019 1212	12/20/2019
015	MPGI-SF-Soil-14B-121919	Solid	12/19/2019 1214	12/20/2019
016	MPGI-SF-Soil-14C-121919	Solid	12/19/2019 1216	12/20/2019
017	MPG1-RB-121719	Aqueous	12/19/2019 1330	12/20/2019

(17 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MPGI-SF-Soil-09-121719	Solid	TPH-DRO	8015C	41000		ug/kg	12
001	MPGI-SF-Soil-09-121719	Solid	Aluminum	6010D	21000		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Arsenic	6010D	14		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Barium	6010D	220		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Beryllium	6010D	0.98		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Cadmium	6010D	0.47		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Calcium	6010D	16000		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Chromium	6010D	27		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Cobalt	6010D	15		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Copper	6010D	26		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Iron	6010D	26000		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Lead	6010D	27		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Magnesium	6010D	11000		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Manganese	6010D	1700		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Mercury	7471B	0.028	J	mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Nickel	6010D	34		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Potassium	6010D	3200		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Sodium	6010D	130	J	mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Vanadium	6010D	46		mg/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Zinc	6010D	99		mg/kg	13
002	MPGI-SF-Soil-10A-121719	Solid	TPH-DRO	8015C	16000		ug/kg	14
002	MPGI-SF-Soil-10A-121719	Solid	Aluminum	6010D	18000		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Arsenic	6010D	20		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Barium	6010D	180		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Beryllium	6010D	1.0		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Cadmium	6010D	0.52	J	mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Calcium	6010D	3300		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Chromium	6010D	25		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Cobalt	6010D	18		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Copper	6010D	29		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Iron	6010D	37000		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Lead	6010D	28		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Magnesium	6010D	4200		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Manganese	6010D	1900		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Nickel	6010D	43		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Potassium	6010D	3000		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Selenium	6010D	0.99	J	mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Sodium	6010D	140	J	mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Vanadium	6010D	46		mg/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Zinc	6010D	86		mg/kg	15
003	MPGI-SF-Soil-10B-121719	Solid	TPH-DRO	8015C	41000		ug/kg	16
003	MPGI-SF-Soil-10B-121719	Solid	Aluminum	6010D	15000		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Arsenic	6010D	13		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Barium	6010D	110		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Beryllium	6010D	0.78		mg/kg	17

Detection Summary (Continued)

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	MPGI-SF-Soil-10B-121719	Solid	Cadmium	6010D	0.21	J	mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Calcium	6010D	13000		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Chromium	6010D	21		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Cobalt	6010D	14		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Copper	6010D	21		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Iron	6010D	24000		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Lead	6010D	22		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Magnesium	6010D	9400		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Manganese	6010D	940		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Mercury	7471B	0.027	J	mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Nickel	6010D	27		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Potassium	6010D	2700		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Sodium	6010D	130	J	mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Vanadium	6010D	36		mg/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Zinc	6010D	83		mg/kg	17
004	MPGI-SF-Soil-10C-121719	Solid	TPH-DRO	8015C	4900	J	ug/kg	18
004	MPGI-SF-Soil-10C-121719	Solid	Aluminum	6010D	18000		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Antimony	6010D	0.28	J	mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Arsenic	6010D	20		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Barium	6010D	330		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Beryllium	6010D	1.0		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Cadmium	6010D	0.49	J	mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Calcium	6010D	8500		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Chromium	6010D	26		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Cobalt	6010D	21		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Copper	6010D	28		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Iron	6010D	35000		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Lead	6010D	35		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Magnesium	6010D	6400		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Manganese	6010D	2800		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Mercury	7471B	0.025	J	mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Nickel	6010D	38		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Potassium	6010D	3500		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Silver	6010D	0.17	J	mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Sodium	6010D	280		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Vanadium	6010D	47		mg/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Zinc	6010D	130		mg/kg	19
005	MPGI-SF-Soil-11A-121919	Solid	TPH-DRO	8015C	6400	J	ug/kg	20
005	MPGI-SF-Soil-11A-121919	Solid	Aluminum	6010D	20000		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Arsenic	6010D	15		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Barium	6010D	120		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Beryllium	6010D	0.91		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Cadmium	6010D	0.20	J	mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Calcium	6010D	6000		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Chromium	6010D	25		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Cobalt	6010D	6.6		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Copper	6010D	20		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Iron	6010D	24000		mg/kg	21

Detection Summary (Continued)

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
005	MPGI-SF-Soil-11A-121919	Solid	Lead	6010D	23		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Magnesium	6010D	4300		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Manganese	6010D	470		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Mercury	7471B	0.035	J	mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Nickel	6010D	18		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Potassium	6010D	2700		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Selenium	6010D	0.60	J	mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Sodium	6010D	210	J	mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Vanadium	6010D	44		mg/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Zinc	6010D	76		mg/kg	21
006	MPGI-SF-Soil-11B-121919	Solid	Aluminum	6010D	19000		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Arsenic	6010D	17		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Barium	6010D	270		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Beryllium	6010D	0.90		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Cadmium	6010D	0.52		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Calcium	6010D	5400		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Chromium	6010D	24		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Cobalt	6010D	17		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Copper	6010D	21		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Iron	6010D	26000		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Lead	6010D	27		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Magnesium	6010D	4100		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Manganese	6010D	2200		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Mercury	7471B	0.033	J	mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Nickel	6010D	25		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Potassium	6010D	2400		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Sodium	6010D	170	J	mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Vanadium	6010D	46		mg/kg	23
006	MPGI-SF-Soil-11B-121919	Solid	Zinc	6010D	80		mg/kg	23
007	MPGI-SF-Soil-11C-121919	Solid	TPH-DRO	8015C	15000		ug/kg	24
007	MPGI-SF-Soil-11C-121919	Solid	Aluminum	6010D	19000		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Arsenic	6010D	22		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Barium	6010D	320		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Beryllium	6010D	0.95		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Cadmium	6010D	0.47	J	mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Calcium	6010D	7300		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Chromium	6010D	25		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Cobalt	6010D	16		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Copper	6010D	24		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Iron	6010D	35000		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Lead	6010D	30		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Magnesium	6010D	5100		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Manganese	6010D	1900		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Mercury	7471B	0.032	J	mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Nickel	6010D	25		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Potassium	6010D	2800		mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Sodium	6010D	130	J	mg/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Vanadium	6010D	49		mg/kg	25

Detection Summary (Continued)

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
007	MPGI-SF-Soil-11C-121919	Solid	Zinc	6010D	110		mg/kg	25
008	MPGI-SF-Soil-12A-121919	Solid	TPH-DRO	8015C	8300	J	ug/kg	26
008	MPGI-SF-Soil-12A-121919	Solid	Aluminum	6010D	19000		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Antimony	6010D	0.33	J	mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Arsenic	6010D	13		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Barium	6010D	140		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Beryllium	6010D	0.91		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Cadmium	6010D	0.30	J	mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Calcium	6010D	8700		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Chromium	6010D	25		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Cobalt	6010D	9.7		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Copper	6010D	25		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Iron	6010D	23000		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Lead	6010D	26		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Magnesium	6010D	6000		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Manganese	6010D	700		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Mercury	7471B	0.030	J	mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Nickel	6010D	21		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Potassium	6010D	3200		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Selenium	6010D	0.62	J	mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Sodium	6010D	120	J	mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Vanadium	6010D	43		mg/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Zinc	6010D	120		mg/kg	27
009	MPGI-SF-Soil-12B-121819	Solid	TPH-DRO	8015C	13000		ug/kg	28
009	MPGI-SF-Soil-12B-121819	Solid	Aluminum	6010D	17000		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Arsenic	6010D	17		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Barium	6010D	440		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Beryllium	6010D	0.89		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Cadmium	6010D	0.73		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Calcium	6010D	11000		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Chromium	6010D	23		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Cobalt	6010D	42		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Copper	6010D	23		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Iron	6010D	28000		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Lead	6010D	31		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Magnesium	6010D	7300		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Manganese	6010D	3900		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Nickel	6010D	33		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Potassium	6010D	2800		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Silver	6010D	0.35	J	mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Sodium	6010D	150	J	mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Vanadium	6010D	47		mg/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Zinc	6010D	110		mg/kg	29
010	MPGI-SF-Soil-12C-121919	Solid	TPH-DRO	8015C	12000		ug/kg	30
010	MPGI-SF-Soil-12C-121919	Solid	Aluminum	6010D	14000		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Arsenic	6010D	10		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Barium	6010D	110		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Beryllium	6010D	0.68		mg/kg	31

Detection Summary (Continued)

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
010	MPGI-SF-Soil-12C-121919	Solid	Cadmium	6010D	0.19	J	mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Calcium	6010D	12000		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Chromium	6010D	19		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Cobalt	6010D	7.1		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Copper	6010D	19		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Iron	6010D	18000		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Lead	6010D	20		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Magnesium	6010D	7100		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Manganese	6010D	580		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Nickel	6010D	16		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Potassium	6010D	2400		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Selenium	6010D	0.44	J	mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Sodium	6010D	84	J	mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Vanadium	6010D	33		mg/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Zinc	6010D	87		mg/kg	31
011	MPGI-SF-Soil-13A-121719	Solid	TPH-DRO	8015C	8300	J	ug/kg	32
011	MPGI-SF-Soil-13A-121719	Solid	Aluminum	6010D	19000		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Antimony	6010D	0.41	J	mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Arsenic	6010D	12		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Barium	6010D	110		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Beryllium	6010D	0.80		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Calcium	6010D	7600		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Chromium	6010D	23		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Cobalt	6010D	10		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Copper	6010D	21		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Iron	6010D	23000		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Lead	6010D	22		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Magnesium	6010D	6300		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Manganese	6010D	550		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Mercury	7471B	0.036	J	mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Nickel	6010D	22		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Potassium	6010D	3300		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Selenium	6010D	0.55	J	mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Vanadium	6010D	39		mg/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Zinc	6010D	74		mg/kg	33
012	MPGI-SF-Soil-13B-121719	Solid	TPH-DRO	8015C	5000	J	ug/kg	34
012	MPGI-SF-Soil-13B-121719	Solid	Aluminum	6010D	19000		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Antimony	6010D	0.35	J	mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Arsenic	6010D	12		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Barium	6010D	120		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Beryllium	6010D	0.85		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Cadmium	6010D	0.091	J	mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Calcium	6010D	8200		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Chromium	6010D	26		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Cobalt	6010D	9.3		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Copper	6010D	25		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Iron	6010D	22000		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Lead	6010D	27		mg/kg	35

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
012	MPGI-SF-Soil-13B-121719	Solid	Magnesium	6010D	6000		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Manganese	6010D	500		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Mercury	7471B	0.052	J	mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Nickel	6010D	21		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Potassium	6010D	3600		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Selenium	6010D	0.51	J	mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Vanadium	6010D	40		mg/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Zinc	6010D	82		mg/kg	35
013	MPGI-SF-Soil-14A-121919	Solid	TPH-DRO	8015C	8300		ug/kg	36
013	MPGI-SF-Soil-14A-121919	Solid	Aluminum	6010D	16000		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Arsenic	6010D	7.4		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Barium	6010D	96		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Beryllium	6010D	0.68		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Cadmium	6010D	0.12	J	mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Calcium	6010D	5800		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Chromium	6010D	20		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Cobalt	6010D	6.5		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Copper	6010D	16		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Iron	6010D	16000		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Lead	6010D	17		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Magnesium	6010D	4200		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Manganese	6010D	390		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Mercury	7471B	0.034	J	mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Nickel	6010D	14		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Potassium	6010D	2100		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Sodium	6010D	55	J	mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Vanadium	6010D	35		mg/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Zinc	6010D	71		mg/kg	37
014	MPGI-SF-Soil-14A-121919-D	Solid	TPH-DRO	8015C	10000		ug/kg	38
014	MPGI-SF-Soil-14A-121919-D	Solid	Aluminum	6010D	14000		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Arsenic	6010D	8.1		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Barium	6010D	98		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Beryllium	6010D	0.62		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Cadmium	6010D	0.18	J	mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Calcium	6010D	5200		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Chromium	6010D	17		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Cobalt	6010D	7.8		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Copper	6010D	15		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Iron	6010D	16000		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Lead	6010D	18		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Magnesium	6010D	3700		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Manganese	6010D	620		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Mercury	7471B	0.033	J	mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Nickel	6010D	15		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Potassium	6010D	1800		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Sodium	6010D	41	J	mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Vanadium	6010D	31		mg/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Zinc	6010D	66		mg/kg	39

Detection Summary (Continued)

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
015	MPGI-SF-Soil-14B-121919	Solid	TPH-DRO	8015C	23000		ug/kg	40
015	MPGI-SF-Soil-14B-121919	Solid	Aluminum	6010D	13000		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Arsenic	6010D	9.5		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Barium	6010D	93		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Beryllium	6010D	0.64		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Cadmium	6010D	0.16	J	mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Calcium	6010D	14000		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Chromium	6010D	17		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Cobalt	6010D	7.9		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Copper	6010D	18		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Iron	6010D	18000		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Lead	6010D	19		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Magnesium	6010D	8800		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Manganese	6010D	590		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Mercury	7471B	0.025	J	mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Nickel	6010D	17		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Potassium	6010D	2100		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Sodium	6010D	80	J	mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Vanadium	6010D	30		mg/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Zinc	6010D	99		mg/kg	41
016	MPGI-SF-Soil-14C-121919	Solid	TPH-DRO	8015C	13000		ug/kg	42
016	MPGI-SF-Soil-14C-121919	Solid	Aluminum	6010D	12000		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Arsenic	6010D	10		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Barium	6010D	110		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Beryllium	6010D	0.59		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Cadmium	6010D	0.22	J	mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Calcium	6010D	12000		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Chromium	6010D	16		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Cobalt	6010D	9.4		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Copper	6010D	17		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Iron	6010D	19000		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Lead	6010D	20		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Magnesium	6010D	6500		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Manganese	6010D	720		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Mercury	7471B	0.027	J	mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Nickel	6010D	17		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Potassium	6010D	2000		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Sodium	6010D	39	J	mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Vanadium	6010D	29		mg/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Zinc	6010D	81		mg/kg	43
017	MPG1-RB-121719	Aqueous	Arsenic	6010D	0.0031	J	mg/L	45
017	MPG1-RB-121719	Aqueous	Sodium	6010D	0.71	J	mg/L	45

(327 detections)

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-001
Description: MPGI-SF-Soil-09-121719
Matrix: Solid
Date Sampled: 12/17/2019 0940
% Solids: 76.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1137	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	41000		8600	4100	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-001
Description: MPGI-SF-Soil-09-121719
Matrix: Solid
Date Sampled: 12/17/2019 0940
% Solids: 76.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0658	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1842	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0823	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	21000		24	9.1	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	14		0.91	0.30	mg/kg	1
Barium	7440-39-3	6010D	220		1.6	0.40	mg/kg	1
Beryllium	7440-41-7	6010D	0.98		0.30	0.077	mg/kg	1
Cadmium	7440-43-9	6010D	0.47		0.30	0.077	mg/kg	1
Calcium	7440-70-2	6010D	16000		300	38	mg/kg	1
Chromium	7440-47-3	6010D	27		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	15		1.6	0.40	mg/kg	1
Copper	7440-50-8	6010D	26		0.61	0.27	mg/kg	1
Iron	7439-89-6	6010D	26000		6.1	2.8	mg/kg	1
Lead	7439-92-1	6010D	27		0.61	0.27	mg/kg	1
Magnesium	7439-95-4	6010D	11000		300	38	mg/kg	1
Manganese	7439-96-5	6010D	1700		1.8	0.72	mg/kg	2
Mercury	7439-97-6	7471B	0.028	J	0.097	0.023	mg/kg	1
Nickel	7440-02-0	6010D	34		2.4	0.64	mg/kg	1
Potassium	7440-09-7	6010D	3200		300	38	mg/kg	1
Selenium	7782-49-2	6010D	ND		2.4	0.99	mg/kg	2
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	130	J	300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.0	0.76	mg/kg	1
Vanadium	7440-62-2	6010D	46		3.0	0.76	mg/kg	1
Zinc	7440-66-6	6010D	99		3.0	0.76	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-002
Description: MPGI-SF-Soil-10A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1140
% Solids: 80.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1235	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	16000		8200	3900	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-002
Description: MPGI-SF-Soil-10A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1140
% Solids: 80.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0738	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1849	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0902	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	18000		24	9.1	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	20		1.8	0.61	mg/kg	2
Barium	7440-39-3	6010D	180		1.6	0.39	mg/kg	1
Beryllium	7440-41-7	6010D	1.0		0.30	0.076	mg/kg	1
Cadmium	7440-43-9	6010D	0.52	J	0.61	0.15	mg/kg	2
Calcium	7440-70-2	6010D	3300		300	38	mg/kg	1
Chromium	7440-47-3	6010D	25		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	18		1.6	0.39	mg/kg	1
Copper	7440-50-8	6010D	29		0.61	0.27	mg/kg	1
Iron	7439-89-6	6010D	37000		12	5.5	mg/kg	2
Lead	7439-92-1	6010D	28		1.2	0.55	mg/kg	2
Magnesium	7439-95-4	6010D	4200		300	38	mg/kg	1
Manganese	7439-96-5	6010D	1900		1.8	0.72	mg/kg	2
Mercury	7439-97-6	7471B	ND		0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	43		4.9	1.3	mg/kg	2
Potassium	7440-09-7	6010D	3000		300	38	mg/kg	1
Selenium	7782-49-2	6010D	0.99	J	2.4	0.99	mg/kg	2
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	140	J	300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		6.1	1.5	mg/kg	2
Vanadium	7440-62-2	6010D	46		6.1	1.5	mg/kg	2
Zinc	7440-66-6	6010D	86		3.0	0.76	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-003
Description: MPGI-SF-Soil-10B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1144
% Solids: 81.4 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1206	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	41000		8000	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		68	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-003
Description: MPGI-SF-Soil-10B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1144
% Solids: 81.4 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0744	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1851	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	15000		21	8.0	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.27	mg/kg	1
Arsenic	7440-38-2	6010D	13		0.80	0.27	mg/kg	1
Barium	7440-39-3	6010D	110		1.4	0.35	mg/kg	1
Beryllium	7440-41-7	6010D	0.78		0.27	0.067	mg/kg	1
Cadmium	7440-43-9	6010D	0.21	J	0.27	0.067	mg/kg	1
Calcium	7440-70-2	6010D	13000		270	33	mg/kg	1
Chromium	7440-47-3	6010D	21		0.53	0.13	mg/kg	1
Cobalt	7440-48-4	6010D	14		1.4	0.35	mg/kg	1
Copper	7440-50-8	6010D	21		0.53	0.24	mg/kg	1
Iron	7439-89-6	6010D	24000		5.3	2.4	mg/kg	1
Lead	7439-92-1	6010D	22		0.53	0.24	mg/kg	1
Magnesium	7439-95-4	6010D	9400		270	33	mg/kg	1
Manganese	7439-96-5	6010D	940		0.80	0.32	mg/kg	1
Mercury	7439-97-6	7471B	0.027	J	0.098	0.024	mg/kg	1
Nickel	7440-02-0	6010D	27		2.1	0.56	mg/kg	1
Potassium	7440-09-7	6010D	2700		270	33	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.43	mg/kg	1
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1
Sodium	7440-23-5	6010D	130	J	270	33	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.7	0.67	mg/kg	1
Vanadium	7440-62-2	6010D	36		2.7	0.67	mg/kg	1
Zinc	7440-66-6	6010D	83		2.7	0.67	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-004
Description: MPGI-SF-Soil-10C-121719
Matrix: Solid
Date Sampled: 12/17/2019 1146
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1254	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	4900	J	8200	3900	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-004
Description: MPGI-SF-Soil-10C-121719
Matrix: Solid
Date Sampled: 12/17/2019 1146
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0749	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1854	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0907	LLL	12/30/2019 0956	40381
3	3050B	6010D	4	12/31/2019 0913	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	18000		22	8.2	mg/kg	1
Antimony	7440-36-0	6010D	0.28	J	1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	20		1.6	0.55	mg/kg	2
Barium	7440-39-3	6010D	330		1.4	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	1.0		0.27	0.069	mg/kg	1
Cadmium	7440-43-9	6010D	0.49	J	0.55	0.14	mg/kg	2
Calcium	7440-70-2	6010D	8500		270	34	mg/kg	1
Chromium	7440-47-3	6010D	26		0.55	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	21		1.4	0.36	mg/kg	1
Copper	7440-50-8	6010D	28		0.55	0.25	mg/kg	1
Iron	7439-89-6	6010D	35000		11	5.0	mg/kg	2
Lead	7439-92-1	6010D	35		1.1	0.49	mg/kg	2
Magnesium	7439-95-4	6010D	6400		270	34	mg/kg	1
Manganese	7439-96-5	6010D	2800		3.3	1.3	mg/kg	3
Mercury	7439-97-6	7471B	0.025	J	0.093	0.022	mg/kg	1
Nickel	7440-02-0	6010D	38		4.4	1.2	mg/kg	2
Potassium	7440-09-7	6010D	3500		270	34	mg/kg	1
Selenium	7782-49-2	6010D	ND		4.4	1.8	mg/kg	3
Silver	7440-22-4	6010D	0.17	J	0.55	0.14	mg/kg	1
Sodium	7440-23-5	6010D	280		270	34	mg/kg	1
Thallium	7440-28-0	6010D	ND		5.5	1.4	mg/kg	2
Vanadium	7440-62-2	6010D	47		5.5	1.4	mg/kg	2
Zinc	7440-66-6	6010D	130		2.7	0.69	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-005
Description: MPGI-SF-Soil-11A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1240
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1244	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	6400	J	8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		65	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-005
Description: MPGI-SF-Soil-11A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1240
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0755	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1856	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	20000		23	8.5	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	15		0.85	0.28	mg/kg	1
Barium	7440-39-3	6010D	120		1.5	0.37	mg/kg	1
Beryllium	7440-41-7	6010D	0.91		0.28	0.071	mg/kg	1
Cadmium	7440-43-9	6010D	0.20	J	0.28	0.071	mg/kg	1
Calcium	7440-70-2	6010D	6000		280	35	mg/kg	1
Chromium	7440-47-3	6010D	25		0.57	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	6.6		1.5	0.37	mg/kg	1
Copper	7440-50-8	6010D	20		0.57	0.25	mg/kg	1
Iron	7439-89-6	6010D	24000		5.7	2.6	mg/kg	1
Lead	7439-92-1	6010D	23		0.57	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	4300		280	35	mg/kg	1
Manganese	7439-96-5	6010D	470		0.85	0.33	mg/kg	1
Mercury	7439-97-6	7471B	0.035	J	0.093	0.022	mg/kg	1
Nickel	7440-02-0	6010D	18		2.3	0.59	mg/kg	1
Potassium	7440-09-7	6010D	2700		280	35	mg/kg	1
Selenium	7782-49-2	6010D	0.60	J	1.1	0.46	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	7440-23-5	6010D	210	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.71	mg/kg	1
Vanadium	7440-62-2	6010D	44		2.8	0.71	mg/kg	1
Zinc	7440-66-6	6010D	76		2.8	0.71	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-006
Description: MPGI-SF-Soil-11B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1242
% Solids: 80.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1303	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		8100	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	51	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-006
Description: MPGI-SF-Soil-11B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1242
% Solids: 80.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0801	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1903	JMH	12/30/2019 1349	40382
2	3050B	6010D	3	12/31/2019 0957	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		22	8.4	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	17		0.84	0.28	mg/kg	1
Barium	7440-39-3	6010D	270		1.5	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	0.90		0.28	0.071	mg/kg	1
Cadmium	7440-43-9	6010D	0.52		0.28	0.071	mg/kg	1
Calcium	7440-70-2	6010D	5400		280	35	mg/kg	1
Chromium	7440-47-3	6010D	24		0.56	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	17		1.5	0.36	mg/kg	1
Copper	7440-50-8	6010D	21		0.56	0.25	mg/kg	1
Iron	7439-89-6	6010D	26000		5.6	2.6	mg/kg	1
Lead	7439-92-1	6010D	27		0.56	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	4100		280	35	mg/kg	1
Manganese	7439-96-5	6010D	2200		2.5	1.0	mg/kg	2
Mercury	7439-97-6	7471B	0.033	J	0.095	0.023	mg/kg	1
Nickel	7440-02-0	6010D	25		2.2	0.59	mg/kg	1
Potassium	7440-09-7	6010D	2400		280	35	mg/kg	1
Selenium	7782-49-2	6010D	ND		3.4	1.4	mg/kg	2
Silver	7440-22-4	6010D	ND		0.56	0.14	mg/kg	1
Sodium	7440-23-5	6010D	170	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.70	mg/kg	1
Vanadium	7440-62-2	6010D	46		2.8	0.70	mg/kg	1
Zinc	7440-66-6	6010D	80		2.8	0.70	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-007
Description: MPGI-SF-Soil-11C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1244
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1333	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	15000		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-007
Description: MPGI-SF-Soil-11C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1244
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0806	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1905	JMH	12/30/2019 1349	40382
2	3050B	6010D	3	12/31/2019 0924	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		25	9.5	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.3	0.32	mg/kg	1
Arsenic	7440-38-2	6010D	22		2.8	0.95	mg/kg	2
Barium	7440-39-3	6010D	320		1.6	0.41	mg/kg	1
Beryllium	7440-41-7	6010D	0.95		0.32	0.079	mg/kg	1
Cadmium	7440-43-9	6010D	0.47	J	0.95	0.24	mg/kg	2
Calcium	7440-70-2	6010D	7300		320	39	mg/kg	1
Chromium	7440-47-3	6010D	25		0.63	0.16	mg/kg	1
Cobalt	7440-48-4	6010D	16		1.6	0.41	mg/kg	1
Copper	7440-50-8	6010D	24		0.63	0.28	mg/kg	1
Iron	7439-89-6	6010D	35000		19	8.6	mg/kg	2
Lead	7439-92-1	6010D	30		1.9	0.85	mg/kg	2
Magnesium	7439-95-4	6010D	5100		320	39	mg/kg	1
Manganese	7439-96-5	6010D	1900		2.8	1.1	mg/kg	2
Mercury	7439-97-6	7471B	0.032	J	0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	25		7.6	2.0	mg/kg	2
Potassium	7440-09-7	6010D	2800		320	39	mg/kg	1
Selenium	7782-49-2	6010D	ND		3.8	1.5	mg/kg	2
Silver	7440-22-4	6010D	ND		0.63	0.16	mg/kg	1
Sodium	7440-23-5	6010D	130	J	320	39	mg/kg	1
Thallium	7440-28-0	6010D	ND		9.5	2.4	mg/kg	2
Vanadium	7440-62-2	6010D	49		9.5	2.4	mg/kg	2
Zinc	7440-66-6	6010D	110		3.2	0.79	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-008
Description: MPGI-SF-Soil-12A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1310
% Solids: 74.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1341	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300	J	9000	4300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		55	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-008
Description: MPGI-SF-Soil-12A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1310
% Solids: 74.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0812	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1908	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		26	9.8	mg/kg	1
Antimony	7440-36-0	6010D	0.33	J	1.3	0.33	mg/kg	1
Arsenic	7440-38-2	6010D	13		0.98	0.33	mg/kg	1
Barium	7440-39-3	6010D	140		1.7	0.43	mg/kg	1
Beryllium	7440-41-7	6010D	0.91		0.33	0.083	mg/kg	1
Cadmium	7440-43-9	6010D	0.30	J	0.33	0.083	mg/kg	1
Calcium	7440-70-2	6010D	8700		330	41	mg/kg	1
Chromium	7440-47-3	6010D	25		0.66	0.16	mg/kg	1
Cobalt	7440-48-4	6010D	9.7		1.7	0.43	mg/kg	1
Copper	7440-50-8	6010D	25		0.66	0.30	mg/kg	1
Iron	7439-89-6	6010D	23000		6.6	3.0	mg/kg	1
Lead	7439-92-1	6010D	26		0.66	0.30	mg/kg	1
Magnesium	7439-95-4	6010D	6000		330	41	mg/kg	1
Manganese	7439-96-5	6010D	700		0.98	0.39	mg/kg	1
Mercury	7439-97-6	7471B	0.030	J	0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	21		2.6	0.69	mg/kg	1
Potassium	7440-09-7	6010D	3200		330	41	mg/kg	1
Selenium	7782-49-2	6010D	0.62	J	1.3	0.53	mg/kg	1
Silver	7440-22-4	6010D	ND		0.66	0.16	mg/kg	1
Sodium	7440-23-5	6010D	120	J	330	41	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.3	0.82	mg/kg	1
Vanadium	7440-62-2	6010D	43		3.3	0.82	mg/kg	1
Zinc	7440-66-6	6010D	120		3.3	0.82	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-009
Description: MPGI-SF-Soil-12B-121819
Matrix: Solid
Date Sampled: 12/18/2019 1001
% Solids: 73.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1401	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	13000		8900	4200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		74	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-009
Description: MPGI-SF-Soil-12B-121819
Matrix: Solid
Date Sampled: 12/18/2019 1001
% Solids: 73.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0817	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1910	JMH	12/30/2019 1349	40382
2	3050B	6010D	5	12/31/2019 0946	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	17000		25	9.2	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	17		0.92	0.31	mg/kg	1
Barium	7440-39-3	6010D	440		1.6	0.40	mg/kg	1
Beryllium	7440-41-7	6010D	0.89		0.31	0.077	mg/kg	1
Cadmium	7440-43-9	6010D	0.73		0.31	0.077	mg/kg	1
Calcium	7440-70-2	6010D	11000		310	38	mg/kg	1
Chromium	7440-47-3	6010D	23		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	42		1.6	0.40	mg/kg	1
Copper	7440-50-8	6010D	23		0.61	0.28	mg/kg	1
Iron	7439-89-6	6010D	28000		6.1	2.8	mg/kg	1
Lead	7439-92-1	6010D	31		0.61	0.28	mg/kg	1
Magnesium	7439-95-4	6010D	7300		310	38	mg/kg	1
Manganese	7439-96-5	6010D	3900		4.6	1.8	mg/kg	2
Mercury	7439-97-6	7471B	ND		0.11	0.026	mg/kg	1
Nickel	7440-02-0	6010D	33		2.5	0.64	mg/kg	1
Potassium	7440-09-7	6010D	2800		310	38	mg/kg	1
Selenium	7782-49-2	6010D	ND		6.1	2.5	mg/kg	2
Silver	7440-22-4	6010D	0.35	J	0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	150	J	310	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.1	0.77	mg/kg	1
Vanadium	7440-62-2	6010D	47		3.1	0.77	mg/kg	1
Zinc	7440-66-6	6010D	110		3.1	0.77	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-010
Description: MPGI-SF-Soil-12C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1312
% Solids: 80.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1352	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	12000		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		62	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-010
Description: MPGI-SF-Soil-12C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1312
% Solids: 80.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0655	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0933	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	14000		21	8.0	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.27	mg/kg	1
Arsenic	7440-38-2	6010D	10		0.80	0.27	mg/kg	1
Barium	7440-39-3	6010D	110		1.4	0.35	mg/kg	1
Beryllium	7440-41-7	6010D	0.68		0.27	0.067	mg/kg	1
Cadmium	7440-43-9	6010D	0.19	J	0.27	0.067	mg/kg	1
Calcium	7440-70-2	6010D	12000		270	33	mg/kg	1
Chromium	7440-47-3	6010D	19		0.53	0.13	mg/kg	1
Cobalt	7440-48-4	6010D	7.1		1.4	0.35	mg/kg	1
Copper	7440-50-8	6010D	19		0.53	0.24	mg/kg	1
Iron	7439-89-6	6010D	18000		5.3	2.4	mg/kg	1
Lead	7439-92-1	6010D	20		0.53	0.24	mg/kg	1
Magnesium	7439-95-4	6010D	7100		270	33	mg/kg	1
Manganese	7439-96-5	6010D	580		0.80	0.31	mg/kg	1
Mercury	7439-97-6	7471B	ND		0.095	0.023	mg/kg	1
Nickel	7440-02-0	6010D	16		2.1	0.56	mg/kg	1
Potassium	7440-09-7	6010D	2400		270	33	mg/kg	1
Selenium	7782-49-2	6010D	0.44	J	1.1	0.43	mg/kg	1
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1
Sodium	7440-23-5	6010D	84	J	270	33	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.7	0.66	mg/kg	1
Vanadium	7440-62-2	6010D	33		2.7	0.66	mg/kg	1
Zinc	7440-66-6	6010D	87		2.7	0.66	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-011
Description: MPGI-SF-Soil-13A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1410
% Solids: 74.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1439	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300	J	8900	4300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	44	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-011
Description: MPGI-SF-Soil-13A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1410
% Solids: 74.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0701	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0936	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		26	9.6	mg/kg	1
Antimony	7440-36-0	6010D	0.41	J	1.3	0.32	mg/kg	1
Arsenic	7440-38-2	6010D	12		0.96	0.32	mg/kg	1
Barium	7440-39-3	6010D	110		1.7	0.42	mg/kg	1
Beryllium	7440-41-7	6010D	0.80		0.32	0.081	mg/kg	1
Cadmium	7440-43-9	6010D	ND		0.32	0.081	mg/kg	1
Calcium	7440-70-2	6010D	7600		320	40	mg/kg	1
Chromium	7440-47-3	6010D	23		0.64	0.16	mg/kg	1
Cobalt	7440-48-4	6010D	10		1.7	0.42	mg/kg	1
Copper	7440-50-8	6010D	21		0.64	0.29	mg/kg	1
Iron	7439-89-6	6010D	23000		6.4	2.9	mg/kg	1
Lead	7439-92-1	6010D	22		0.64	0.29	mg/kg	1
Magnesium	7439-95-4	6010D	6300		320	40	mg/kg	1
Manganese	7439-96-5	6010D	550		0.96	0.38	mg/kg	1
Mercury	7439-97-6	7471B	0.036	J	0.098	0.024	mg/kg	1
Nickel	7440-02-0	6010D	22		2.6	0.67	mg/kg	1
Potassium	7440-09-7	6010D	3300		320	40	mg/kg	1
Selenium	7782-49-2	6010D	0.55	J	1.3	0.52	mg/kg	1
Silver	7440-22-4	6010D	ND		0.64	0.16	mg/kg	1
Sodium	7440-23-5	6010D	ND		320	40	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.2	0.80	mg/kg	1
Vanadium	7440-62-2	6010D	39		3.2	0.80	mg/kg	1
Zinc	7440-66-6	6010D	74		3.2	0.80	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-012
Description: MPGI-SF-Soil-13B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1414
% Solids: 75.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1458	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	5000	J	8800	4200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	41	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-012
Description: MPGI-SF-Soil-13B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1414
% Solids: 75.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0706	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0938	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		24	9.1	mg/kg	1
Antimony	7440-36-0	6010D	0.35	J	1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	12		0.91	0.30	mg/kg	1
Barium	7440-39-3	6010D	120		1.6	0.40	mg/kg	1
Beryllium	7440-41-7	6010D	0.85		0.30	0.077	mg/kg	1
Cadmium	7440-43-9	6010D	0.091	J	0.30	0.077	mg/kg	1
Calcium	7440-70-2	6010D	8200		300	38	mg/kg	1
Chromium	7440-47-3	6010D	26		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	9.3		1.6	0.40	mg/kg	1
Copper	7440-50-8	6010D	25		0.61	0.27	mg/kg	1
Iron	7439-89-6	6010D	22000		6.1	2.8	mg/kg	1
Lead	7439-92-1	6010D	27		0.61	0.27	mg/kg	1
Magnesium	7439-95-4	6010D	6000		300	38	mg/kg	1
Manganese	7439-96-5	6010D	500		0.91	0.36	mg/kg	1
Mercury	7439-97-6	7471B	0.052	J	0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	21		2.4	0.64	mg/kg	1
Potassium	7440-09-7	6010D	3600		300	38	mg/kg	1
Selenium	7782-49-2	6010D	0.51	J	1.2	0.49	mg/kg	1
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	ND		300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.0	0.76	mg/kg	1
Vanadium	7440-62-2	6010D	40		3.0	0.76	mg/kg	1
Zinc	7440-66-6	6010D	82		3.0	0.76	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-013
Description: MPGI-SF-Soil-14A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1210
% Solids: 82.8 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1517	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300		7900	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-013
Description: MPGI-SF-Soil-14A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1210
% Solids: 82.8 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0723	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0941	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	16000		23	8.6	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.29	mg/kg	1
Arsenic	7440-38-2	6010D	7.4		0.86	0.29	mg/kg	1
Barium	7440-39-3	6010D	96		1.5	0.37	mg/kg	1
Beryllium	7440-41-7	6010D	0.68		0.29	0.072	mg/kg	1
Cadmium	7440-43-9	6010D	0.12	J	0.29	0.072	mg/kg	1
Calcium	7440-70-2	6010D	5800		290	36	mg/kg	1
Chromium	7440-47-3	6010D	20		0.57	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	6.5		1.5	0.37	mg/kg	1
Copper	7440-50-8	6010D	16		0.57	0.26	mg/kg	1
Iron	7439-89-6	6010D	16000		5.7	2.6	mg/kg	1
Lead	7439-92-1	6010D	17		0.57	0.26	mg/kg	1
Magnesium	7439-95-4	6010D	4200		290	36	mg/kg	1
Manganese	7439-96-5	6010D	390		0.86	0.34	mg/kg	1
Mercury	7439-97-6	7471B	0.034	J	0.092	0.022	mg/kg	1
Nickel	7440-02-0	6010D	14		2.3	0.60	mg/kg	1
Potassium	7440-09-7	6010D	2100		290	36	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.47	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	7440-23-5	6010D	55	J	290	36	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.9	0.72	mg/kg	1
Vanadium	7440-62-2	6010D	35		2.9	0.72	mg/kg	1
Zinc	7440-66-6	6010D	71		2.9	0.72	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-014
Description: MPGI-SF-Soil-14A-121919-D
Matrix: Solid
Date Sampled: 12/19/2019 1212
% Solids: 84.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1537	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	10000		7800	3700	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		64	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-014
Description: MPGI-SF-Soil-14A-121919-D
Matrix: Solid
Date Sampled: 12/19/2019 1212
% Solids: 84.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0728	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0943	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	14000		22	8.3	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	8.1		0.83	0.28	mg/kg	1
Barium	7440-39-3	6010D	98		1.4	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	0.62		0.28	0.069	mg/kg	1
Cadmium	7440-43-9	6010D	0.18	J	0.28	0.069	mg/kg	1
Calcium	7440-70-2	6010D	5200		280	34	mg/kg	1
Chromium	7440-47-3	6010D	17		0.55	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	7.8		1.4	0.36	mg/kg	1
Copper	7440-50-8	6010D	15		0.55	0.25	mg/kg	1
Iron	7439-89-6	6010D	16000		5.5	2.5	mg/kg	1
Lead	7439-92-1	6010D	18		0.55	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	3700		280	34	mg/kg	1
Manganese	7439-96-5	6010D	620		0.83	0.33	mg/kg	1
Mercury	7439-97-6	7471B	0.033	J	0.095	0.023	mg/kg	1
Nickel	7440-02-0	6010D	15		2.2	0.58	mg/kg	1
Potassium	7440-09-7	6010D	1800		280	34	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.45	mg/kg	1
Silver	7440-22-4	6010D	ND		0.55	0.14	mg/kg	1
Sodium	7440-23-5	6010D	41	J	280	34	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.69	mg/kg	1
Vanadium	7440-62-2	6010D	31		2.8	0.69	mg/kg	1
Zinc	7440-66-6	6010D	66		2.8	0.69	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-015
Description: MPGI-SF-Soil-14B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1214
% Solids: 85.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1556	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	23000		7600	3600	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		65	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-015
Description: MPGI-SF-Soil-14B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1214
% Solids: 85.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0734	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0945	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	13000		22	8.3	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	9.5		0.83	0.28	mg/kg	1
Barium	7440-39-3	6010D	93		1.4	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	0.64		0.28	0.070	mg/kg	1
Cadmium	7440-43-9	6010D	0.16	J	0.28	0.070	mg/kg	1
Calcium	7440-70-2	6010D	14000		280	35	mg/kg	1
Chromium	7440-47-3	6010D	17		0.55	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	7.9		1.4	0.36	mg/kg	1
Copper	7440-50-8	6010D	18		0.55	0.25	mg/kg	1
Iron	7439-89-6	6010D	18000		5.5	2.5	mg/kg	1
Lead	7439-92-1	6010D	19		0.55	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	8800		280	35	mg/kg	1
Manganese	7439-96-5	6010D	590		0.83	0.33	mg/kg	1
Mercury	7439-97-6	7471B	0.025	J	0.096	0.023	mg/kg	1
Nickel	7440-02-0	6010D	17		2.2	0.58	mg/kg	1
Potassium	7440-09-7	6010D	2100		280	35	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.45	mg/kg	1
Silver	7440-22-4	6010D	ND		0.55	0.14	mg/kg	1
Sodium	7440-23-5	6010D	80	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.69	mg/kg	1
Vanadium	7440-62-2	6010D	30		2.8	0.69	mg/kg	1
Zinc	7440-66-6	6010D	99		2.8	0.69	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-016
Description: MPGI-SF-Soil-14C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1216
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1615	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	13000		8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-016
Description: MPGI-SF-Soil-14C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1216
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0739	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0948	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	12000		23	8.5	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.29	mg/kg	1
Arsenic	7440-38-2	6010D	10		0.85	0.28	mg/kg	1
Barium	7440-39-3	6010D	110		1.5	0.37	mg/kg	1
Beryllium	7440-41-7	6010D	0.59		0.28	0.071	mg/kg	1
Cadmium	7440-43-9	6010D	0.22	J	0.28	0.071	mg/kg	1
Calcium	7440-70-2	6010D	12000		280	35	mg/kg	1
Chromium	7440-47-3	6010D	16		0.57	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	9.4		1.5	0.37	mg/kg	1
Copper	7440-50-8	6010D	17		0.57	0.25	mg/kg	1
Iron	7439-89-6	6010D	19000		5.7	2.6	mg/kg	1
Lead	7439-92-1	6010D	20		0.57	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	6500		280	35	mg/kg	1
Manganese	7439-96-5	6010D	720		0.85	0.34	mg/kg	1
Mercury	7439-97-6	7471B	0.027	J	0.089	0.021	mg/kg	1
Nickel	7440-02-0	6010D	17		2.3	0.59	mg/kg	1
Potassium	7440-09-7	6010D	2000		280	35	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.46	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	7440-23-5	6010D	39	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.71	mg/kg	1
Vanadium	7440-62-2	6010D	29		2.8	0.71	mg/kg	1
Zinc	7440-66-6	6010D	81		2.8	0.71	mg/kg	1

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TPH-DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-017
Description: MPGI-RB-121719
Matrix: Aqueous
Date Sampled: 12/19/2019 1330
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8015C	1	12/27/2019 1102	CHG	12/26/2019 1928	40144

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		200	43	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	48	53-118

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-017
Description: MPGI-RB-121719
Matrix: Aqueous
Date Sampled: 12/19/2019 1330
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/26/2019 2221	JMH	12/26/2019 1256	39898
1	3005A	6010D	1	12/26/2019 1107	LLL	12/24/2019 1021	39905

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	ND		0.40	0.10	mg/L	1
Antimony	7440-36-0	6010D	ND		0.020	0.0070	mg/L	1
Arsenic	7440-38-2	6010D	0.0031	J	0.015	0.0025	mg/L	1
Barium	7440-39-3	6010D	ND		0.025	0.0031	mg/L	1
Beryllium	7440-41-7	6010D	ND		0.0050	0.00060	mg/L	1
Cadmium	7440-43-9	6010D	ND		0.0050	0.00060	mg/L	1
Calcium	7440-70-2	6010D	ND		5.0	0.63	mg/L	1
Chromium	7440-47-3	6010D	ND		0.010	0.0013	mg/L	1
Cobalt	7440-48-4	6010D	ND		0.025	0.0031	mg/L	1
Copper	7440-50-8	6010D	ND		0.010	0.0020	mg/L	1
Iron	7439-89-6	6010D	ND		0.10	0.040	mg/L	1
Lead	7439-92-1	6010D	ND		0.010	0.0047	mg/L	1
Magnesium	7439-95-4	6010D	ND		5.0	0.63	mg/L	1
Manganese	7439-96-5	6010D	ND		0.015	0.0019	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	0.000091	mg/L	1
Nickel	7440-02-0	6010D	ND		0.040	0.0050	mg/L	1
Potassium	7440-09-7	6010D	ND		5.0	0.63	mg/L	1
Selenium	7782-49-2	6010D	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010D	ND		0.010	0.0021	mg/L	1
Sodium	7440-23-5	6010D	0.71	J	5.0	0.63	mg/L	1
Thallium	7440-28-0	6010D	ND		0.050	0.0063	mg/L	1
Vanadium	7440-62-2	6010D	ND		0.050	0.0063	mg/L	1
Zinc	7440-66-6	6010D	ND		0.020	0.0025	mg/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

TPH - DRO - MB

Sample ID: UQ39962-001
Batch: 39962
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/23/2019 2339

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/24/2019 1011

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		101	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - LCS

Sample ID: UQ39962-002
Batch: 39962
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/23/2019 2339

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	75000		1	91	70-130	12/24/2019 1030

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		106	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MB

Sample ID: UQ40054-001
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/26/2019 1021

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		100	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - LCS

Sample ID: UQ40054-002
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	78000		1	93	70-130	12/26/2019 1040

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		108	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MS

Sample ID: UL20021-001MS
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	41000	110000	69000	N	1	26	70-130	12/26/2019 1157

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		69	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MSD

Sample ID: UL20021-001MD
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	41000	110000	74000	N	1	30	6.4	70-130	20	12/26/2019 1216

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - MB

Sample ID: UQ40144-001
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	200	43	ug/L	12/27/2019 1024

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		74	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - LCS

Sample ID: UQ40144-002
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	2000	1200	N	1	60	70-130	12/27/2019 1043

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		81	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - MS

Sample ID: UL20021-017MS
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	ND	2000	1100	N	1	57	70-130	12/27/2019 1121

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		74	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - MSD

Sample ID: UL20021-017MD
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	ND	2000	1300	N	1	63	11	70-130	20	12/27/2019 1140

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		84	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39838-001
Batch: 39838
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/24/2019 0905

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	20	7.5	mg/kg	12/26/2019 0644
Antimony	ND		1	1.0	0.25	mg/kg	12/26/2019 0644
Arsenic	ND		1	0.75	0.25	mg/kg	12/26/2019 0644
Barium	ND		1	1.3	0.33	mg/kg	12/26/2019 0644
Beryllium	ND		1	0.25	0.063	mg/kg	12/26/2019 0644
Cadmium	ND		1	0.25	0.063	mg/kg	12/26/2019 0644
Calcium	ND		1	250	31	mg/kg	12/26/2019 0644
Chromium	ND		1	0.50	0.13	mg/kg	12/26/2019 0644
Cobalt	ND		1	1.3	0.33	mg/kg	12/26/2019 0644
Copper	ND		1	0.50	0.23	mg/kg	12/26/2019 0644
Iron	ND		1	5.0	2.3	mg/kg	12/26/2019 0644
Lead	ND		1	0.50	0.23	mg/kg	12/26/2019 0644
Magnesium	ND		1	250	31	mg/kg	12/26/2019 0644
Manganese	ND		1	0.75	0.30	mg/kg	12/26/2019 0644
Nickel	ND		1	2.0	0.53	mg/kg	12/26/2019 0644
Potassium	ND		1	250	31	mg/kg	12/26/2019 0644
Selenium	ND		1	1.0	0.41	mg/kg	12/26/2019 0644
Silver	ND		1	0.50	0.13	mg/kg	12/26/2019 0644
Sodium	ND		1	250	31	mg/kg	12/26/2019 0644
Thallium	ND		1	2.5	0.63	mg/kg	12/26/2019 0644
Vanadium	ND		1	2.5	0.63	mg/kg	12/26/2019 0644
Zinc	ND		1	2.5	0.63	mg/kg	12/26/2019 0644

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39838-002
Batch: 39838
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/24/2019 0905

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	1000	960		1	96	80-120	12/26/2019 0650
Antimony	50	48		1	97	80-120	12/26/2019 0650
Arsenic	250	250		1	102	80-120	12/26/2019 0650
Barium	500	490		1	98	80-120	12/26/2019 0650
Beryllium	100	100		1	100	80-120	12/26/2019 0650
Cadmium	50	47		1	93	80-120	12/26/2019 0650
Calcium	2000	2000		1	98	80-120	12/26/2019 0650
Chromium	250	240		1	97	80-120	12/26/2019 0650
Cobalt	100	98		1	98	80-120	12/26/2019 0650
Copper	100	98		1	98	80-120	12/26/2019 0650
Iron	1000	960		1	96	80-120	12/26/2019 0650
Lead	250	250		1	98	80-120	12/26/2019 0650
Magnesium	2000	1900		1	97	80-120	12/26/2019 0650
Manganese	100	97		1	97	80-120	12/26/2019 0650
Nickel	100	98		1	98	80-120	12/26/2019 0650
Potassium	2000	2000		1	100	80-120	12/26/2019 0650
Selenium	50	49		1	97	80-120	12/26/2019 0650
Silver	50	47		1	94	80-120	12/26/2019 0650
Sodium	2000	2000		1	98	80-120	12/26/2019 0650
Thallium	40	40		1	99	80-120	12/26/2019 0650
Vanadium	100	95		1	95	80-120	12/26/2019 0650
Zinc	100	97		1	97	80-120	12/26/2019 0650

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39905-001
Batch: 39905
Analytical Method: 6010D

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 12/24/2019 1021

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	0.40	0.10	mg/L	12/26/2019 0955
Antimony	ND		1	0.020	0.0070	mg/L	12/26/2019 0955
Arsenic	ND		1	0.015	0.0025	mg/L	12/26/2019 0955
Barium	ND		1	0.025	0.0031	mg/L	12/26/2019 0955
Beryllium	ND		1	0.0050	0.00060	mg/L	12/26/2019 0955
Cadmium	0.00060	J	1	0.0050	0.00060	mg/L	12/26/2019 0955
Calcium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Chromium	ND		1	0.010	0.0013	mg/L	12/26/2019 0955
Cobalt	ND		1	0.025	0.0031	mg/L	12/26/2019 0955
Copper	ND		1	0.010	0.0020	mg/L	12/26/2019 0955
Iron	ND		1	0.10	0.040	mg/L	12/26/2019 0955
Lead	ND		1	0.010	0.0047	mg/L	12/26/2019 0955
Magnesium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Manganese	ND		1	0.015	0.0019	mg/L	12/26/2019 0955
Nickel	ND		1	0.040	0.0050	mg/L	12/26/2019 0955
Potassium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Selenium	ND		1	0.020	0.0085	mg/L	12/26/2019 0955
Silver	ND		1	0.010	0.0021	mg/L	12/26/2019 0955
Sodium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Thallium	ND		1	0.050	0.0063	mg/L	12/26/2019 0955
Vanadium	ND		1	0.050	0.0063	mg/L	12/26/2019 0955
Zinc	ND		1	0.020	0.0025	mg/L	12/26/2019 0955

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39905-002
Batch: 39905
Analytical Method: 6010D

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 12/24/2019 1021

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	20	21		1	103	80-120	12/26/2019 1000
Antimony	0.40	0.39		1	96	80-120	12/26/2019 1000
Arsenic	0.40	0.42		1	105	80-120	12/26/2019 1000
Barium	2.0	2.1		1	106	80-120	12/26/2019 1000
Beryllium	2.0	2.1		1	107	80-120	12/26/2019 1000
Cadmium	0.40	0.40		1	99	80-120	12/26/2019 1000
Calcium	40	41		1	103	80-120	12/26/2019 1000
Chromium	2.0	2.1		1	104	80-120	12/26/2019 1000
Cobalt	2.0	2.0		1	100	80-120	12/26/2019 1000
Copper	2.0	2.1		1	103	80-120	12/26/2019 1000
Iron	20	20		1	102	80-120	12/26/2019 1000
Lead	0.40	0.41		1	102	80-120	12/26/2019 1000
Magnesium	40	41		1	101	80-120	12/26/2019 1000
Manganese	2.0	2.1		1	104	80-120	12/26/2019 1000
Nickel	2.0	2.0		1	99	80-120	12/26/2019 1000
Potassium	40	43		1	107	80-120	12/26/2019 1000
Selenium	0.40	0.40		1	101	80-120	12/26/2019 1000
Silver	0.40	0.42		1	104	80-120	12/26/2019 1000
Sodium	40	44		1	109	80-120	12/26/2019 1000
Thallium	0.80	0.84		1	105	80-120	12/26/2019 1000
Vanadium	2.0	2.1		1	104	80-120	12/26/2019 1000
Zinc	2.0	2.0		1	99	80-120	12/26/2019 1000

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ40381-001
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	20	7.5	mg/kg	12/31/2019 0647
Antimony	ND		1	1.0	0.25	mg/kg	12/31/2019 0647
Arsenic	ND		1	0.75	0.25	mg/kg	12/31/2019 0647
Barium	ND		1	1.3	0.33	mg/kg	12/31/2019 0647
Beryllium	ND		1	0.25	0.063	mg/kg	12/31/2019 0647
Cadmium	ND		1	0.25	0.063	mg/kg	12/31/2019 0647
Calcium	ND		1	250	31	mg/kg	12/31/2019 0647
Chromium	ND		1	0.50	0.13	mg/kg	12/31/2019 0647
Cobalt	ND		1	1.3	0.33	mg/kg	12/31/2019 0647
Copper	ND		1	0.50	0.23	mg/kg	12/31/2019 0647
Iron	ND		1	5.0	2.3	mg/kg	12/31/2019 0647
Lead	ND		1	0.50	0.23	mg/kg	12/31/2019 0647
Magnesium	ND		1	250	31	mg/kg	12/31/2019 0647
Manganese	ND		1	0.75	0.30	mg/kg	12/31/2019 0647
Nickel	ND		1	2.0	0.53	mg/kg	12/31/2019 0647
Potassium	ND		1	250	31	mg/kg	12/31/2019 0647
Selenium	ND		1	1.0	0.41	mg/kg	12/31/2019 0647
Silver	ND		1	0.50	0.13	mg/kg	12/31/2019 0647
Sodium	ND		1	250	31	mg/kg	12/31/2019 0647
Thallium	ND		1	2.5	0.63	mg/kg	12/31/2019 0647
Vanadium	ND		1	2.5	0.63	mg/kg	12/31/2019 0647
Zinc	ND		1	2.5	0.63	mg/kg	12/31/2019 0647

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ40381-002
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	1000	1000		1	100	80-120	12/31/2019 0652
Antimony	50	48		1	96	80-120	12/31/2019 0652
Arsenic	250	260		1	103	80-120	12/31/2019 0652
Barium	500	510		1	101	80-120	12/31/2019 0652
Beryllium	100	100		1	105	80-120	12/31/2019 0652
Cadmium	50	47		1	94	80-120	12/31/2019 0652
Calcium	2000	2000		1	100	80-120	12/31/2019 0652
Chromium	250	260		1	102	80-120	12/31/2019 0652
Cobalt	100	100		1	100	80-120	12/31/2019 0652
Copper	100	100		1	102	80-120	12/31/2019 0652
Iron	1000	1000		1	100	80-120	12/31/2019 0652
Lead	250	250		1	101	80-120	12/31/2019 0652
Magnesium	2000	2000		1	100	80-120	12/31/2019 0652
Manganese	100	100		1	102	80-120	12/31/2019 0652
Nickel	100	99		1	99	80-120	12/31/2019 0652
Potassium	2000	2000		1	98	80-120	12/31/2019 0652
Selenium	50	49		1	99	80-120	12/31/2019 0652
Silver	50	49		1	98	80-120	12/31/2019 0652
Sodium	2000	2000		1	100	80-120	12/31/2019 0652
Thallium	40	41		1	102	80-120	12/31/2019 0652
Vanadium	100	100		1	102	80-120	12/31/2019 0652
Zinc	100	99		1	99	80-120	12/31/2019 0652

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-001MS
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	21000	1300	30000	N	1	705	75-125	12/31/2019 0704
Antimony	ND	66	28	N	1	42	75-125	12/31/2019 0704
Arsenic	14	330	370		1	108	75-125	12/31/2019 0704
Barium	220	660	850		1	95	75-125	12/31/2019 0704
Beryllium	0.98	130	140		1	106	75-125	12/31/2019 0704
Cadmium	0.47	66	67		1	101	75-125	12/31/2019 0704
Calcium	16000	2600	14000	N	1	-105	75-125	12/31/2019 0704
Chromium	27	330	360		1	101	75-125	12/31/2019 0704
Cobalt	15	130	140		1	98	75-125	12/31/2019 0704
Copper	26	130	160		1	105	75-125	12/31/2019 0704
Iron	26000	1300	28000	N	1	140	75-125	12/31/2019 0704
Lead	27	330	350		1	100	75-125	12/31/2019 0704
Magnesium	11000	2600	11000	N	1	0.094	75-125	12/31/2019 0704
Manganese	1700	130	930	N	2	-566	75-125	12/31/2019 0839
Nickel	34	130	160		1	93	75-125	12/31/2019 0704
Potassium	3200	2600	7900	N	1	177	75-125	12/31/2019 0704
Selenium	ND	66	66		2	100	75-125	12/31/2019 0839
Silver	ND	66	67		1	103	75-125	12/31/2019 0704
Sodium	130	2600	2900		1	104	75-125	12/31/2019 0704
Thallium	ND	53	48		1	92	75-125	12/31/2019 0704
Vanadium	46	130	190		1	110	75-125	12/31/2019 0704
Zinc	99	130	230		1	97	75-125	12/31/2019 0704

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-001MD
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Aluminum	21000	1300	30000	N	1	721	0.38	75-125	20	12/31/2019 0710
Antimony	ND	63	27	N	1	42	4.3	75-125	20	12/31/2019 0710
Arsenic	14	320	360		1	108	3.4	75-125	20	12/31/2019 0710
Barium	220	630	810		1	92	4.8	75-125	20	12/31/2019 0710
Beryllium	0.98	130	130		1	105	4.1	75-125	20	12/31/2019 0710
Cadmium	0.47	63	64		1	101	3.4	75-125	20	12/31/2019 0710
Calcium	16000	2500	14000	N	1	-98	1.9	75-125	20	12/31/2019 0710
Chromium	27	320	350		1	101	3.2	75-125	20	12/31/2019 0710
Cobalt	15	130	140		1	97	3.5	75-125	20	12/31/2019 0710
Copper	26	130	160		1	105	3.5	75-125	20	12/31/2019 0710
Iron	26000	1300	28000		1	105	1.8	75-125	20	12/31/2019 0710
Lead	27	320	340		1	99	4.1	75-125	20	12/31/2019 0710
Magnesium	11000	2500	11000	N	1	-1.8	0.43	75-125	20	12/31/2019 0710
Manganese	1700	130	840	N	2	-662	11	75-125	20	12/31/2019 0845
Nickel	34	130	150		1	93	2.8	75-125	20	12/31/2019 0710
Potassium	3200	2500	7900	N	1	184	0.20	75-125	20	12/31/2019 0710
Selenium	ND	63	65		2	103	1.0	75-125	20	12/31/2019 0845
Silver	ND	63	65		1	103	3.6	75-125	20	12/31/2019 0710
Sodium	130	2500	2800		1	106	1.6	75-125	20	12/31/2019 0710
Thallium	ND	51	47		1	93	2.6	75-125	20	12/31/2019 0710
Vanadium	46	130	190		1	110	2.7	75-125	20	12/31/2019 0710
Zinc	99	130	220		1	98	1.4	75-125	20	12/31/2019 0710

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39735-001
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	12/21/2019 0929

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39735-002
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.85		1	102	80-120	12/21/2019 0931

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-016MS
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.027	1.0	1.2		1	114	80-120	12/21/2019 0955

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-016MD
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.027	1.0	1.2		1	111	2.1	80-120	20	12/21/2019 0957

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals - MB

Sample ID: UQ39898-001
Batch: 39898
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 12/26/2019 1256

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.00020	0.000091	mg/L	12/26/2019 2215

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39898-002
Batch: 39898
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 12/26/2019 1256

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0020		1	100	80-120	12/26/2019 2218

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ40382-001
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	12/30/2019 1837

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ40382-002
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.83		1	99	80-120	12/30/2019 1839

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-001MS
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.028	1.1	1.3		1	117	80-120	12/30/2019 1844

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-001MD
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.028	1.0	1.2		1	115	4.6	80-120	20	12/30/2019 1847

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Chain of Custody Record

Number

Client: Tetra Tech	Report to Contact: Andre Baker and Brendan Martin	Telephone No. / E-mail: andre.baker@tetratech.com, brendan.martin@tetratech.com	Quote No. 221613
Address: 1 S. Wacker Drive, Suite 3700	Sampler's Signature: x Brendan Martin	Analysis (Attach list if more space is needed)	Page 1 of 2
City: Chicago / State: IL / Zip Code: 60606	Printed Name: Brendan Martin		
Project Name: Joliet Chemical Fire PRP Cleanup Site			
Project Number: 103X9031006900C2AJ001	P.O. No.: SHLY-1		

UL20021

NM&

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	TPH-DRO/SW-846 8015C	TAL Metals (with mercury)/SW-846 6010D/7470A/7471B	Remarks / Cooler I.D.
MPGI-SF-Soil-09-121719	121719	0940			X		2								X	X	Extra Volume for MS/MSD
MPGI-SF-Soil-10A-121719	121719	1140			X		1								X	X	
MPGI-SF-Soil-10B-121719	121719	1144			X		1								X	X	
MPGI-SF-Soil-10C-121719	121719	1146			X		1								X	X	
MPGI-SF-Soil-11A-121919	121919	1240			X		1								X	X	
MPGI-SF-Soil-11B-121919	121919	1242			X		1								X	X	
MPGI-SF-Soil-11C-121919	121919	1244			X		1								X	X	
MPGI-SF-Soil-12A-121919	121919	1310			X		1								X	X	
MPGI-SF-Soil-12B-121819	121819	1001			X		1								X	X	
MPGI-SF-Soil-12C-121919	121919	1312			X		1								X	X	

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal
☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks)
☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements

	Date	Time		Date	Time
1. Relinquished by: Brendan Martin Brendan Martin	121919	1430	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: FedEx	12.20.19	1308	4. Laboratory Received by: Erin Brown	12.20.19	1308

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack
Receipt Temp. 3.1 °C

Document Number: ME0020W-01

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

SHEALY

Chain of Custody Record

Number

Client	Report to Contact	Telephone No. / E-mail	Quote No.
Tetra Tech	Andre Baker and Brendan Martin	andre.baker@tetratech.com, brendan.martin@tetratech.com	

Address	Sampler's Signature	Analysis (Attach list if more space is needed)	Page 2 of 2
S. Wacker Drive, Suite 3700	x [signature]		

City	State	Zip Code	Printed Name
Chicago	IL	60606	Brendan Martin

Project Name: Joliet Chemical Fire PRP Cleanup Site

Project Number: 03X9031306900ZAJD01

P.O No.: SHLY-1

UL20021

NIRS

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	TPH-DRO/SW-846 8015C	TAL Metals (with mercury)/SW-846 6010D/7470A/7471B	Remarks / Cooler I.D.
MPGI-SF-Soil-13A-121719	121719	1410			X		1								X	X	
MPGI-SF-Soil-13B-121719	121719	1414			X		1								X	X	
MPGI-SF-Soil-14A-121919	121919	1210			X		1								X	X	
MPGI-SF-Soil-14A-121919-D	121919	1212			X		1								X	X	
MPGI-SF-Soil-14B-121919	121919	1214			X		1								X	X	
MPGI-SF-Soil-14C-121919	121919	1216			X		1								X	X	
MPGI-RB-121719	121719	1330		X			1								X	X	Rinsate Blank

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal
☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks)
☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements

	Date	Time		Date	Time
1. Relinquished by: Brendan Martin	121919	1430	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: FedEx	12.20.19	1308	4. Laboratory Received by: [signature]	12.20.19	1308

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack
Receipt Temp. 3.1 °C

Document Number: ME002OW-01

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: MF0018C-14

Page: 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: JSH / 12/20/19 Lot #: UL20021

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 19-2313

3.1 / 3.1 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☐ Yes	☑ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JSH Date: 12/20/19

Comments:

TPH-DRO

QC SUMMARY

FORM 2
ISOTOPE DILUTION STANDARD RECOVERY

Lab Name: Shealy Environmental Services, Inc.   Lot No.: UL20021

Project No.: 103X9031006

AnalyticalMethod: 8015C   Matrix: Water

CLIENT SAMPLE ID	IDS1								TOT OUT
MPG1-RB-121719	48 *								1
DBLK44	74								0
DLCS44	81								0
MPG1-RB-121719MS	74								0
MPG1-RB-121719MSD	84								0

QC LIMITS

IDS1 = o - Terphenyl   53-118

* Recoveries outside QC limits
D IDS Diluted Out

FORM 2
ISOTOPE DILUTION STANDARD RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL20021

Project No.: 103X9031006

AnalyticalMethod: 8015C Matrix: Soil

CLIENT SAMPLE ID	IDS1								TOT OUT
MPGI-SF-Soil-09-12	57								0
MPGI-SF-Soil-10A-12	57								0
MPGI-SF-Soil-10B-12	68								0
MPGI-SF-Soil-10C-12	58								0
MPGI-SF-Soil-11A-12	65								0
MPGI-SF-Soil-11B-12	51 *								1
MPGI-SF-Soil-11C-12	57								0
MPGI-SF-Soil-12A-12	55								0
MPGI-SF-Soil-12B-12	74								0
MPGI-SF-Soil-12C-12	62								0
MPGI-SF-Soil-13A-12	44 *								1
MPGI-SF-Soil-13B-12	41 *								1
MPGI-SF-Soil-14A-12	58								0
MPGI-SF-Soil-14A-12	64								0
MPGI-SF-Soil-14B-12	65								0
MPGI-SF-Soil-14C-12	57								0
DBLK54	100								0
DLCS54	108								0
DBLK62	101								0
DLCS62	106								0
MPGI-SF-Soil-09-12MS	65								0
MPGI-SF-Soil-09-12MSD	56								0

QC LIMITS

IDS1 = o - Terphenyl 55-120

* Recoveries outside QC limits
D IDS Diluted Out

FORM 3
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL20021

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Water

Client Sample ID (Matrix Spike/Matrix Spike Duplicate): MPG1-RB-121719

Instrument ID: Agilent_6890_GC12 Lab Sample ID: UL20021-017MS

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %REC	#	QC LIMITS REC.
TPH-DRO	2000		1100	57	*	70-130

ANALYTE	SPIKE ADDED	MSD CONCENTRATION	MSD %R	#	RPD	#	QC LIMITS RPD	QC LIMITS %R
TPH-DRO	2000	1300	63	*	11		0-20	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL20021

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Soil

Client Sample ID: DLCS54 Lab Sample ID: UQ40054-002

Instrument ID: Agilent_6890_GC12

Concentration Units (ug/L, mg/L, ug/kg): ug/kg

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
TPH-DRO	83000	78000	93	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL20021

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Soil

Client Sample ID: DLCS62 Lab Sample ID: UQ39962-002

Instrument ID: Agilent_6890_GC12

Concentration Units (ug/L, mg/L, ug/kg): ug/kg

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
TPH-DRO	83000	75000	91	70-130

* Values outside of QC Limits

FORM 3
LABORATORY CONTROL/LABORATORY CONTROL DUPLICATE SAMPLE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Lot No.: UL20021

Project No.: 103X9031006

Analytical Method: 8015C Matrix: Water

Client Sample ID: DLCS44 Lab Sample ID: UQ40144-002

Instrument ID: Agilent_6890_GC12

Concentration Units (ug/L, mg/L, ug/kg): ug/L

ANALYTE	SPIKE ADDED	LCS CONCENTRATION	LCS %REC #	QC LIMITS REC.
TPH-DRO	2000	1200	60 *	70-130

* Values outside of QC Limits

CLIENT SAMPLE ID

DBLK54

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc.

Lot No.: UL20021

Project No.: 103X9031006

Lab Sample ID: UQ40054-001

Analytical Method: 8015C

Matrix: Soil

Instrument ID: Agilent_6890_GC12

Lab File ID: UQ40054-001.txt

Extraction Type: 3550C

Date Extracted: 12/25/2019

LC Column: DB-35MS ID: 0.32 (mm)

Date Analyzed: 12/26/2019

Time Analyzed: 10:21

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPGI-SF-Soil-09-12	UL20021-001	UL20021-001.txt	11:37
MPGI-SF-Soil-10A-12	UL20021-002	UL20021-002.txt	12:35
MPGI-SF-Soil-10C-12	UL20021-004	UL20021-004.txt	12:54
MPGI-SF-Soil-11C-12	UL20021-007	UL20021-007.txt	13:33
MPGI-SF-Soil-12C-12	UL20021-010	UL20021-010.txt	13:52
DLCS54	UQ40054-002	UQ40054-002.txt	10:40

CLIENT SAMPLE ID

DBLK62

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc.

Lot No.: UL20021

Project No.: 103X9031006

Lab Sample ID: UQ39962-001

Analytical Method: 8015C

Matrix: Soil

Instrument ID: Agilent_6890_GC12

Lab File ID: UQ39962-001.txt

Extraction Type: 3550C

Date Extracted: 12/23/2019

LC Column: DB-35MS ID: 0.32 (mm)

Date Analyzed: 12/24/2019

Time Analyzed: 10:11

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPGI-SF-Soil-10B-12	UL20021-003	UL20021-003.txt	12:06
MPGI-SF-Soil-11A-12	UL20021-005	UL20021-005.txt	12:44
MPGI-SF-Soil-11B-12	UL20021-006	UL20021-006.txt	13:03
MPGI-SF-Soil-12A-12	UL20021-008	UL20021-008.txt	13:41
MPGI-SF-Soil-12B-12	UL20021-009	UL20021-009.txt	14:01
MPGI-SF-Soil-13A-12	UL20021-011	UL20021-011.txt	14:39
MPGI-SF-Soil-13B-12	UL20021-012	UL20021-012.txt	14:58
MPGI-SF-Soil-14A-12	UL20021-013	UL20021-013.txt	15:17
MPGI-SF-Soil-14A-12	UL20021-014	UL20021-014.txt	15:37
MPGI-SF-Soil-14B-12	UL20021-015	UL20021-015.txt	15:56
MPGI-SF-Soil-14C-12	UL20021-016	UL20021-016.txt	16:15
DLCS62	UQ39962-002	UQ39962-002.txt	10:30
MPGI-SF-Soil-09-12MS	UL20021-001MS	UL20021-001MS.txt	11:08
MPGI-SF-Soil-09-12MSD	UL20021-001MD	UL20021-001MD.txt	11:27

CLIENT SAMPLE ID

DBLK44

FORM 4
METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc.
Lot No.: UL20021

Project No.: 103X9031006
Lab Sample ID: UQ40144-001

Analytical Method: 8015C
Matrix: Water

Instrument ID: Agilent_6890_GC12
Lab File ID: UQ40144-001.txt

Extraction Type: 3520C
Date Extracted: 12/26/2019

LC Column: DB-35MS ID: 0.32 (mm)
Date Analyzed: 12/27/2019

Time Analyzed: 10:24

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE/TIME ANALYZED
MPG1-RB-121719	UL20021-017	UL20021-017.txt	11:02
DLCS44	UQ40144-002	UQ40144-002.txt	10:43
MPG1-RB-121719MS	UL20021-017MS	UL20021-017MS.txt	11:21
MPG1-RB-121719MSD	UL20021-017MD	UL20021-017MD.txt	11:40

Report Date: 20-Nov-2019 15:05:31 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\112019F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK	001F0101.d	20-Nov-2019 09:23:30	6.900
Client	IBLK	001F0201.d	20-Nov-2019 09:42:30	6.887
Client	SVGC-1832	002F0301.d	20-Nov-2019 10:01:30	6.895
Ical	SVGC-1659	003F0401.d	20-Nov-2019 10:20:30	6.893
Ical	SVGC-1660	004F0501.d	20-Nov-2019 10:40:30	6.892
Ical	SVGC-1661	005F0601.d	20-Nov-2019 10:59:30	6.895
Ical	SVGC-1662	006F0701.d	20-Nov-2019 11:18:30	6.897
Ical	SVGC-1663	007F0801.d	20-Nov-2019 11:37:30	6.902
Client	SVGC-1832	002F0901.d	20-Nov-2019 11:56:30	6.894
LCS	SVGC-1711	008F1001.d	20-Nov-2019 12:15:30	6.895
Client	SVGC-1832	002F1101.d	20-Nov-2019 12:34:30	6.895

Report Date: 24-Dec-2019 16:50:39 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\122419F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK 19-2577	001F0101.d	24-Dec-2019 09:13:30	6.894
Client	SVGC-1832	002F0201.d	24-Dec-2019 09:32:30	6.896
Ccv	SVGC-1661	003F0301.d	24-Dec-2019 09:51:30	6.896
BLANK	UQ39962-001	004F0401.d	24-Dec-2019 10:11:30	6.896
LCS	UQ39962-002	005F0501.d	24-Dec-2019 10:30:30	6.896
Client	UL20021-001	006F0601.d	24-Dec-2019 10:49:30	6.893
MS	UL20021-001MS	007F0701.d	24-Dec-2019 11:08:30	6.894
MSD	UL20021-001MD	008F0801.d	24-Dec-2019 11:27:30	6.894
Client	UL20021-002	009F0901.d	24-Dec-2019 11:46:30	6.894
Client	UL20021-003	010F1001.d	24-Dec-2019 12:06:30	6.895
Client	UL20021-004	011F1101.d	24-Dec-2019 12:25:30	6.895
Client	UL20021-005	012F1201.d	24-Dec-2019 12:44:30	6.895
Client	UL20021-006	013F1301.d	24-Dec-2019 13:03:30	6.895
Client	UL20021-007	014F1401.d	24-Dec-2019 13:22:30	6.895
Client	UL20021-008	015F1501.d	24-Dec-2019 13:41:30	6.895
Client	UL20021-009	016F1601.d	24-Dec-2019 14:01:30	6.895
Client	UL20021-010	017F1701.d	24-Dec-2019 14:20:30	6.895
Client	UL20021-011	018F1801.d	24-Dec-2019 14:39:30	6.895
Client	UL20021-012	019F1901.d	24-Dec-2019 14:58:30	6.895
Client	UL20021-013	020F2001.d	24-Dec-2019 15:17:30	6.895
Client	UL20021-014	021F2101.d	24-Dec-2019 15:37:30	6.895
Client	UL20021-015	022F2201.d	24-Dec-2019 15:56:30	6.896
Client	UL20021-016	023F2301.d	24-Dec-2019 16:15:30	6.895
Ccv	SVGC-1661	003F2401.d	24-Dec-2019 16:34:30	6.897

Report Date: 27-Dec-2019 10:06:40 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\122619F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK 19-2577	001F0101.d	26-Dec-2019 09:24:30	
Client	SVGC-1832	002F0201.d	26-Dec-2019 09:43:30	6.892
Ccv	SVGC-1661	003F0301.d	26-Dec-2019 10:02:30	6.892
BLANK	UQ40054-001	004F0401.d	26-Dec-2019 10:21:30	6.893
LCS	UQ40054-002	005F0501.d	26-Dec-2019 10:40:30	6.893
Client	UL20020-001	006F0601.d	26-Dec-2019 10:59:30	6.892
Client	UL20020-002	007F0701.d	26-Dec-2019 11:18:30	6.892
Client	UL20021-001	008F0801.d	26-Dec-2019 11:37:30	6.892
MS	UL20021-001MS	009F0901.d	26-Dec-2019 11:57:30	6.893
MSD	UL20021-001MD	010F1001.d	26-Dec-2019 12:16:30	6.892
Client	UL20021-002	011F1101.d	26-Dec-2019 12:35:30	6.892
Client	UL20021-004	012F1201.d	26-Dec-2019 12:54:30	6.892
Client	UL20021-006	013F1301.d	26-Dec-2019 13:13:30	6.892
Client	UL20021-007	014F1401.d	26-Dec-2019 13:33:30	6.892
Client	UL20021-010	015F1501.d	26-Dec-2019 13:52:30	6.893
Client	UL20021-011	016F1601.d	26-Dec-2019 14:11:30	6.892
Client	UL20021-012	017F1701.d	26-Dec-2019 14:30:30	6.892
Client	UL20081-001	018F1801.d	26-Dec-2019 14:49:30	
Client	UL20081-002	019F1901.d	26-Dec-2019 15:09:30	
Client	UL20081-003	020F2001.d	26-Dec-2019 15:28:30	6.874
Client	UL20081-004	021F2101.d	26-Dec-2019 15:47:30	6.867
Client	UL20081-001	022F2201.d	26-Dec-2019 16:06:30	6.892
Client	UL20081-002	023F2301.d	26-Dec-2019 16:25:30	6.895
Ccv	SVGC-1661	003F2401.d	26-Dec-2019 16:45:30	6.894
Client	UL20081-003	024F2501.d	26-Dec-2019 17:04:30	6.902
Client	UL20081-004	025F2601.d	26-Dec-2019 17:23:30	6.897
Ccv	SVGC-1661	003F2701.d	26-Dec-2019 17:42:30	6.893

Report Date: 09-Jan-2020 09:07:35 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Form 8 - Analytical Sequence

Batch Path: \\Organics\EE\chem\gc12.i\122719F1.b

Instrument: gc12 Method: 8015CLVI.m

Ical Date: 20-Nov-2019 11:37:30

Column: MXT-1 (0.53 mm) Detector: FID1

Surrogate 1 (6.895) $ 1 OTP

Sample Type	Lab Sample ID	Data File	Injection Date/Time	Sur 1 RT
Client	IBLK 19-2577	001F0101.d	27-Dec-2019 09:27:30	6.874
Client	SVGC-1832	002F0201.d	27-Dec-2019 09:46:30	6.891
Ccv	SVGC-1661	003F0301.d	27-Dec-2019 10:05:30	6.892
BLANK	UQ40144-001	004F0401.d	27-Dec-2019 10:24:30	6.891
LCS	UQ40144-002	005F0501.d	27-Dec-2019 10:43:30	6.891
Client	UL20021-017	006F0601.d	27-Dec-2019 11:02:30	6.891
MS	UL20021-017MS	007F0701.d	27-Dec-2019 11:21:30	6.891
MSD	UL20021-017MD	008F0801.d	27-Dec-2019 11:40:30	6.891
Ccv	SVGC-1661	003F0901.d	27-Dec-2019 11:59:30	6.892
Client	UQ40144-002	005F1001.d	27-Dec-2019 12:24:30	6.892
Client	UL20021-017	006F1101.d	27-Dec-2019 12:43:30	6.891
Client	SVGC-1661	003F1201.d	27-Dec-2019 13:02:30	6.892

RAW SAMPLE DATA

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-001
Description: MPGI-SF-Soil-09-121719
Matrix: Solid
Date Sampled: 12/17/2019 0940
% Solids: 76.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1137	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	41000		8600	4100	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\008F0801.D		
Lab Sample ID:	UL20021-001	Client Sample ID:	MPGI-SF-Soil-09-121
Injection Date:	26-Dec-2019 11:37:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-001		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	8
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.600	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 13:11:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	25174492	192.59	31469	M
$	1 OTP	6.892	6.895	-0.002	4329203	28.712	4691.42	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

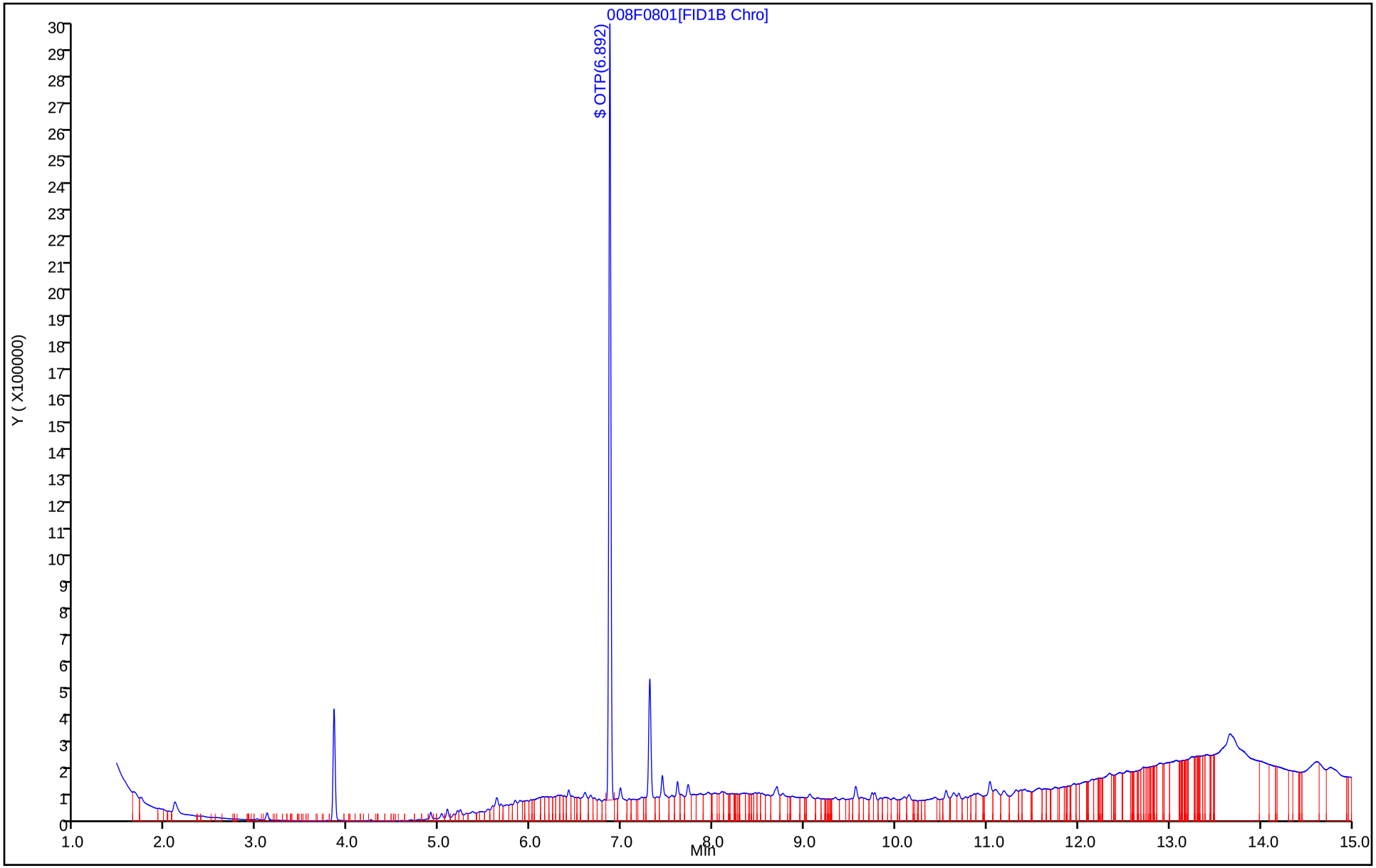
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\008F0801.D				
Injection Date:	26-Dec-2019 11:37:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-09-121	Lab ID:	UL20021-001		
Sample Info:	UL20021-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

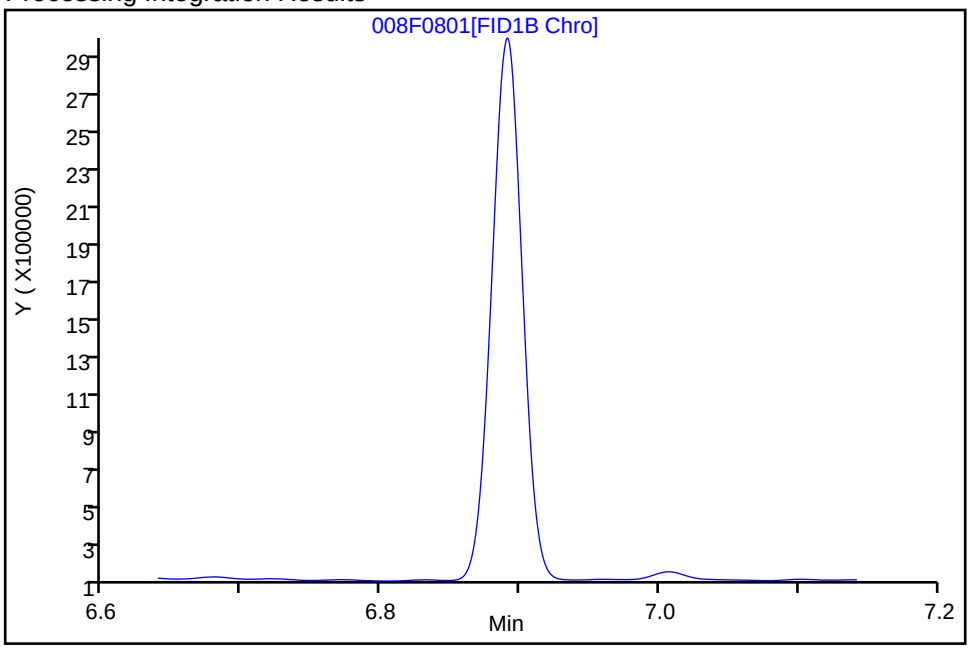
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\008F0801.D		
Injection Date:	26-Dec-2019 11:37:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-09-121	Lab ID:	UL20021-001
Sample Info:	UL20021-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

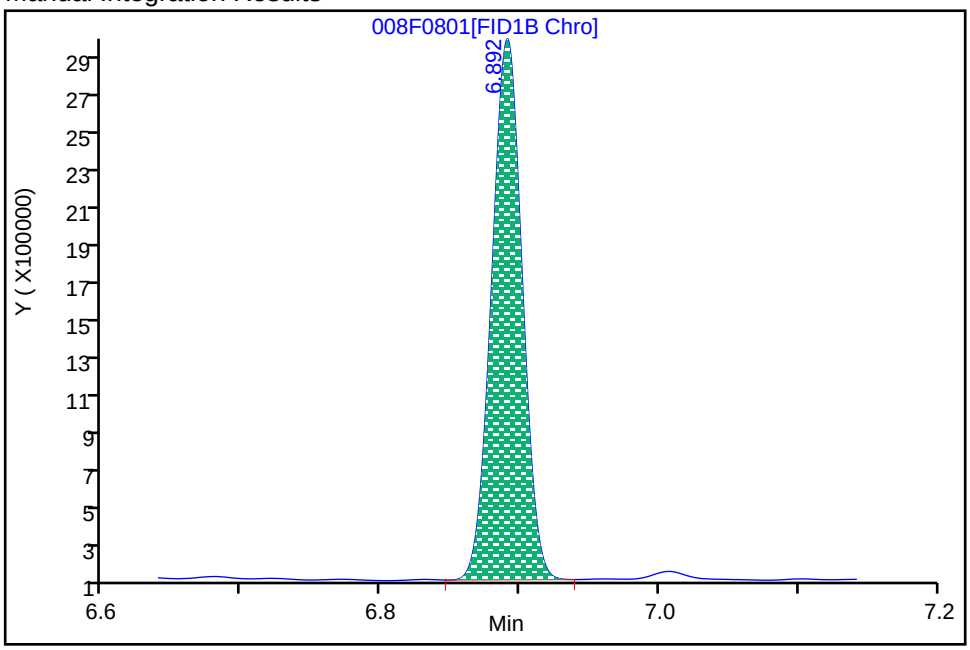
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 4329203
Conc: 4691.42
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 13:11:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-002
Description: MPGI-SF-Soil-10A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1140
% Solids: 80.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1235	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	16000		8200	3900	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\011F1101.D		
Lab Sample ID:	UL20021-002	Client Sample ID:	MPGI-SF-Soil-10A-12
Injection Date:	26-Dec-2019 12:35:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-002		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	11
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.300	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 13:11:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	10492003	80.266	13245	M
$	1 OTP	6.892	6.895	-0.003	4305024	28.551	4711.41	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

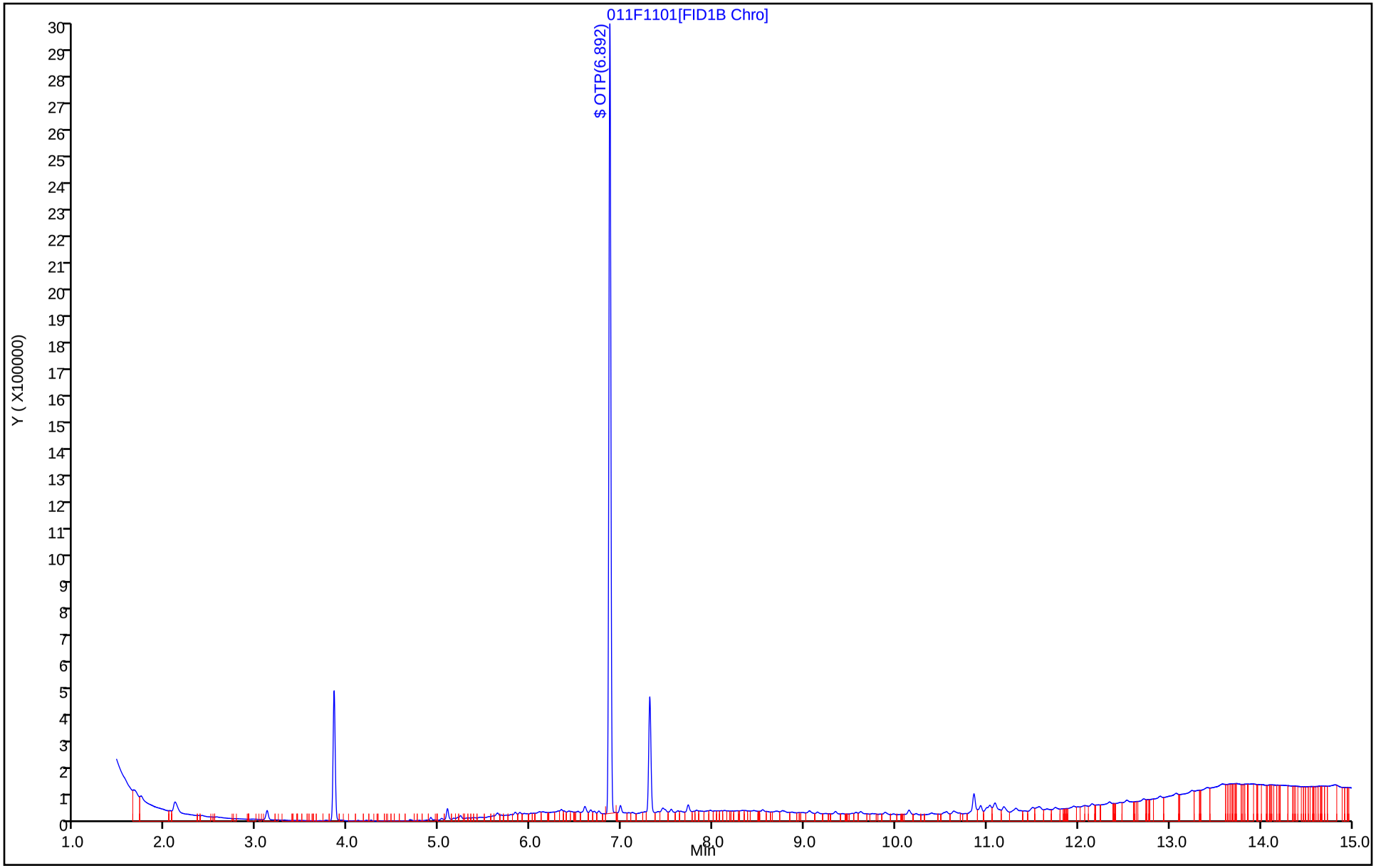
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\011F1101.D				
Injection Date:	26-Dec-2019 12:35:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-10A-12	Lab ID:	UL20021-002		
Sample Info:	UL20021-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

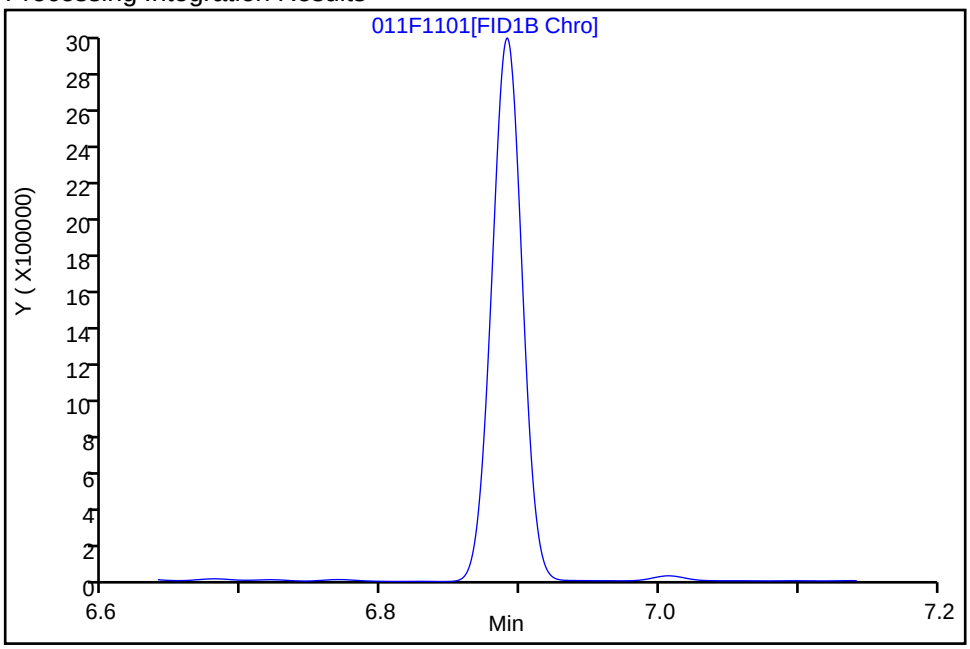
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\011F1101.D		
Injection Date:	26-Dec-2019 12:35:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-10A-12	Lab ID:	UL20021-002
Sample Info:	UL20021-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

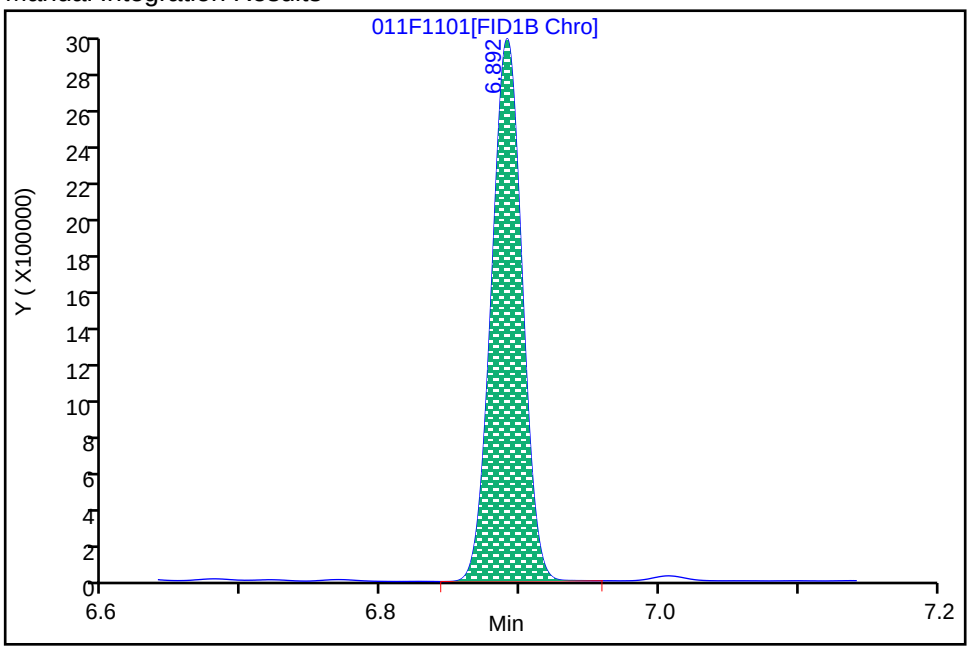
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 4305024
Conc: 4711.41
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 13:11:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-003
Description: MPGI-SF-Soil-10B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1144
% Solids: 81.4 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1206	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	41000		8000	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		68	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\010F1001.D		
Lab Sample ID:	UL20021-003	Client Sample ID:	MPGI-SF-Soil-10B-12
Injection Date:	24-Dec-2019 12:06:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-003		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	10
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.700	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 12:29:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	26589559	203.42	33130	M
$	1 OTP	6.895	6.895	0.000	5123973	33.982	5534.60	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

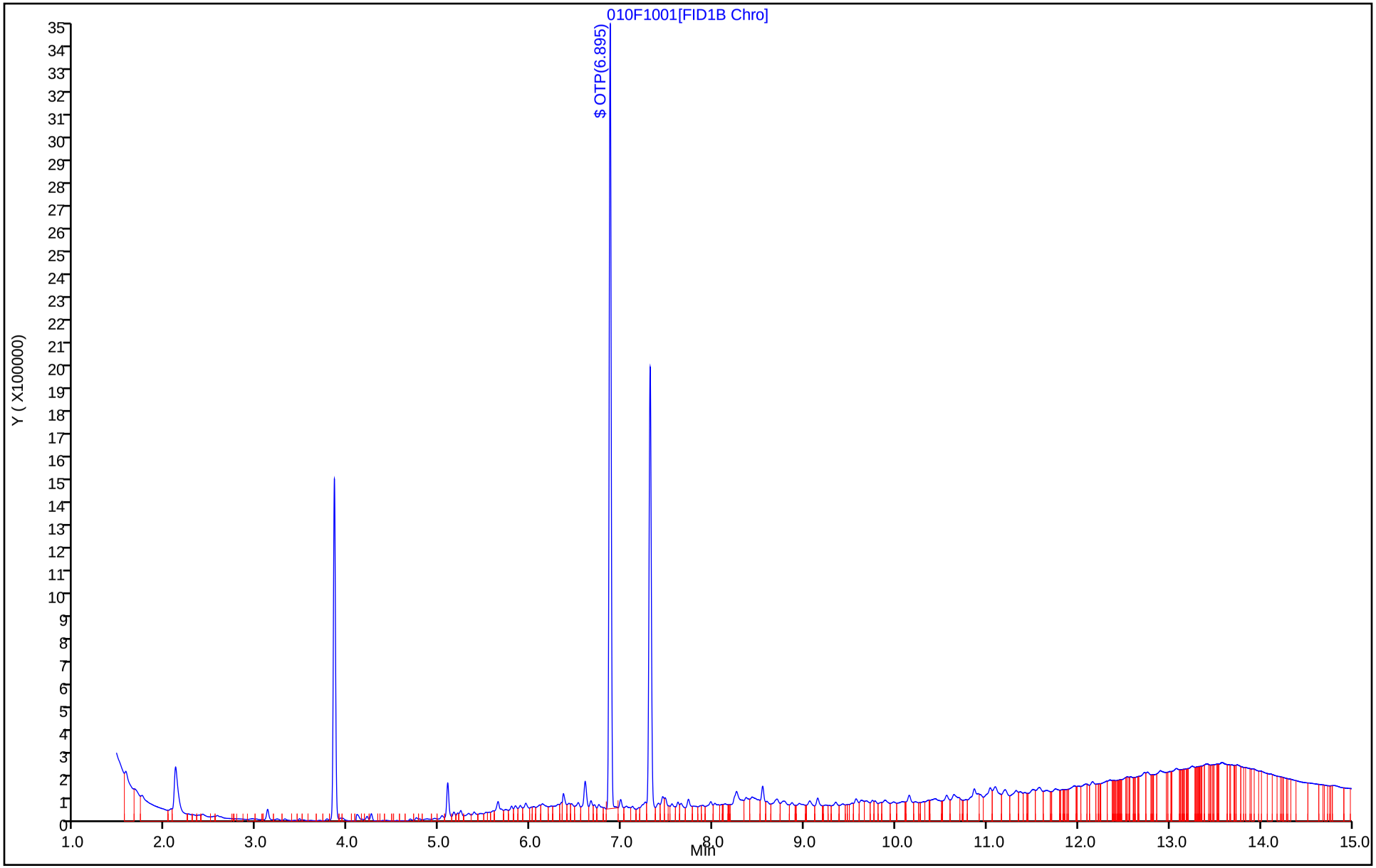
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:00 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\010F1001.D				
Injection Date:	24-Dec-2019 12:06:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-10B-12	Lab ID:	UL20021-003		
Sample Info:	UL20021-003				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:00 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

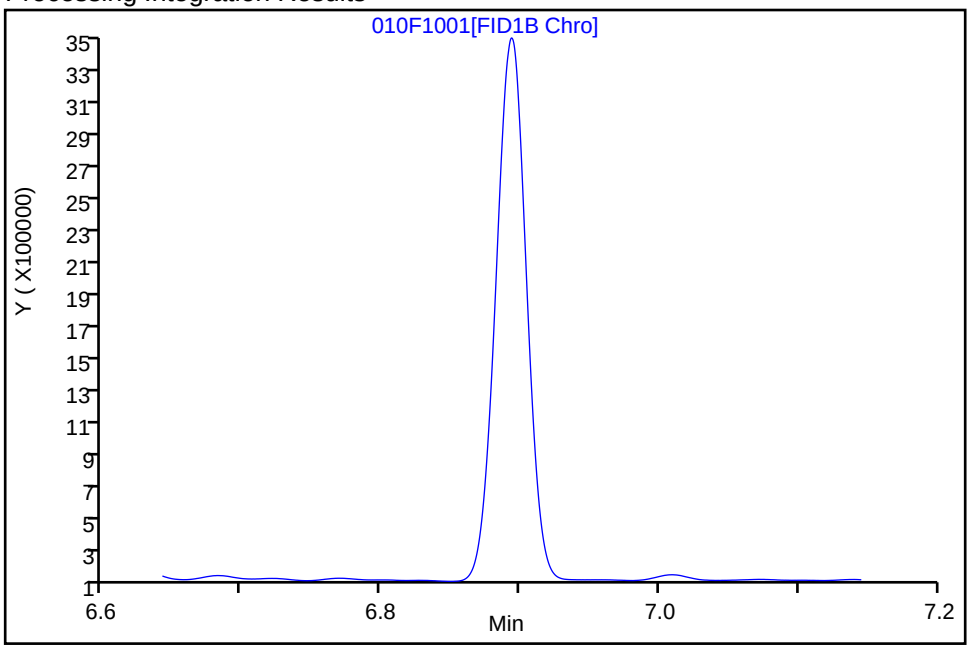
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\010F1001.D		
Injection Date:	24-Dec-2019 12:06:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-10B-12	Lab ID:	UL20021-003
Sample Info:	UL20021-003		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

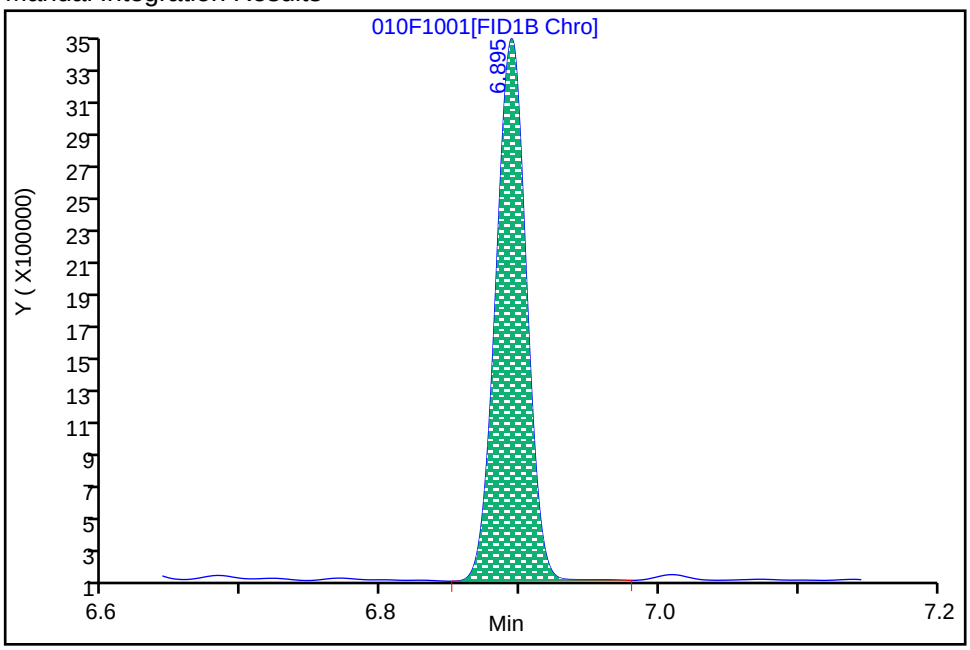
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 5123973
Conc: 5534.60
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 12:29:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-004
Description: MPGI-SF-Soil-10C-121719
Matrix: Solid
Date Sampled: 12/17/2019 1146
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1254	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	4900	J	8200	3900	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\012F1201.D		
Lab Sample ID:	UL20021-004	Client Sample ID:	MPGI-SF-Soil-10C-12
Injection Date:	26-Dec-2019 12:54:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-004		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.200	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 13:12:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	3134265	23.978	3969.85	M
$	1 OTP	6.892	6.895	-0.002	4371595	28.993	4800.11	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

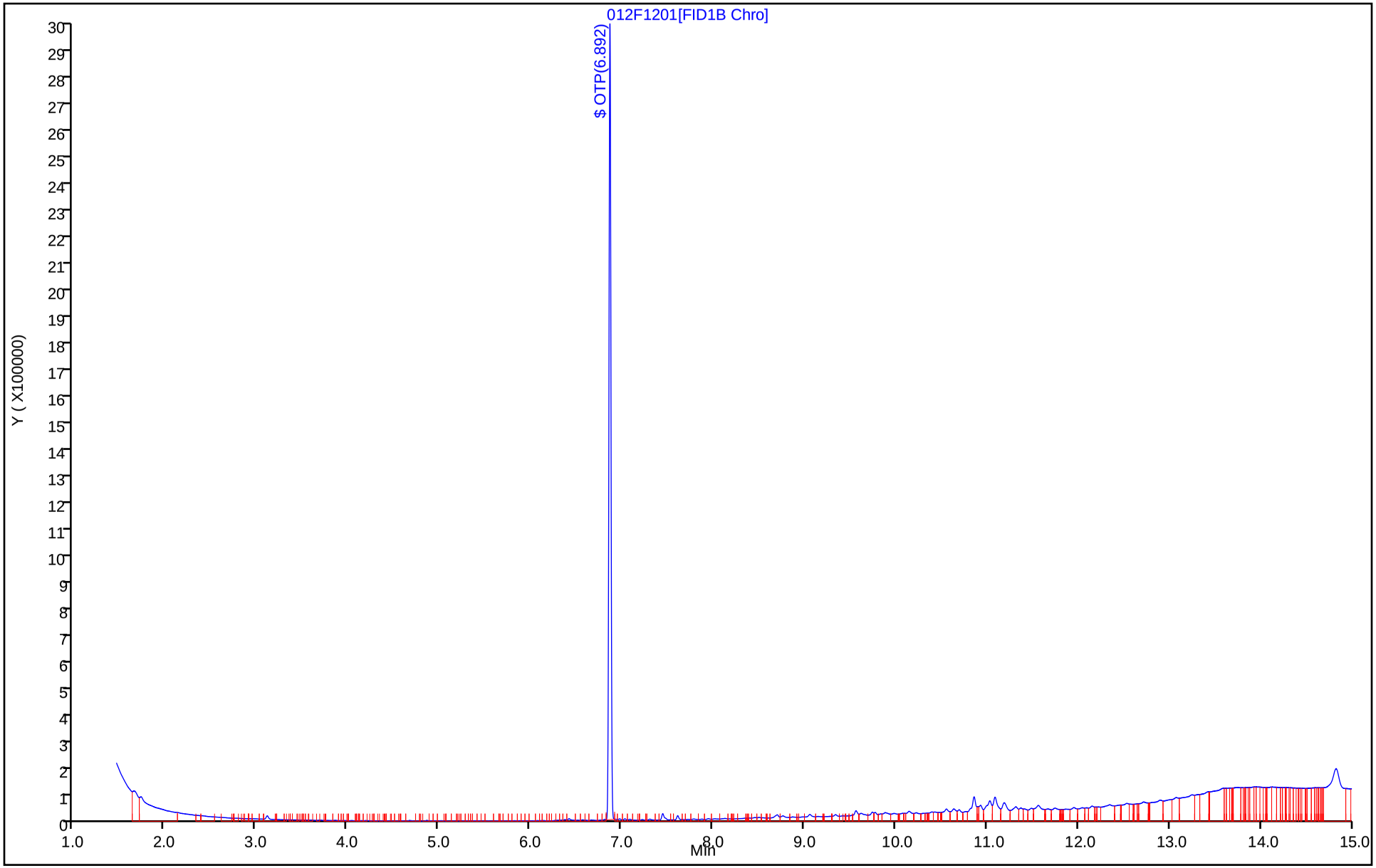
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\012F1201.D				
Injection Date:	26-Dec-2019 12:54:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-10C-12	Lab ID:	UL20021-004		
Sample Info:	UL20021-004				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

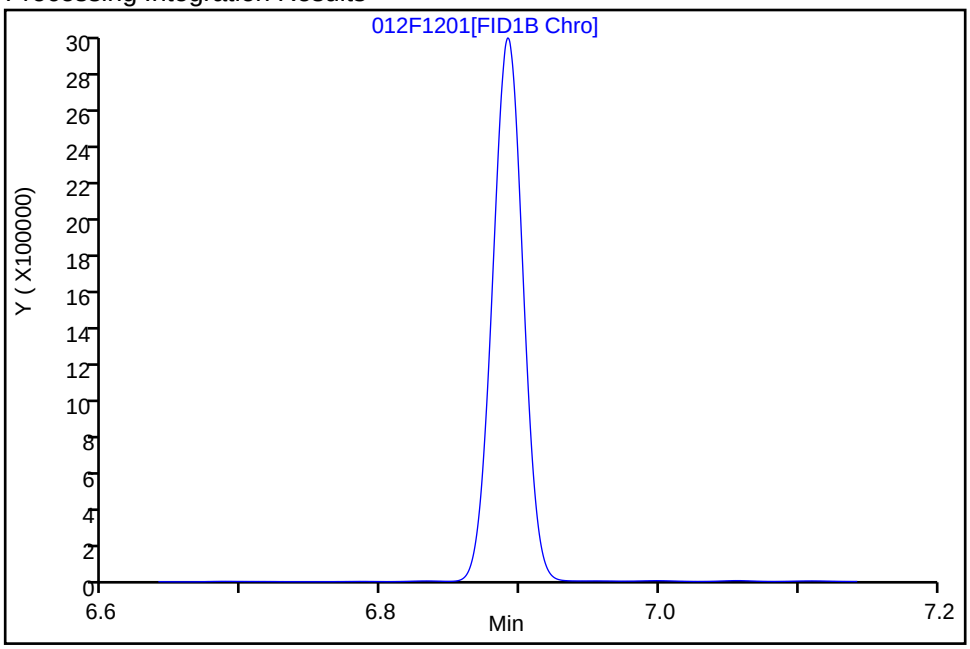
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\012F1201.D		
Injection Date:	26-Dec-2019 12:54:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-10C-12	Lab ID:	UL20021-004
Sample Info:	UL20021-004		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

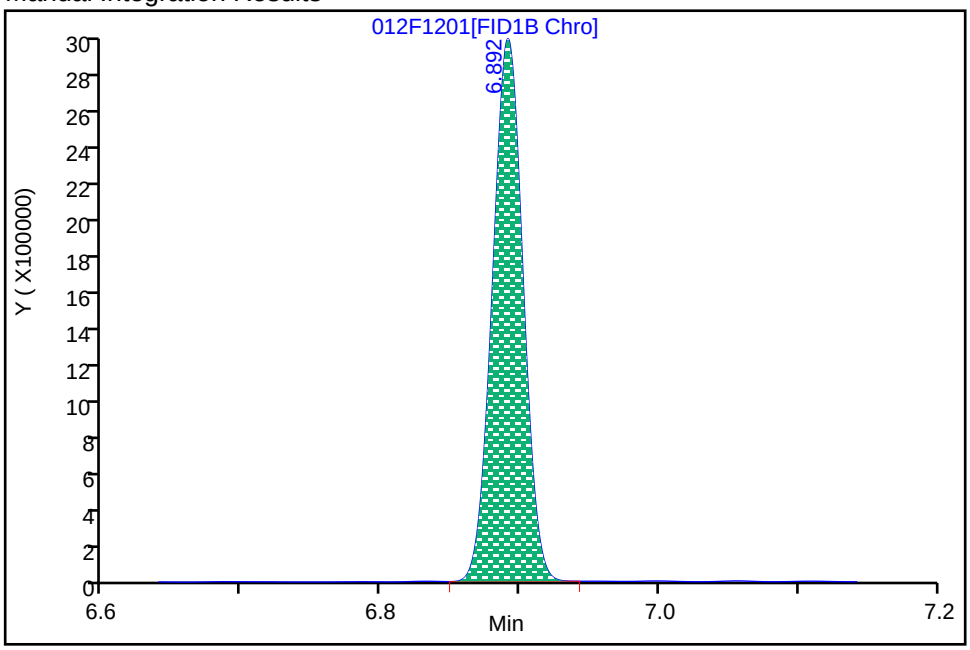
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 4371595
Conc: 4800.11
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 13:12:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-005
Description: MPGI-SF-Soil-11A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1240
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1244	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	6400	J	8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		65	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\012F1201.D		
Lab Sample ID:	UL20021-005	Client Sample ID:	MPGI-SF-Soil-11A-12
Injection Date:	24-Dec-2019 12:44:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-005		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	12
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.900	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 13:24:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	4098262	31.353	5073.26	M
$	1 OTP	6.895	6.895	0.000	4894767	32.462	5252.81	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

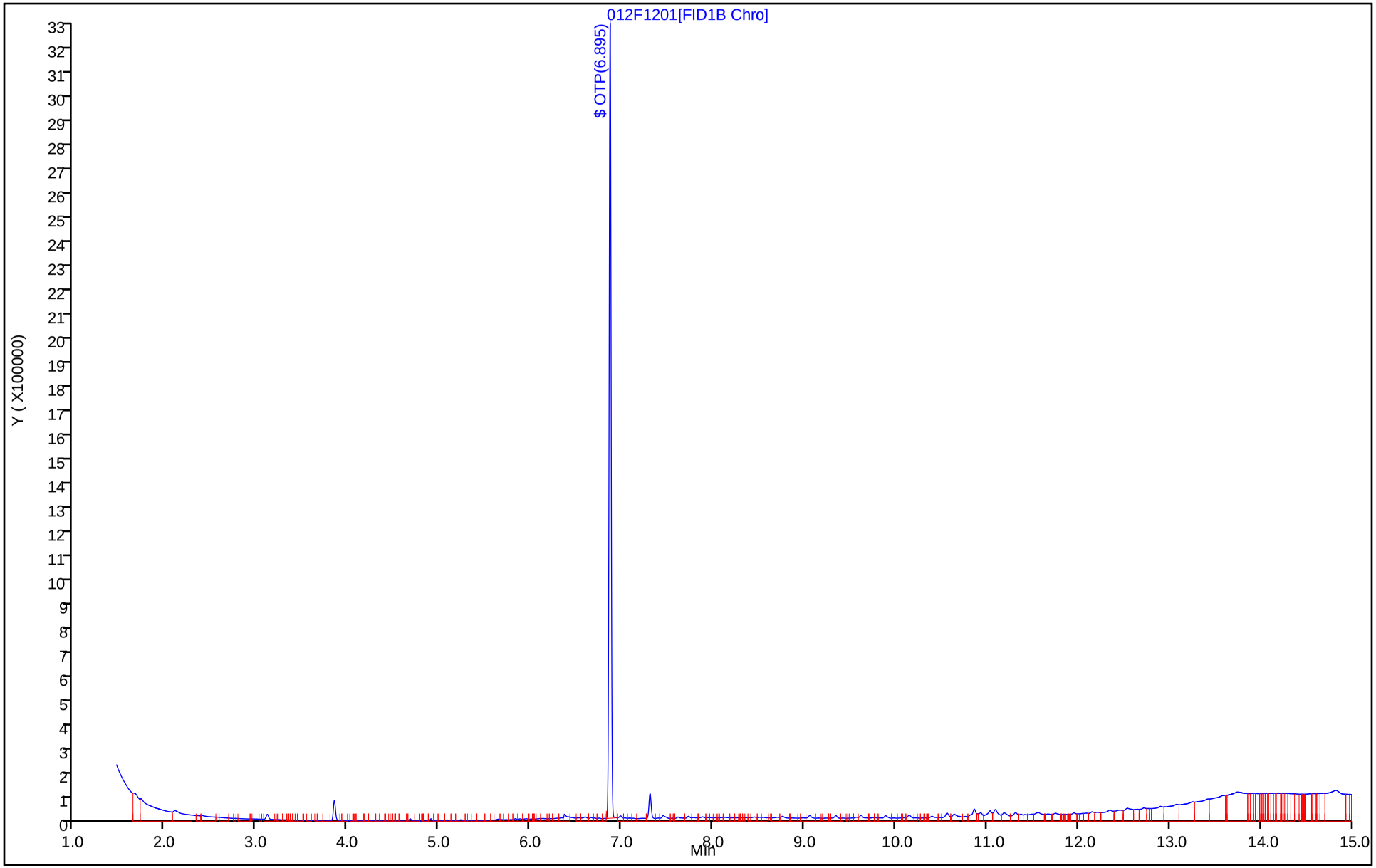
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\012F1201.D				
Injection Date:	24-Dec-2019 12:44:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-11A-12	Lab ID:	UL20021-005		
Sample Info:	UL20021-005				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

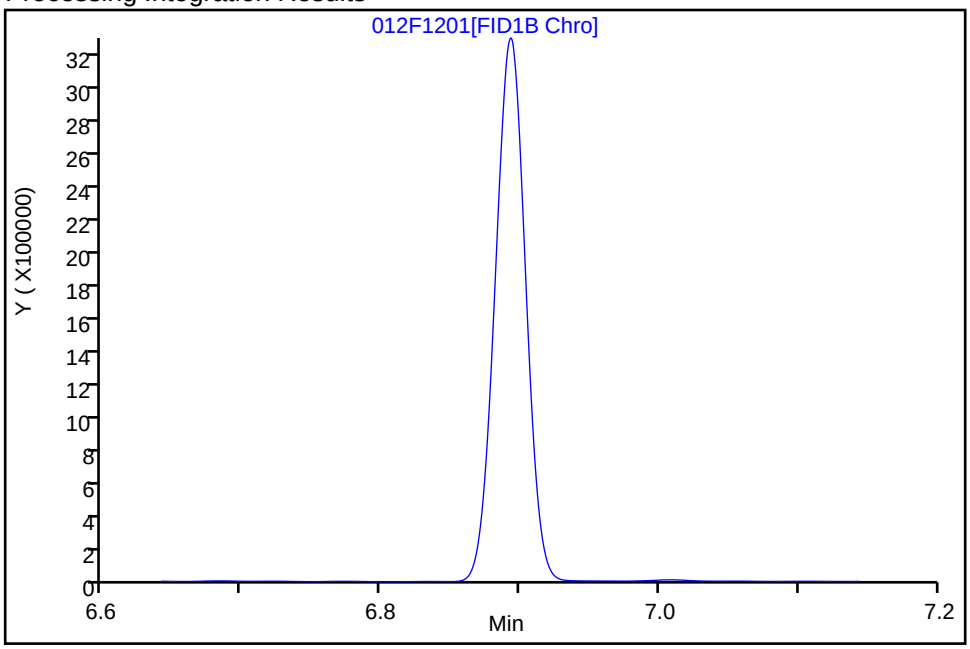
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\012F1201.D		
Injection Date:	24-Dec-2019 12:44:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-11A-12	Lab ID:	UL20021-005
Sample Info:	UL20021-005		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

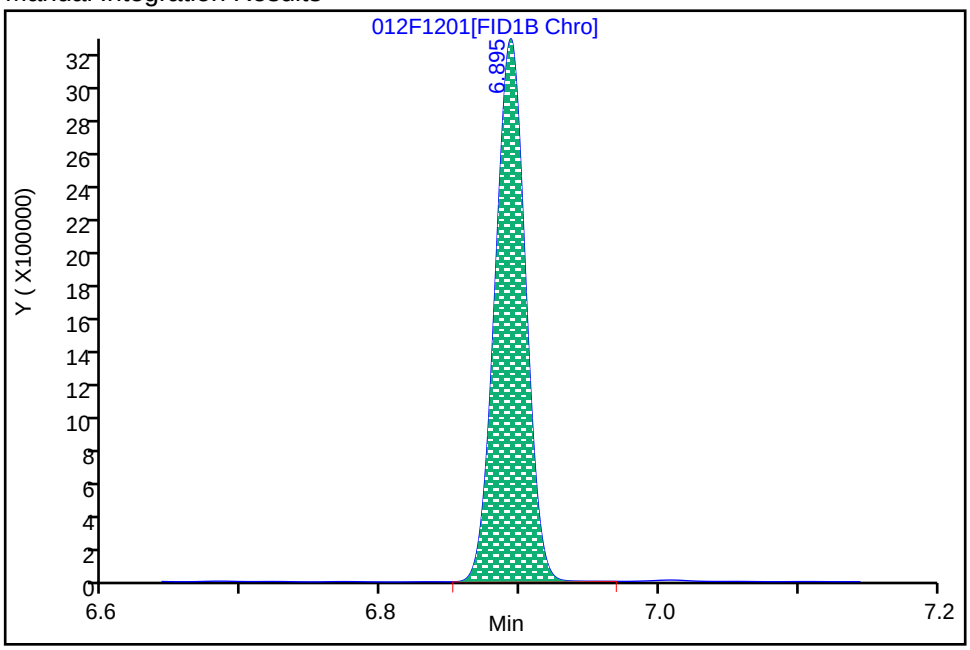
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 4894767
Conc: 5252.81
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 13:24:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-006
Description: MPGI-SF-Soil-11B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1242
% Solids: 80.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1303	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		8100	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	51	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\013F1301.D		
Lab Sample ID:	UL20021-006	Client Sample ID:	MPGI-SF-Soil-11B-12
Injection Date:	24-Dec-2019 13:03:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-006		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	13
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.900	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 13:24:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	2274617	17.401	2815.76	eM
$	1 OTP	6.895	6.895	0.000	3863036	25.620	4145.61	MR

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

R - Spike/Surrogte Fails %Recovery Test

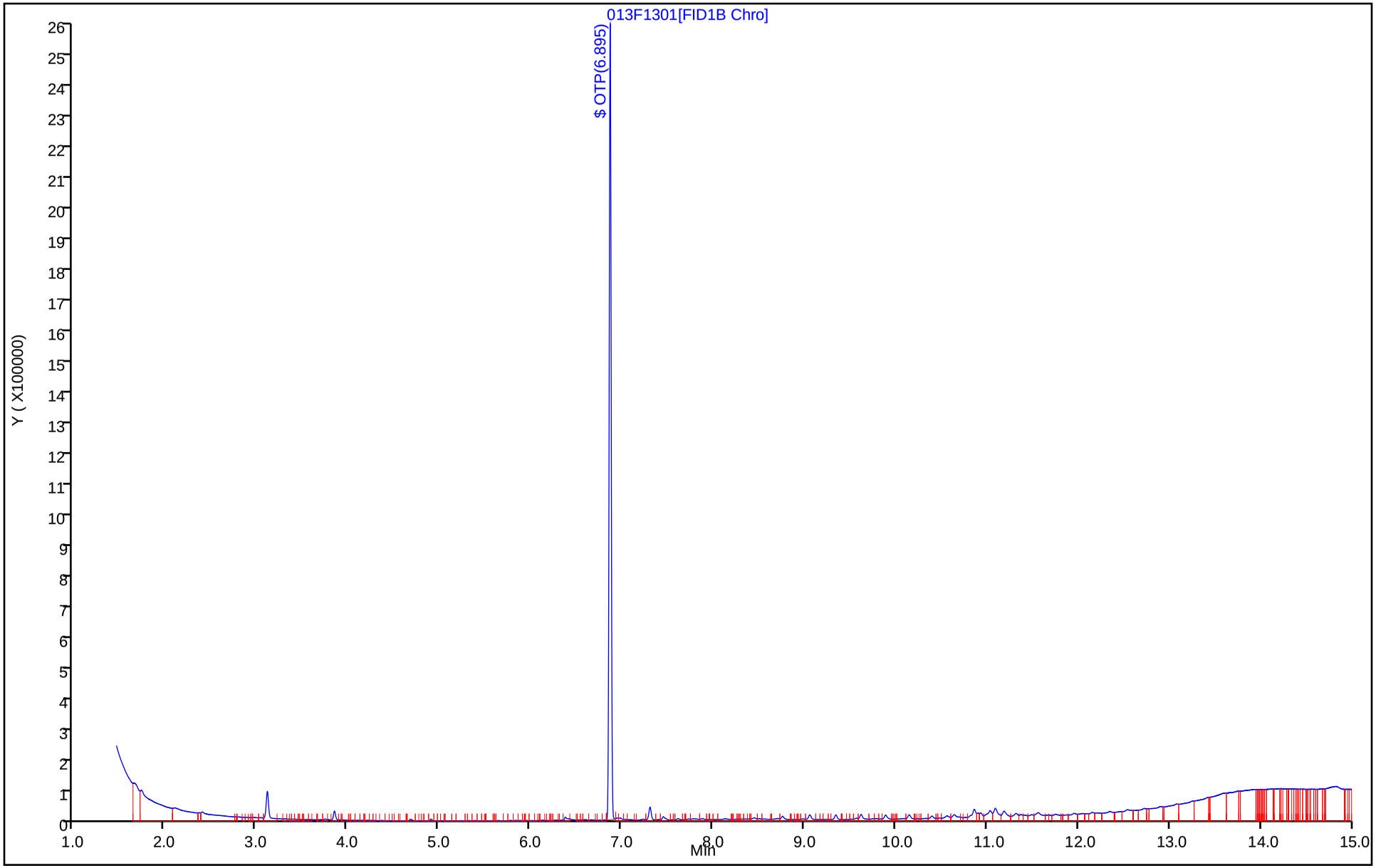
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\013F1301.D				
Injection Date:	24-Dec-2019 13:03:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-11B-12	Lab ID:	UL20021-006		
Sample Info:	UL20021-006				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:02 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

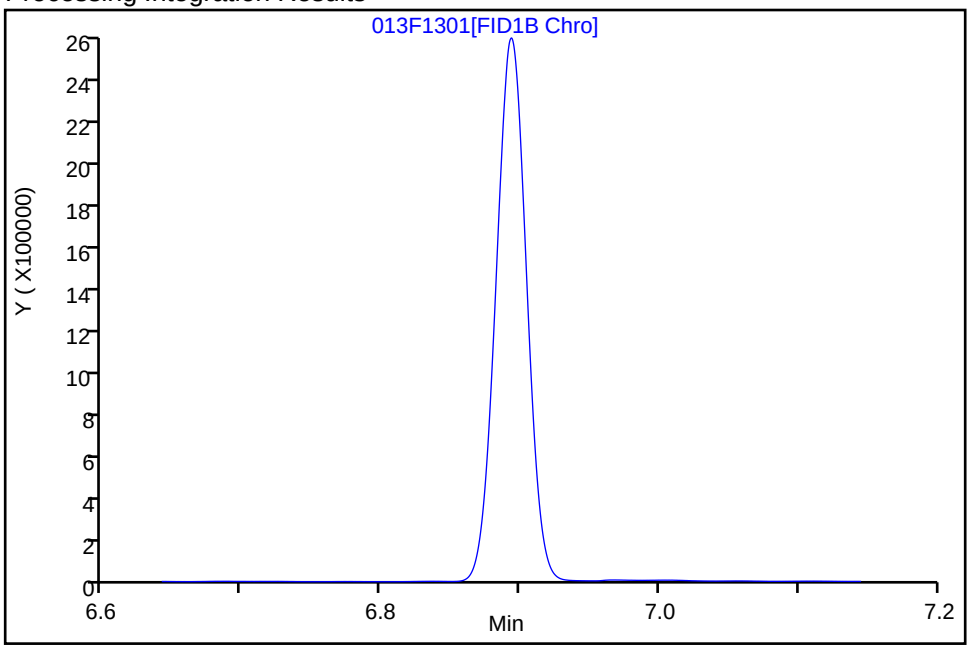
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\013F1301.D		
Injection Date:	24-Dec-2019 13:03:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-11B-12	Lab ID:	UL20021-006
Sample Info:	UL20021-006		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

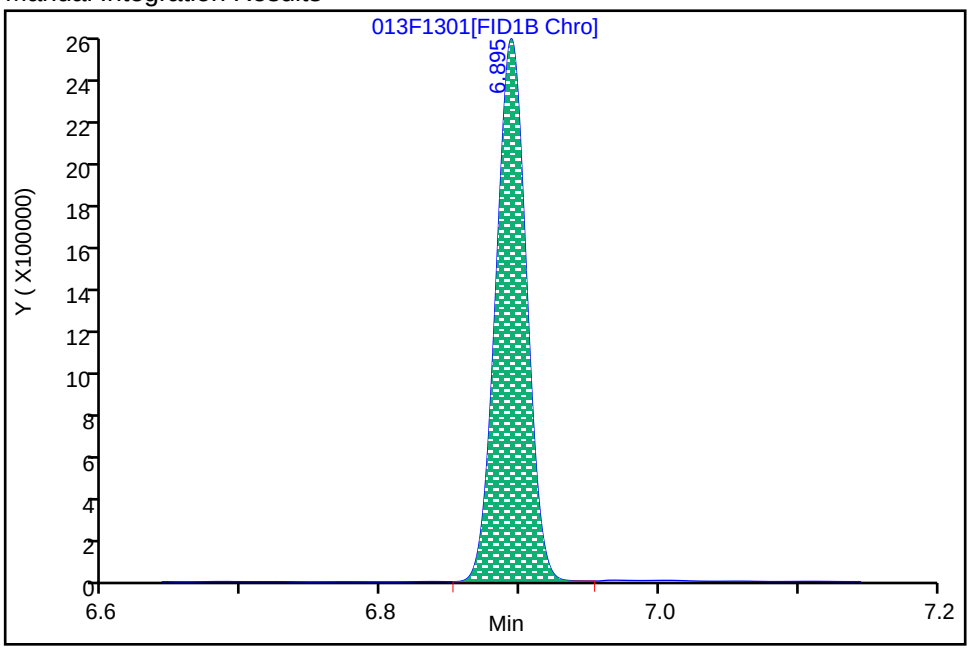
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 3863036
Conc: 4145.61
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 13:24:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-007
Description: MPGI-SF-Soil-11C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1244
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1333	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	15000		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\014F1401.D		
Lab Sample ID:	UL20021-007	Client Sample ID:	MPGI-SF-Soil-11C-12
Injection Date:	26-Dec-2019 13:33:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-007		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	14
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.100	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 15:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	9263797	70.870	11772	M
$	1 OTP	6.892	6.895	-0.002	4311385	28.593	4749.72	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

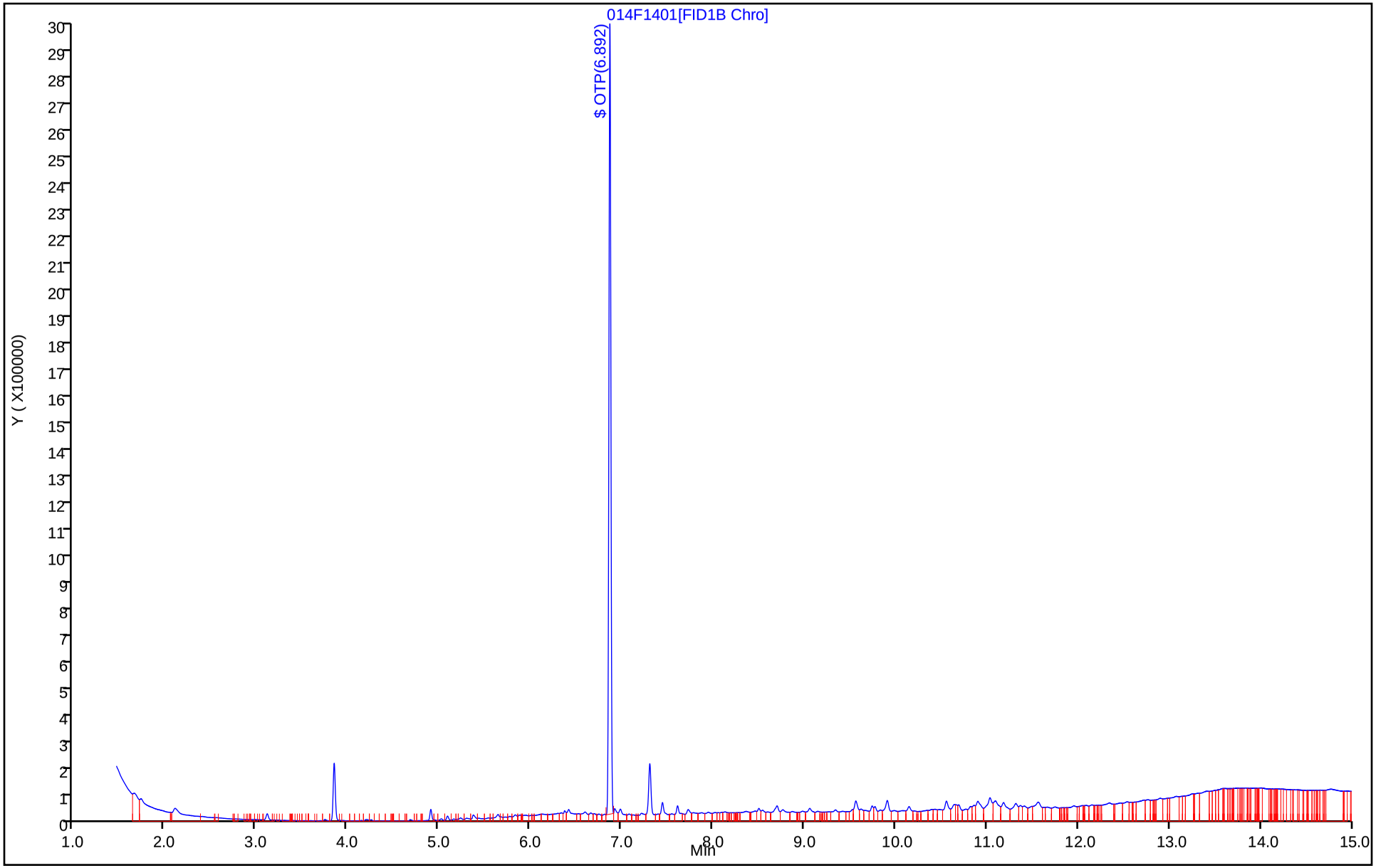
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:25 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\014F1401.D				
Injection Date:	26-Dec-2019 13:33:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-11C-12	Lab ID:	UL20021-007		
Sample Info:	UL20021-007				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:25 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

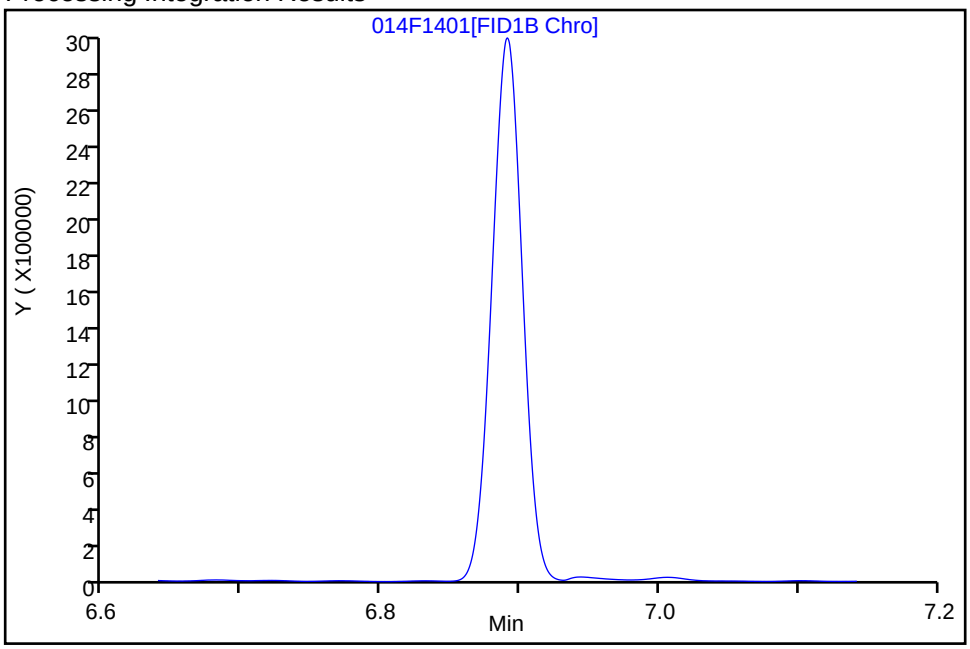
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\014F1401.D		
Injection Date:	26-Dec-2019 13:33:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-11C-12	Lab ID:	UL20021-007
Sample Info:	UL20021-007		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

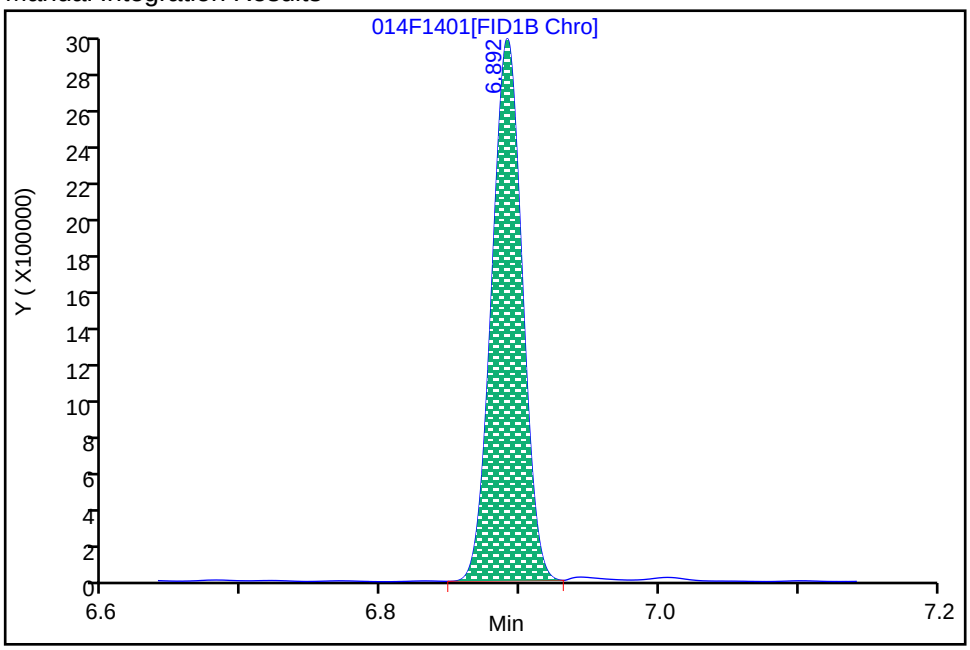
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 4311385
Conc: 4749.72
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 15:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-008
Description: MPGI-SF-Soil-12A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1310
% Solids: 74.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1341	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300	J	9000	4300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		55	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\015F1501.D		
Lab Sample ID:	UL20021-008	Client Sample ID:	MPGI-SF-Soil-12A-12
Injection Date:	24-Dec-2019 13:41:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-008		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	15
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.100	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 14:46:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	4851105	37.112	6164.81	M
$	1 OTP	6.895	6.895	0.000	4116052	27.298	4534.53	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

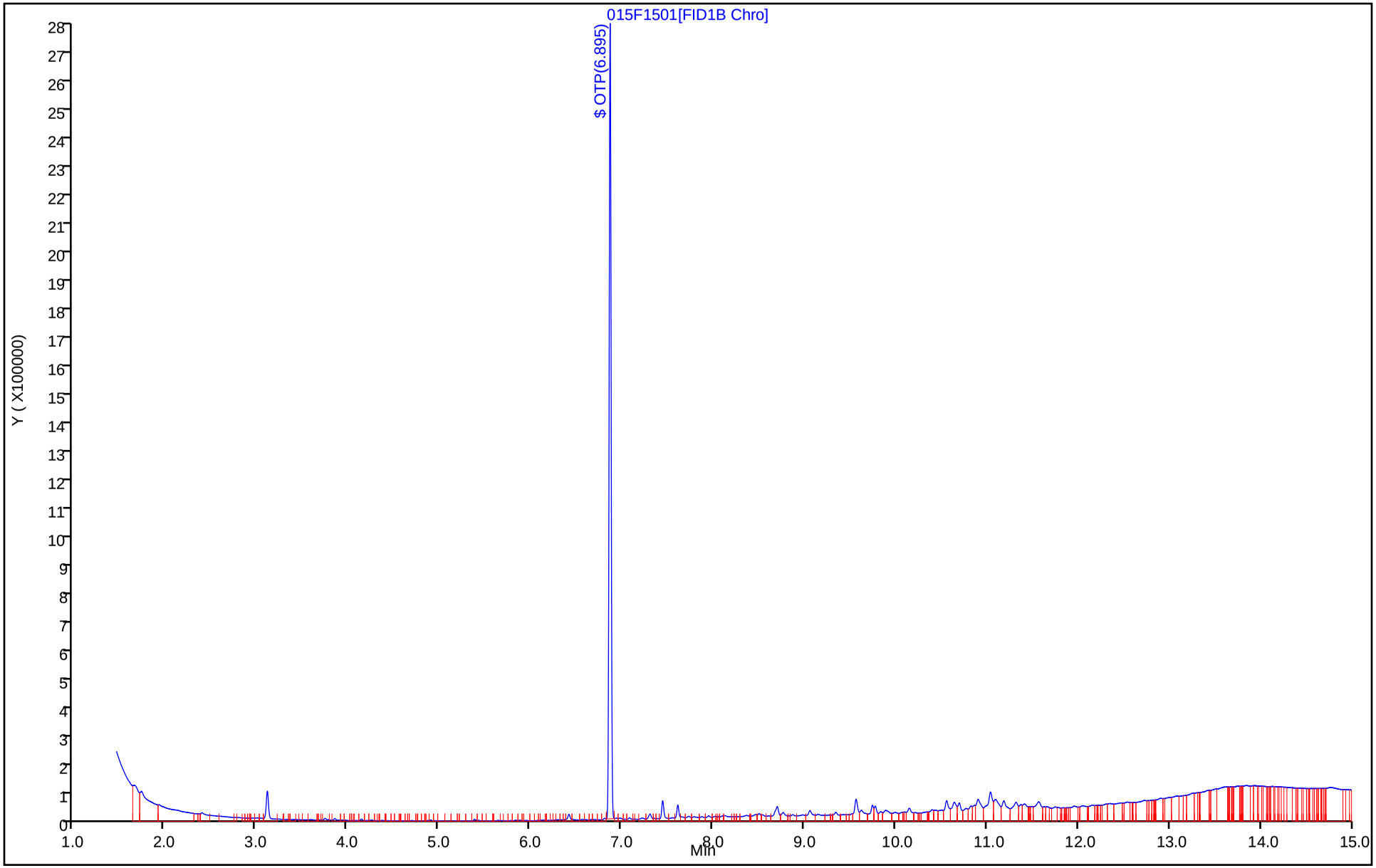
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\015F1501.D				
Injection Date:	24-Dec-2019 13:41:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-12A-12	Lab ID:	UL20021-008		
Sample Info:	UL20021-008				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

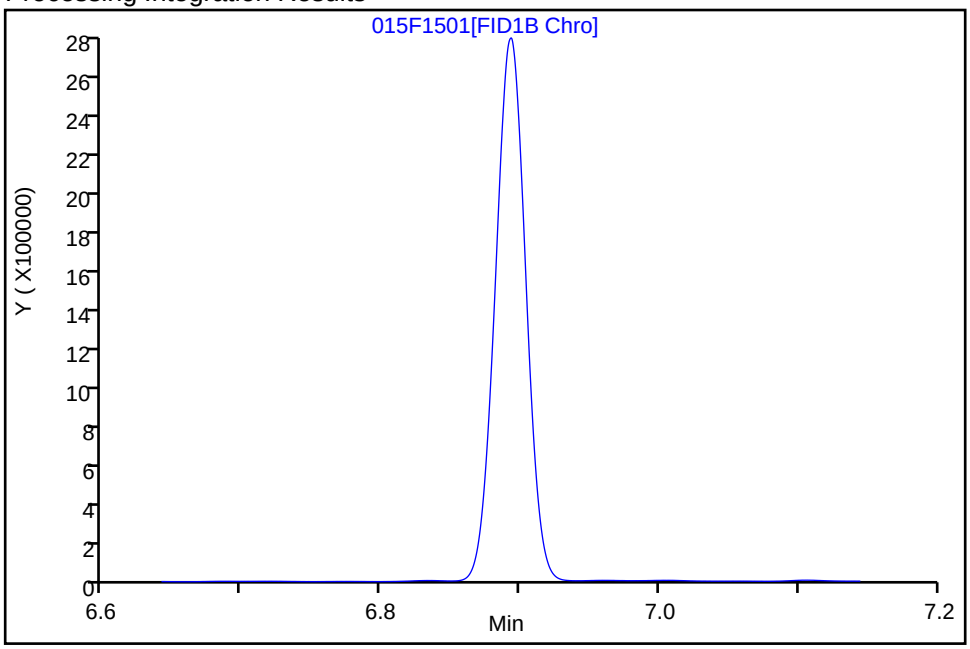
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\015F1501.D		
Injection Date:	24-Dec-2019 13:41:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-12A-12	Lab ID:	UL20021-008
Sample Info:	UL20021-008		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

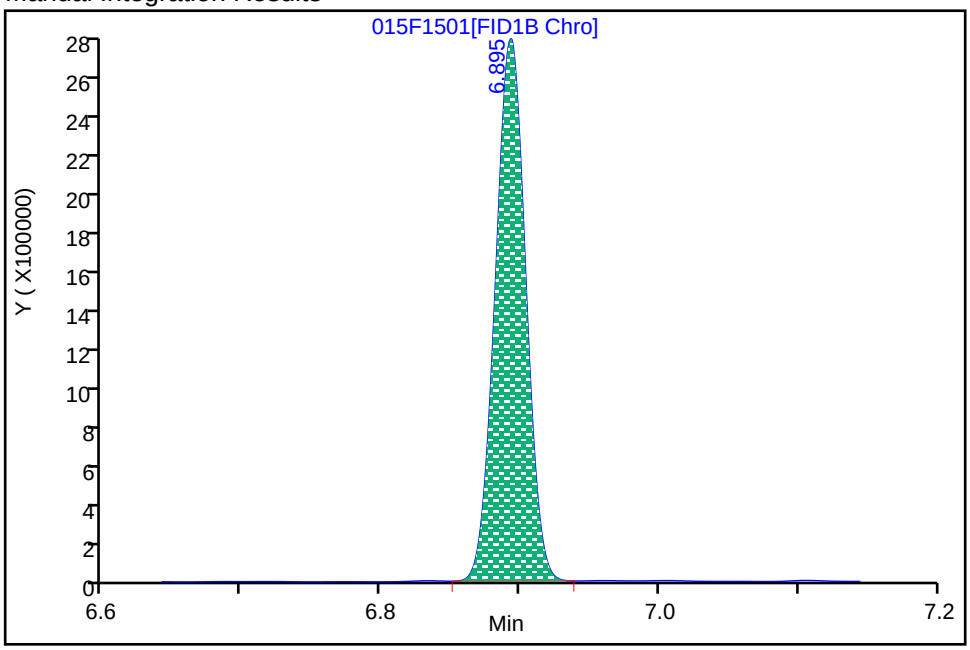
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 4116052
Conc: 4534.53
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 14:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-009
Description: MPGI-SF-Soil-12B-121819
Matrix: Solid
Date Sampled: 12/18/2019 1001
% Solids: 73.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1401	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	13000		8900	4200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		74	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\016F1601.D		
Lab Sample ID:	UL20021-009	Client Sample ID:	MPGI-SF-Soil-12B-12
Injection Date:	24-Dec-2019 14:01:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-009		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	16
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.900	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 14:46:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	7440878	56.925	9211.09	M
$	1 OTP	6.895	6.895	0.000	5551665	36.819	5957.76	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

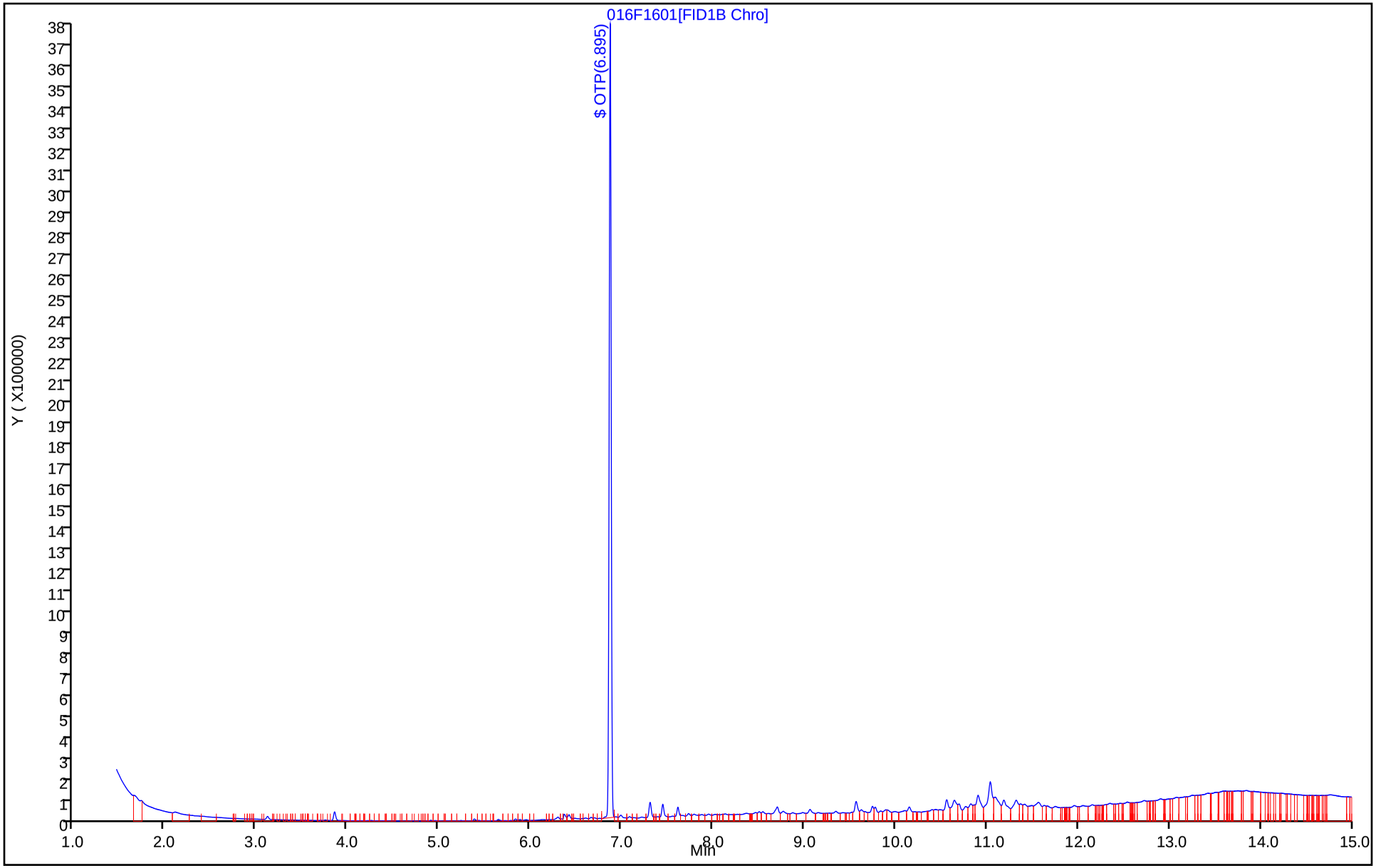
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\016F1601.D				
Injection Date:	24-Dec-2019 14:01:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-12B-12	Lab ID:	UL20021-009		
Sample Info:	UL20021-009				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:04 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

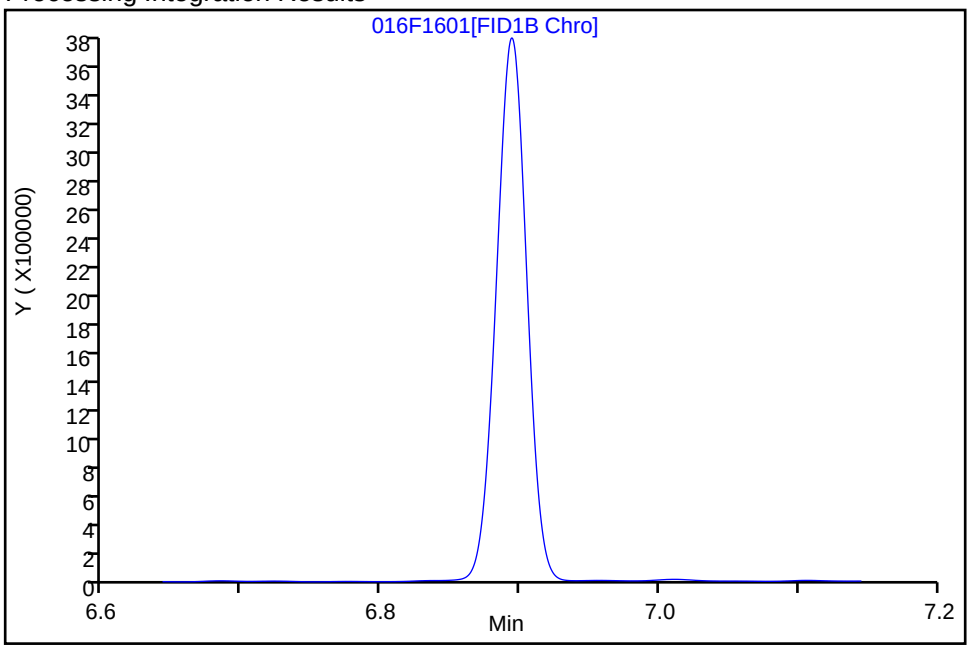
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\016F1601.D		
Injection Date:	24-Dec-2019 14:01:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-12B-12	Lab ID:	UL20021-009
Sample Info:	UL20021-009		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

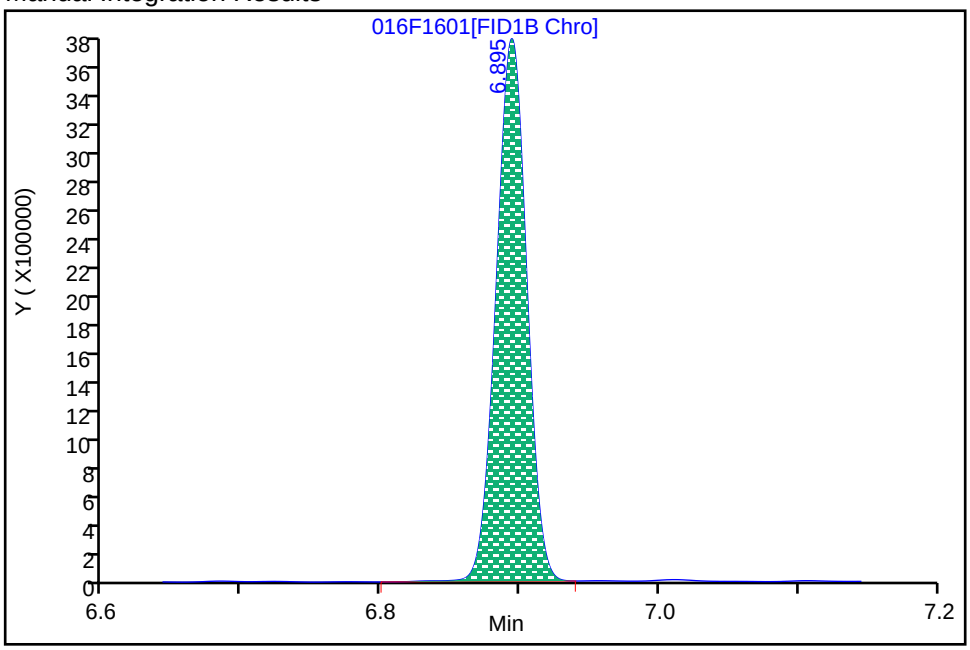
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 5551665
Conc: 5957.76
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 14:46:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-010
Description: MPGI-SF-Soil-12C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1312
% Solids: 80.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1352	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	12000		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		62	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\015F1501.D		
Lab Sample ID:	UL20021-010	Client Sample ID:	MPGI-SF-Soil-12C-12
Injection Date:	26-Dec-2019 13:52:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-010		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	15
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 15:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	7756563	59.340	9889.94	M
$	1 OTP	6.893	6.895	-0.002	4654349	30.868	5144.65	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

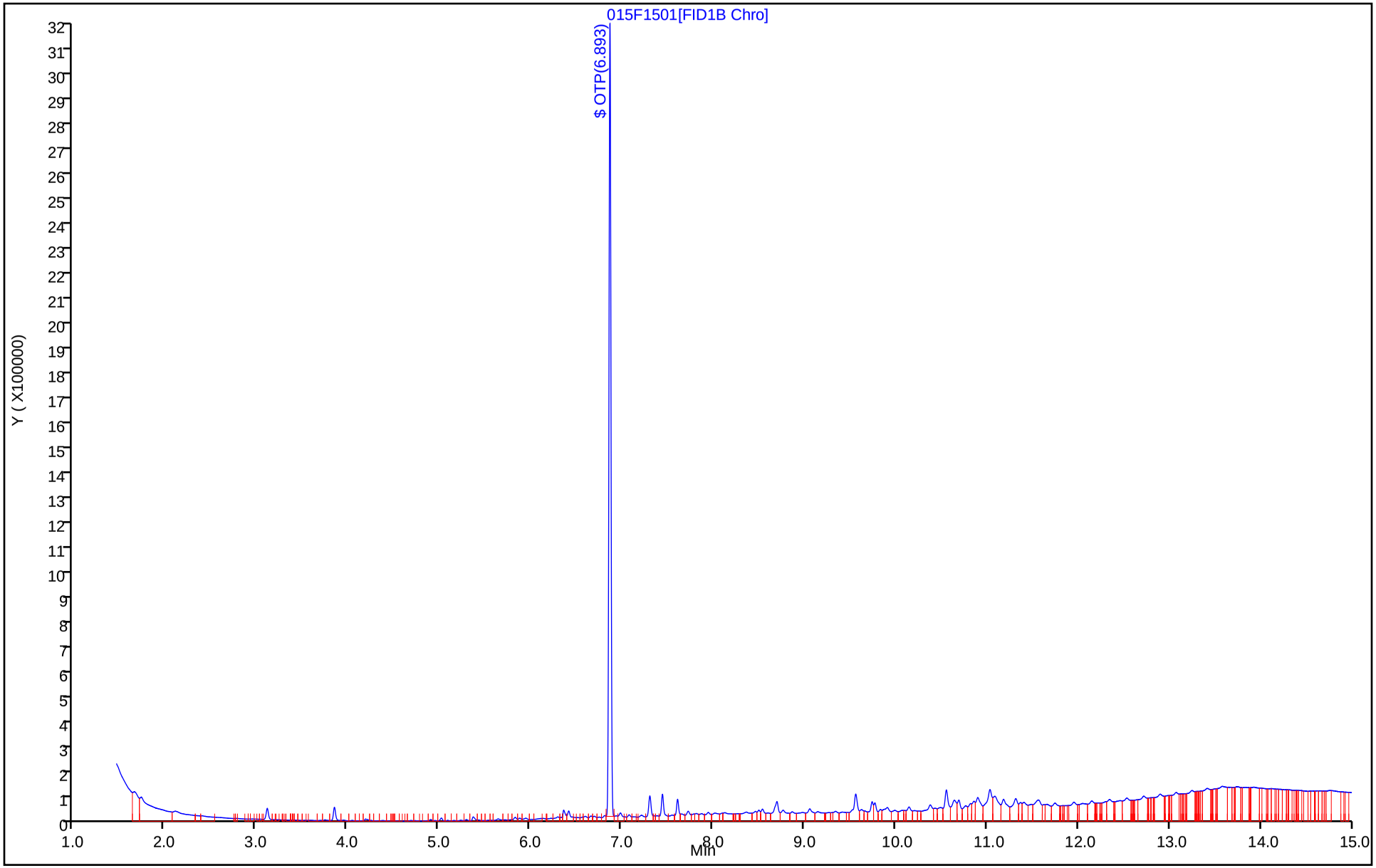
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:26 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\015F1501.D				
Injection Date:	26-Dec-2019 13:52:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-12C-12	Lab ID:	UL20021-010		
Sample Info:	UL20021-010				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:26 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

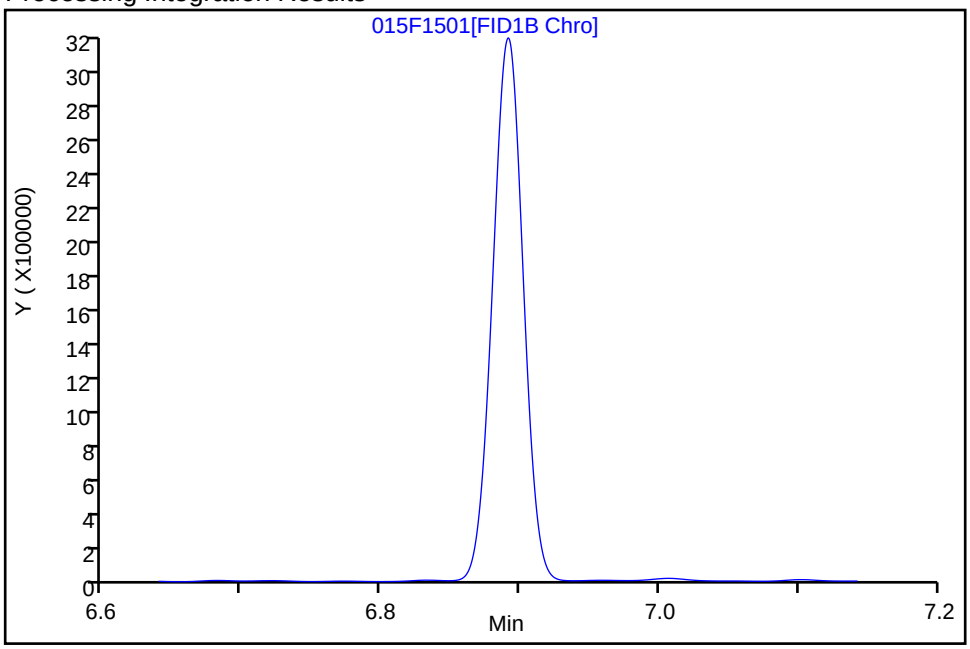
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\015F1501.D		
Injection Date:	26-Dec-2019 13:52:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-12C-12	Lab ID:	UL20021-010
Sample Info:	UL20021-010		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

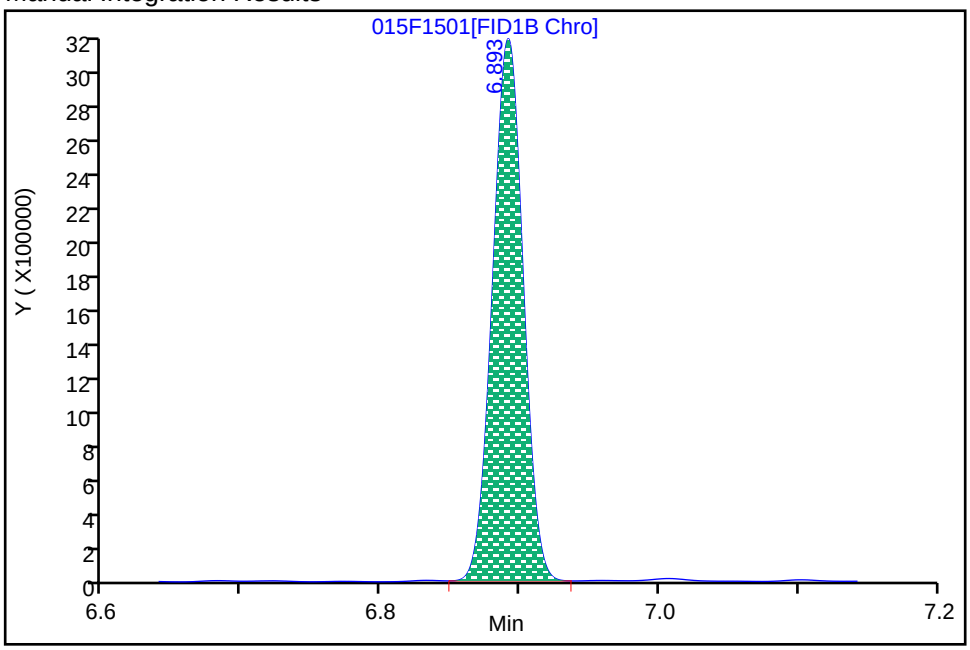
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.893
Area: 4654349
Conc: 5144.65
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 15:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-011
Description: MPGI-SF-Soil-13A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1410
% Solids: 74.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1439	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300	J	8900	4300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	44	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\018F1801.D		
Lab Sample ID:	UL20021-011	Client Sample ID:	MPGI-SF-Soil-13A-12
Injection Date:	24-Dec-2019 14:39:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-011		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	18
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.200	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 15:00:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	4884626	37.369	6186.85	M
$	1 OTP	6.895	6.895	0.000	3300197	21.887	3623.69	MR

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

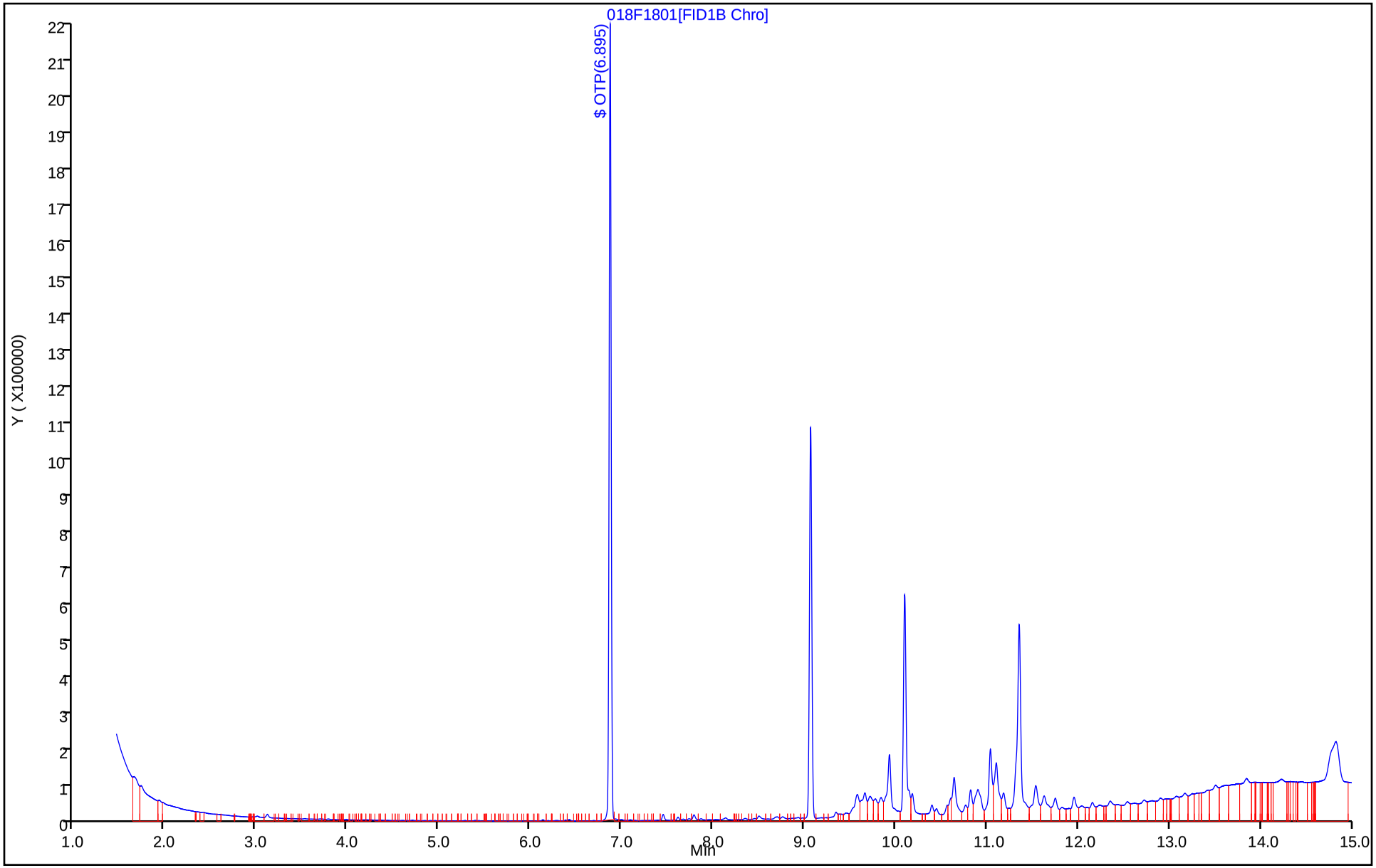
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\018F1801.D				
Injection Date:	24-Dec-2019 14:39:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-13A-12	Lab ID:	UL20021-011		
Sample Info:	UL20021-011				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

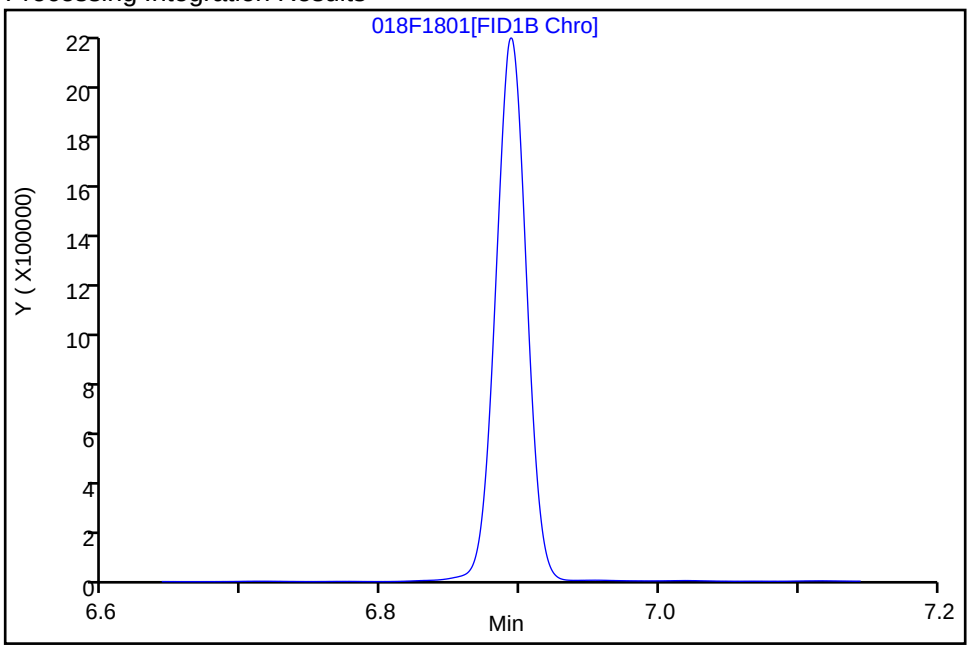
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\018F1801.D		
Injection Date:	24-Dec-2019 14:39:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-13A-12	Lab ID:	UL20021-011
Sample Info:	UL20021-011		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

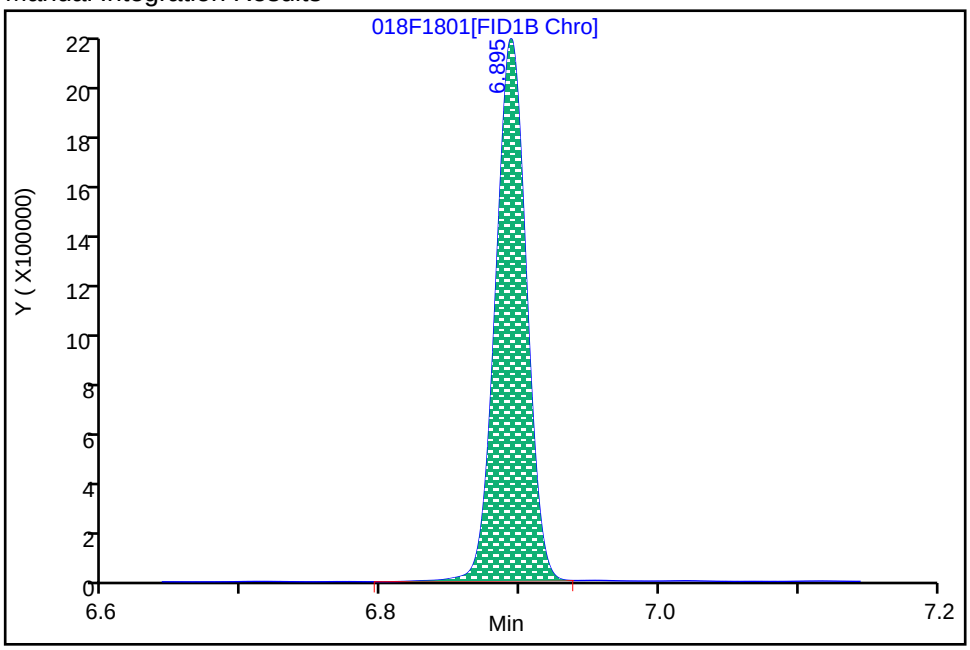
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 3300197
Conc: 3623.69
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 15:00:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-012
Description: MPGI-SF-Soil-13B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1414
% Solids: 75.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1458	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	5000	J	8800	4200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	41	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\019F1901.D		
Lab Sample ID:	UL20021-012	Client Sample ID:	MPGI-SF-Soil-13B-12
Injection Date:	24-Dec-2019 14:58:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-012		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	19
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.300	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	2994069	22.905	3779.76	M
$	1 OTP	6.895	6.895	0.000	3089924	20.493	3381.61	MR

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

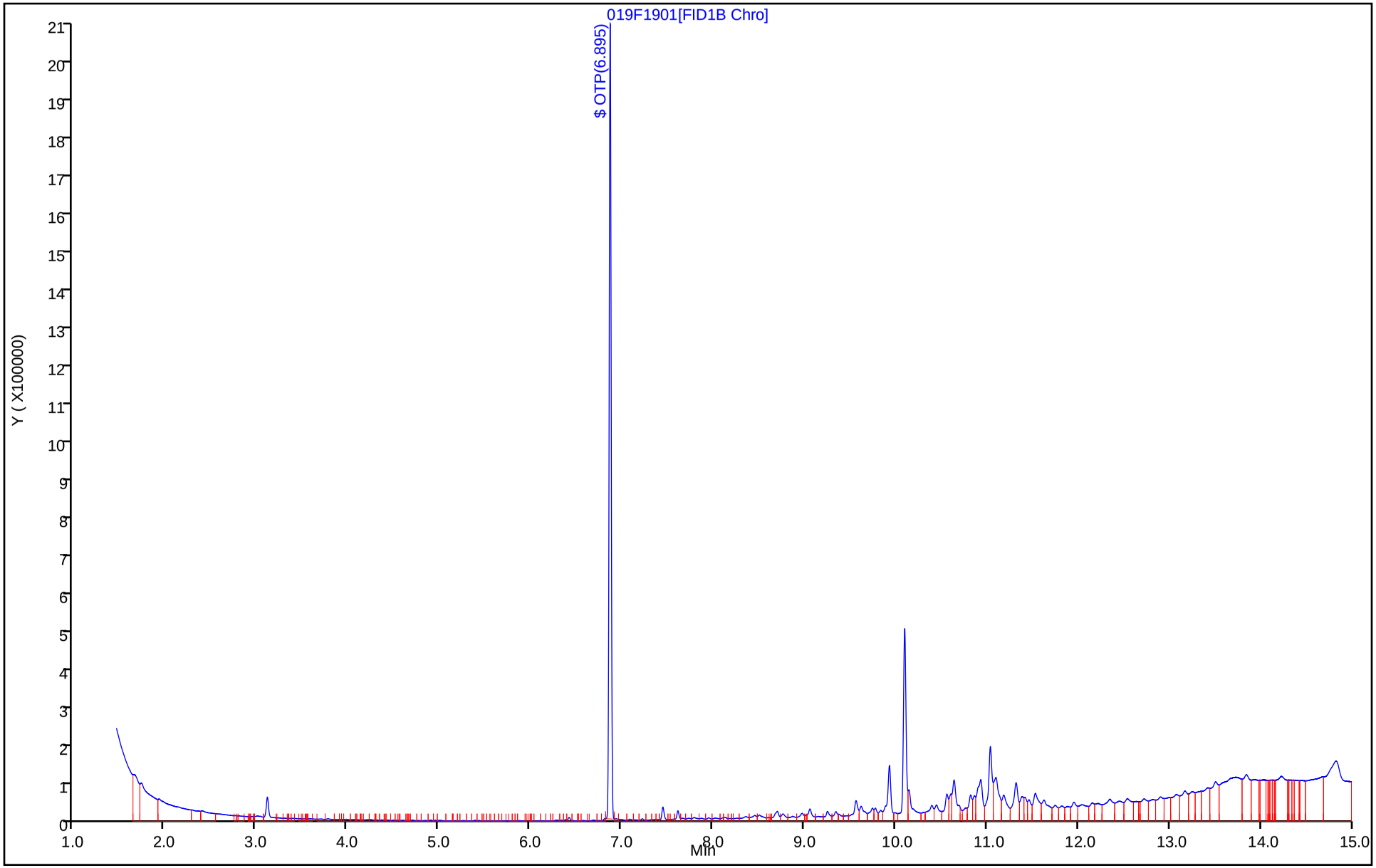
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\019F1901.D				
Injection Date:	24-Dec-2019 14:58:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-13B-12	Lab ID:	UL20021-012		
Sample Info:	UL20021-012				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

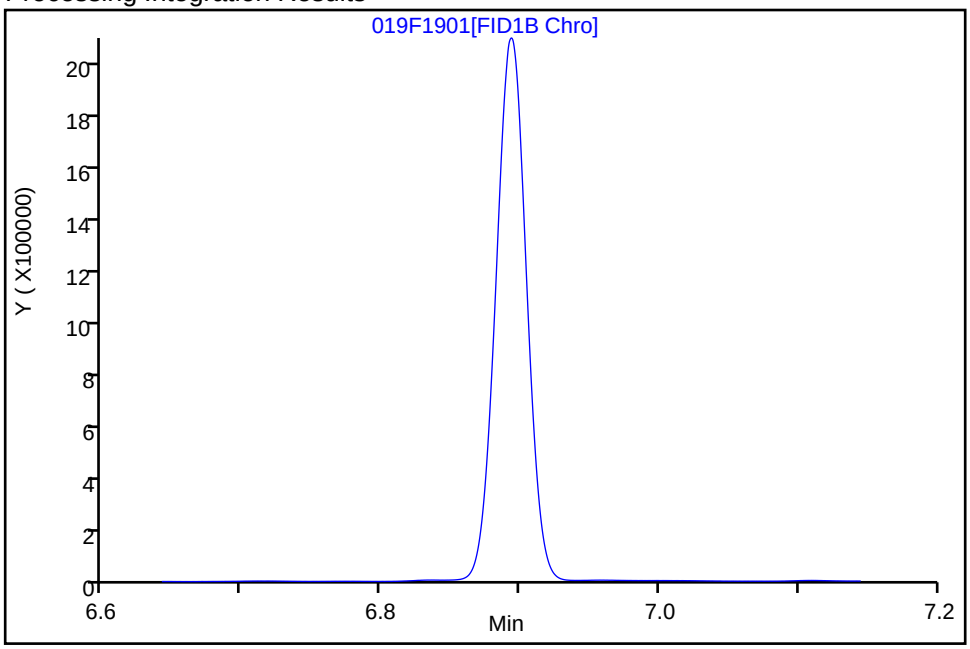
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\019F1901.D		
Injection Date:	24-Dec-2019 14:58:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-13B-12	Lab ID:	UL20021-012
Sample Info:	UL20021-012		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

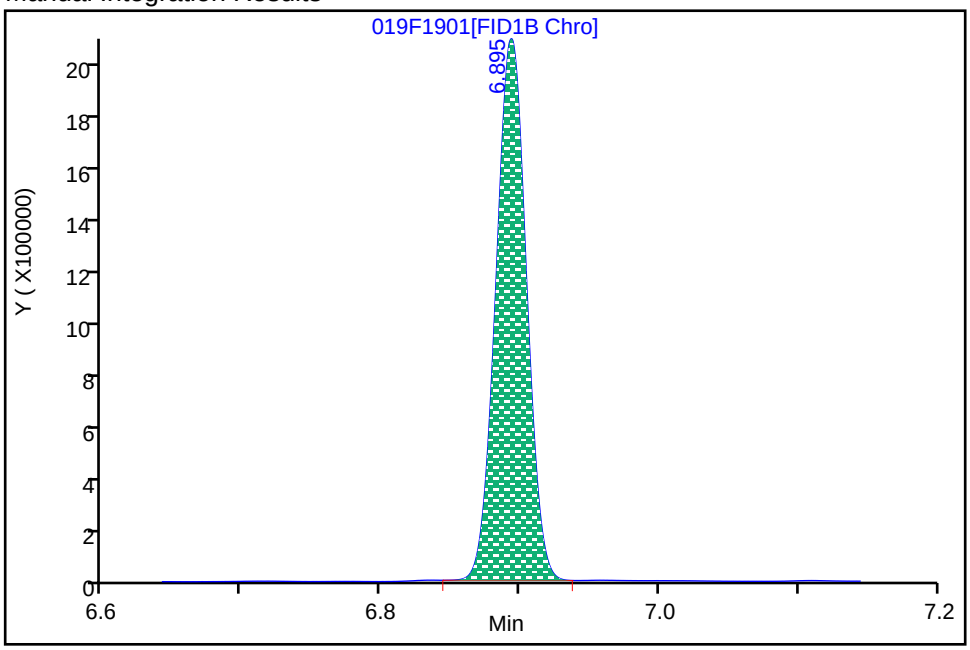
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 3089924
Conc: 3381.61
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-013
Description: MPGI-SF-Soil-14A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1210
% Solids: 82.8 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1517	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300		7900	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\020F2001.D		
Lab Sample ID:	UL20021-013	Client Sample ID:	MPGI-SF-Soil-14A-12
Injection Date:	24-Dec-2019 15:17:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-013		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	20
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.900	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	5523530	42.256	6837.60	M
$	1 OTP	6.895	6.895	0.000	4392192	29.129	4713.47	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

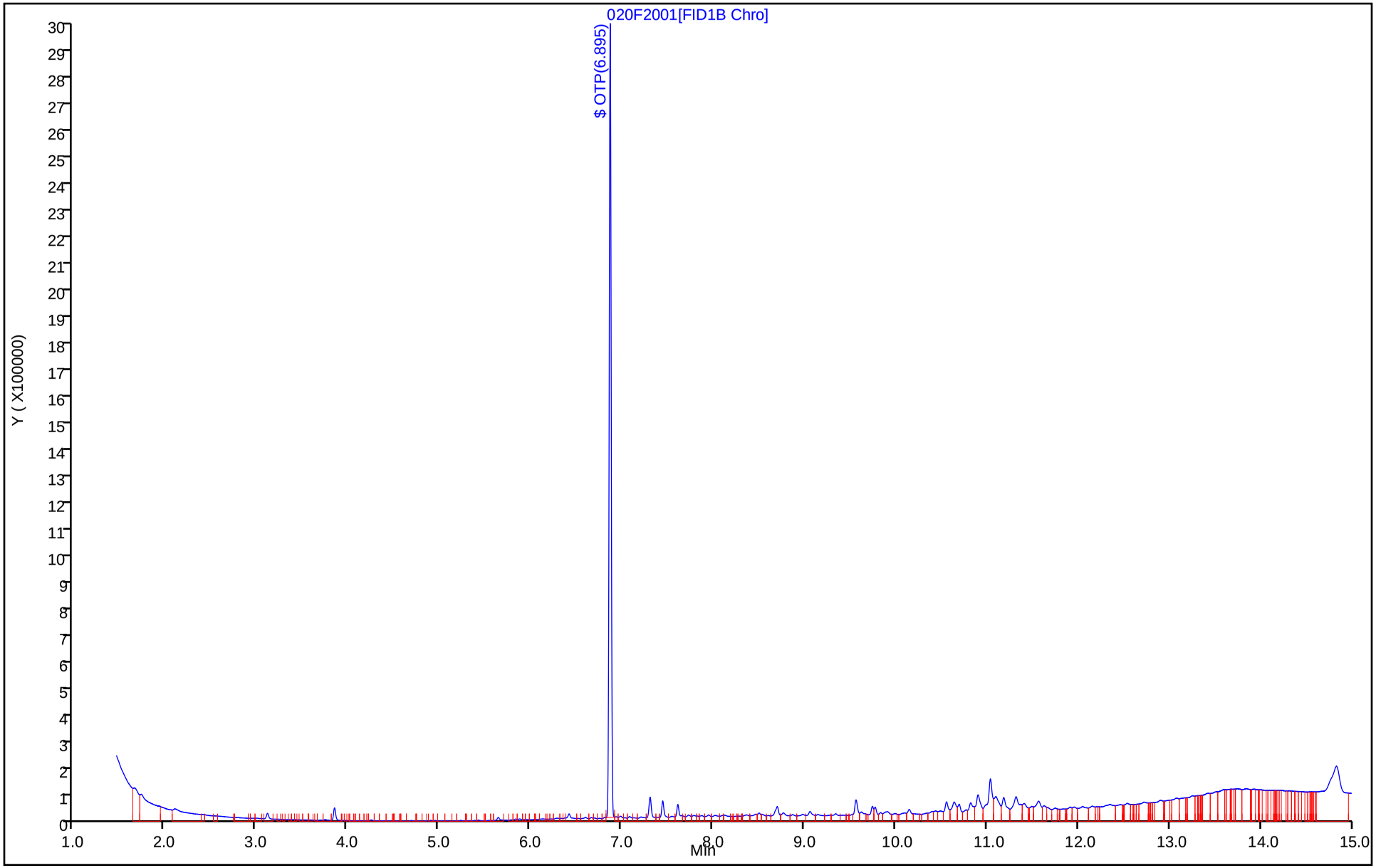
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:10 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\020F2001.D				
Injection Date:	24-Dec-2019 15:17:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-14A-12	Lab ID:	UL20021-013		
Sample Info:	UL20021-013				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

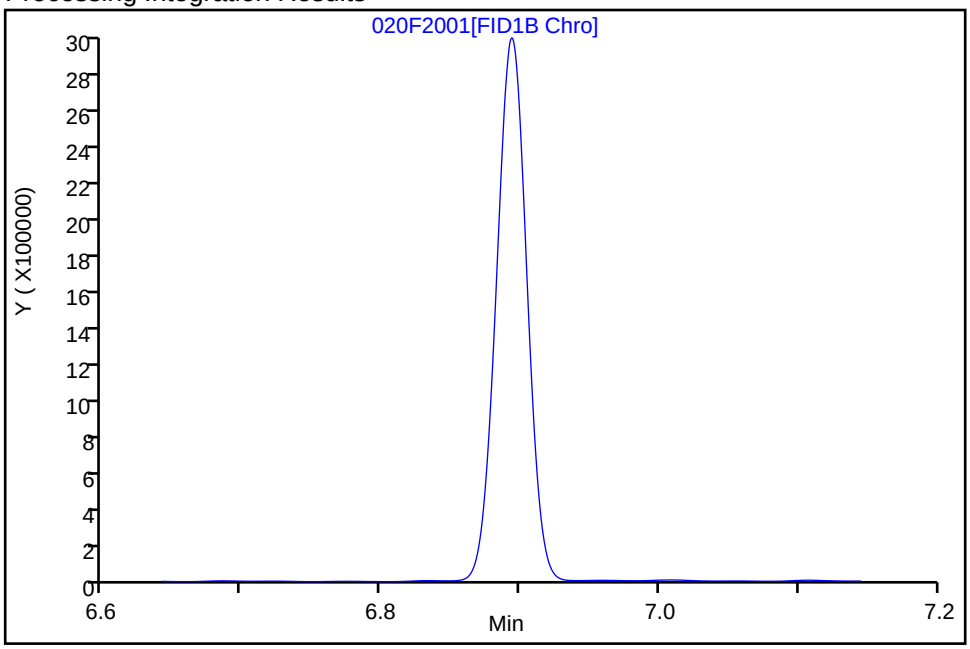
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\020F2001.D		
Injection Date:	24-Dec-2019 15:17:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-14A-12	Lab ID:	UL20021-013
Sample Info:	UL20021-013		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

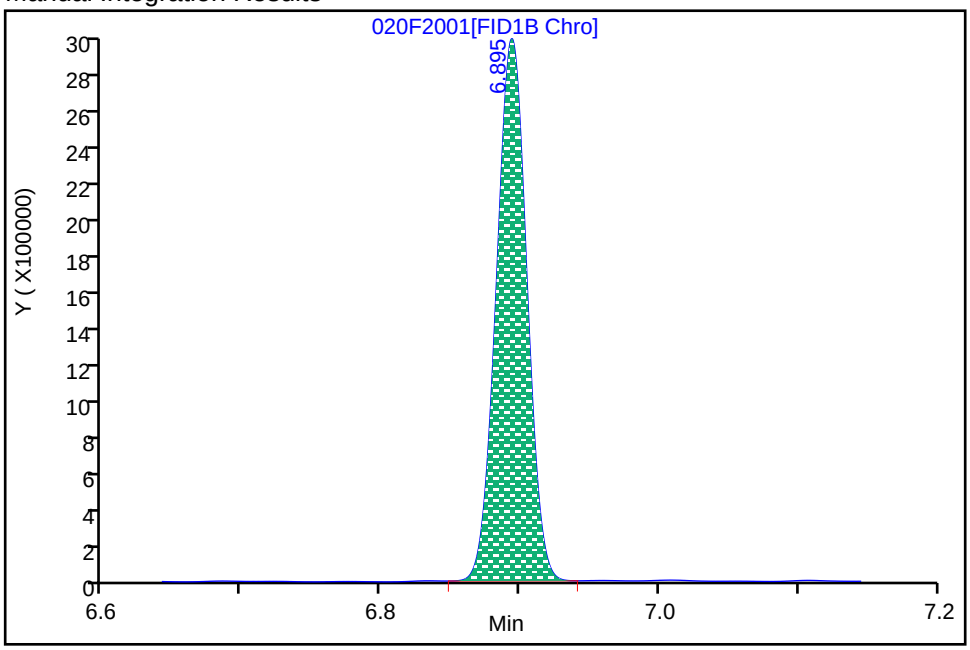
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 4392192
Conc: 4713.47
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-014
Description: MPGI-SF-Soil-14A-121919-D
Matrix: Solid
Date Sampled: 12/19/2019 1212
% Solids: 84.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1537	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	10000		7800	3700	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		64	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\021F2101.D		
Lab Sample ID:	UL20021-014	Client Sample ID:	MPGI-SF-Soil-14A-12
Injection Date:	24-Dec-2019 15:37:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-014		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	21
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.800	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	6812066	52.114	8460.06	M
$	1 OTP	6.895	6.895	0.000	4859257	32.227	5231.63	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

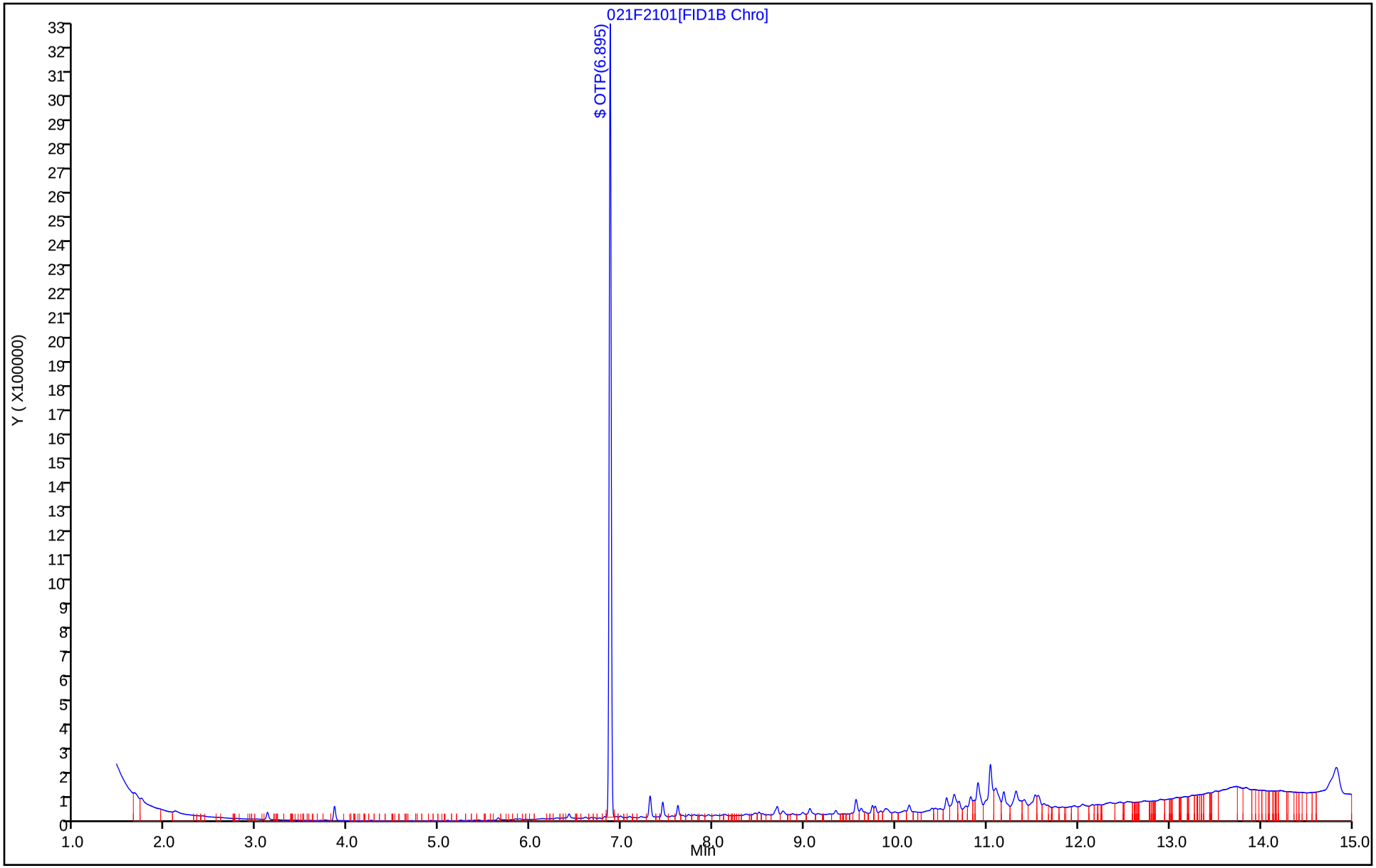
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\021F2101.D				
Injection Date:	24-Dec-2019 15:37:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-14A-12	Lab ID:	UL20021-014		
Sample Info:	UL20021-014				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:12 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

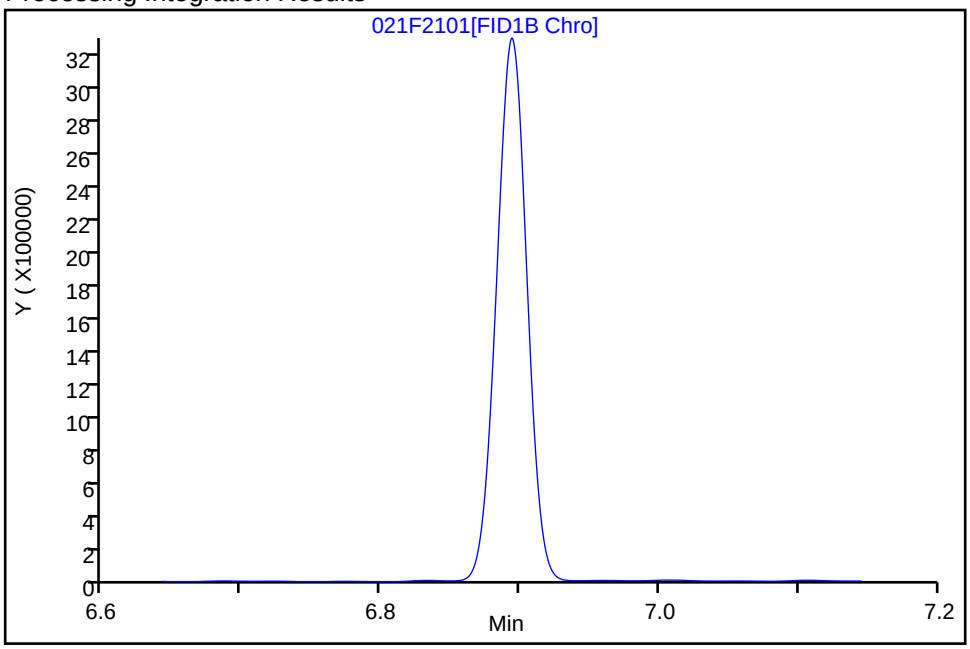
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\021F2101.D		
Injection Date:	24-Dec-2019 15:37:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-14A-12	Lab ID:	UL20021-014
Sample Info:	UL20021-014		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

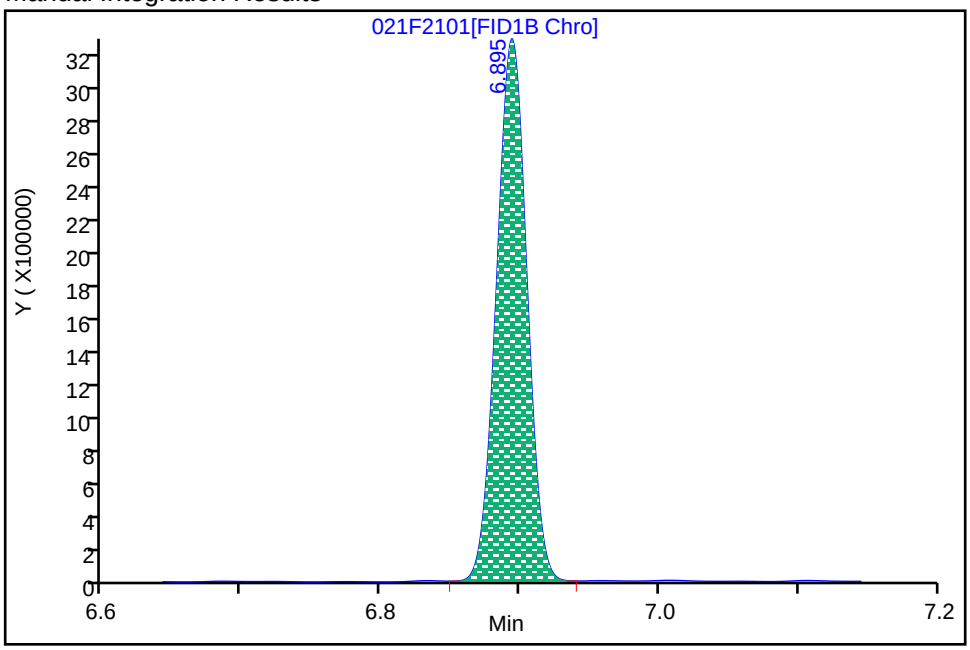
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.895
Area: 4859257
Conc: 5231.63
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-015
Description: MPGI-SF-Soil-14B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1214
% Solids: 85.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1556	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	23000		7600	3600	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		65	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\022F2201.D		
Lab Sample ID:	UL20021-015	Client Sample ID:	MPGI-SF-Soil-14B-12
Injection Date:	24-Dec-2019 15:56:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-015		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	22
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.700	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:17:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	15951900	122.04	19876	M
$	1 OTP	6.896	6.895	0.000	4889864	32.430	5281.73	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

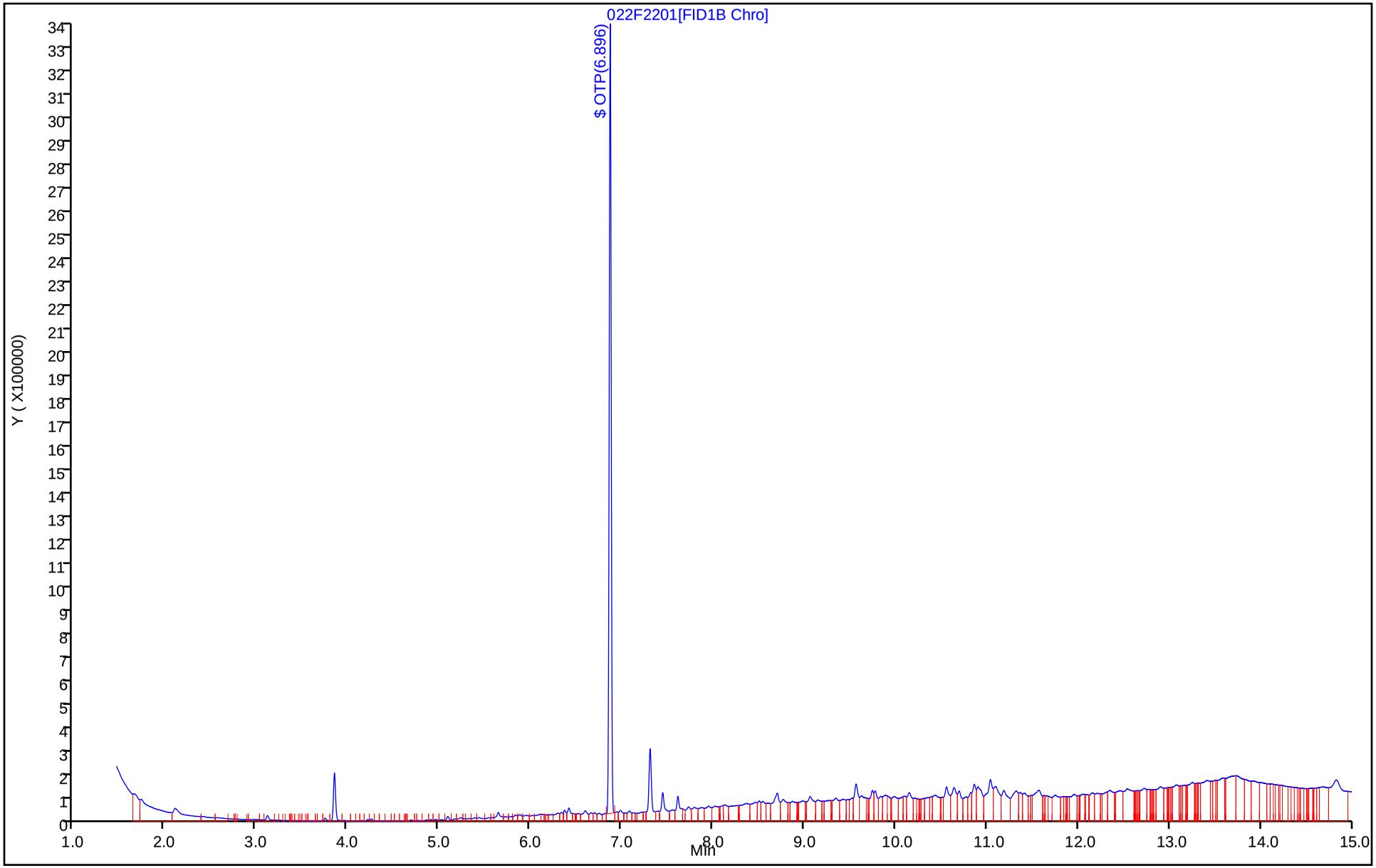
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:50:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\022F2201.D				
Injection Date:	24-Dec-2019 15:56:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-14B-12	Lab ID:	UL20021-015		
Sample Info:	UL20021-015				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:50:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

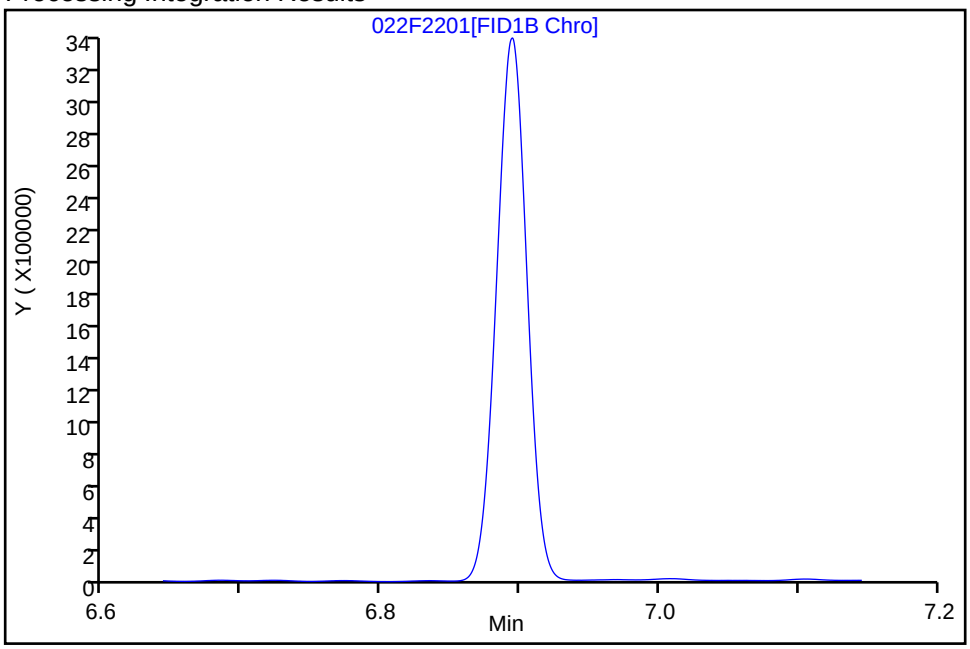
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\022F2201.D		
Injection Date:	24-Dec-2019 15:56:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-14B-12	Lab ID:	UL20021-015
Sample Info:	UL20021-015		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

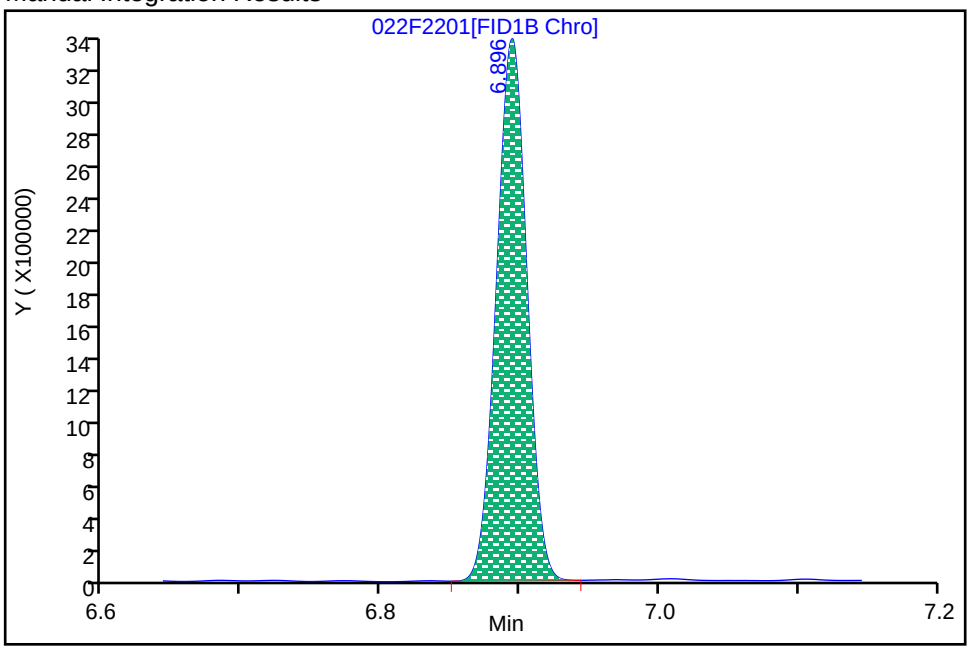
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.896
Area: 4889864
Conc: 5281.73
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:17:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-016
Description: MPGI-SF-Soil-14C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1216
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1615	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	13000		8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\ORGANICS\EE\chem\gc12.i\122419F1.b\023F2301.D		
Lab Sample ID:	UL20021-016	Client Sample ID:	MPGI-SF-Soil-14C-12
Injection Date:	24-Dec-2019 16:15:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-016		
Method:	\\ORGANICS\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	23
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:41:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	8520603	65.185	10864	M
$	1 OTP	6.895	6.895	0.000	4330032	28.717	4786.17	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 26-Dec-2019 11:00:46 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\ORGANICS\EE\chem\gc12.i\122419F1.b\023F2301.D				
Injection Date:	24-Dec-2019 16:15:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-14C-12	Lab ID:	UL20021-016		
Sample Info:	UL20021-016				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		

Report Date: 26-Dec-2019 11:00:46 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

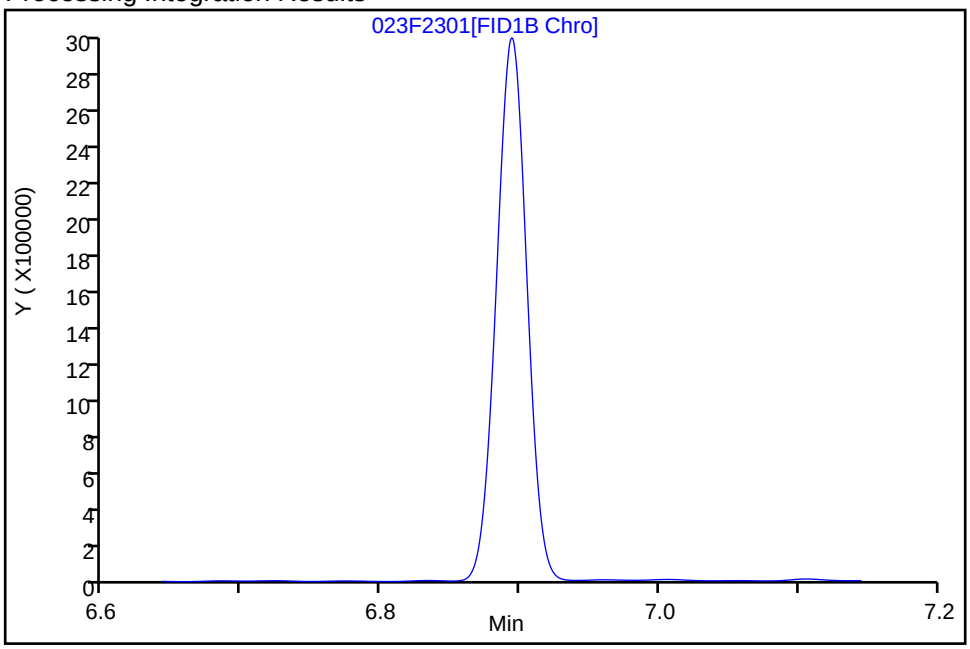
Manual Integration Report

Data File:	\\ORGANICS\EE\chem\gc12.i\122419F1.b\023F2301.D		
Injection Date:	24-Dec-2019 16:15:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-14C-12	Lab ID:	UL20021-016
Sample Info:	UL20021-016		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

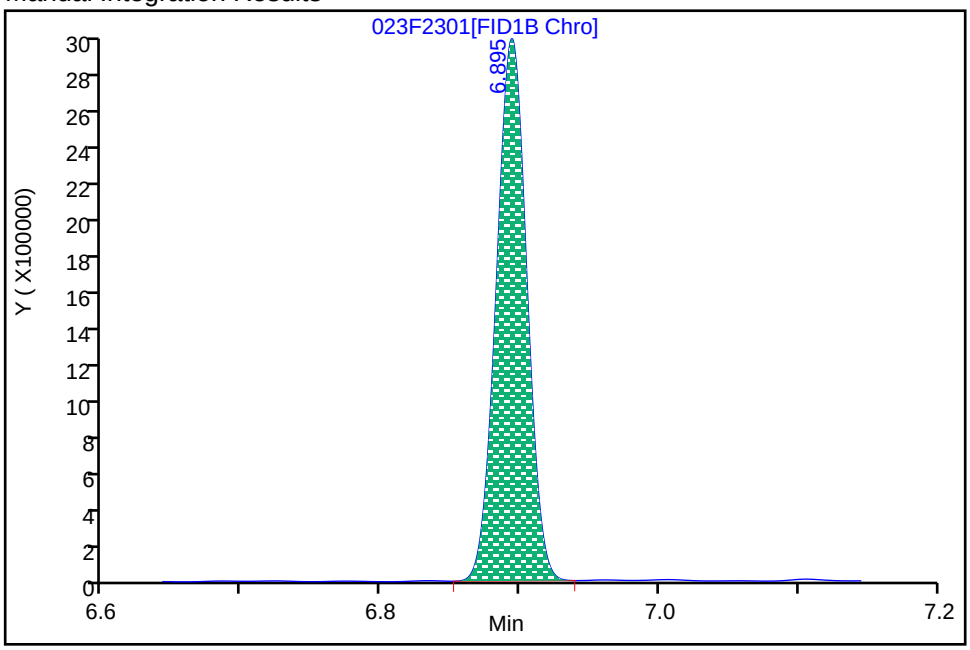
Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925

Processing Integration Results



Manual Integration Results

RT: 6.895
Area: 4330032
Conc: 4786.17
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:41:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH-DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-017
Description: MPGI-RB-121719
Matrix: Aqueous
Date Sampled: 12/19/2019 1330
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8015C	1	12/27/2019 1102	CHG	12/26/2019 1928	40144

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		200	43	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	48	53-118

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\006F0601.D		
Lab Sample ID:	UL20021-017	Client Sample ID:	MPG1-RB-121719
Injection Date:	27-Dec-2019 11:02:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-017		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Client	ALS Bottle:	6
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vi	5.0000	Volume of Injection
Vt	5000.00	Final Extract Volume(uL)
Vo	250.00	Extracted Sample Vol(mL)
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 12:02:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1360741	10.410	41.640	eM
$	1 OTP	6.891	6.895	-0.004	3631072	24.081	96.326	eMR

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

R - Spike/Surrogte Fails %Recovery Test

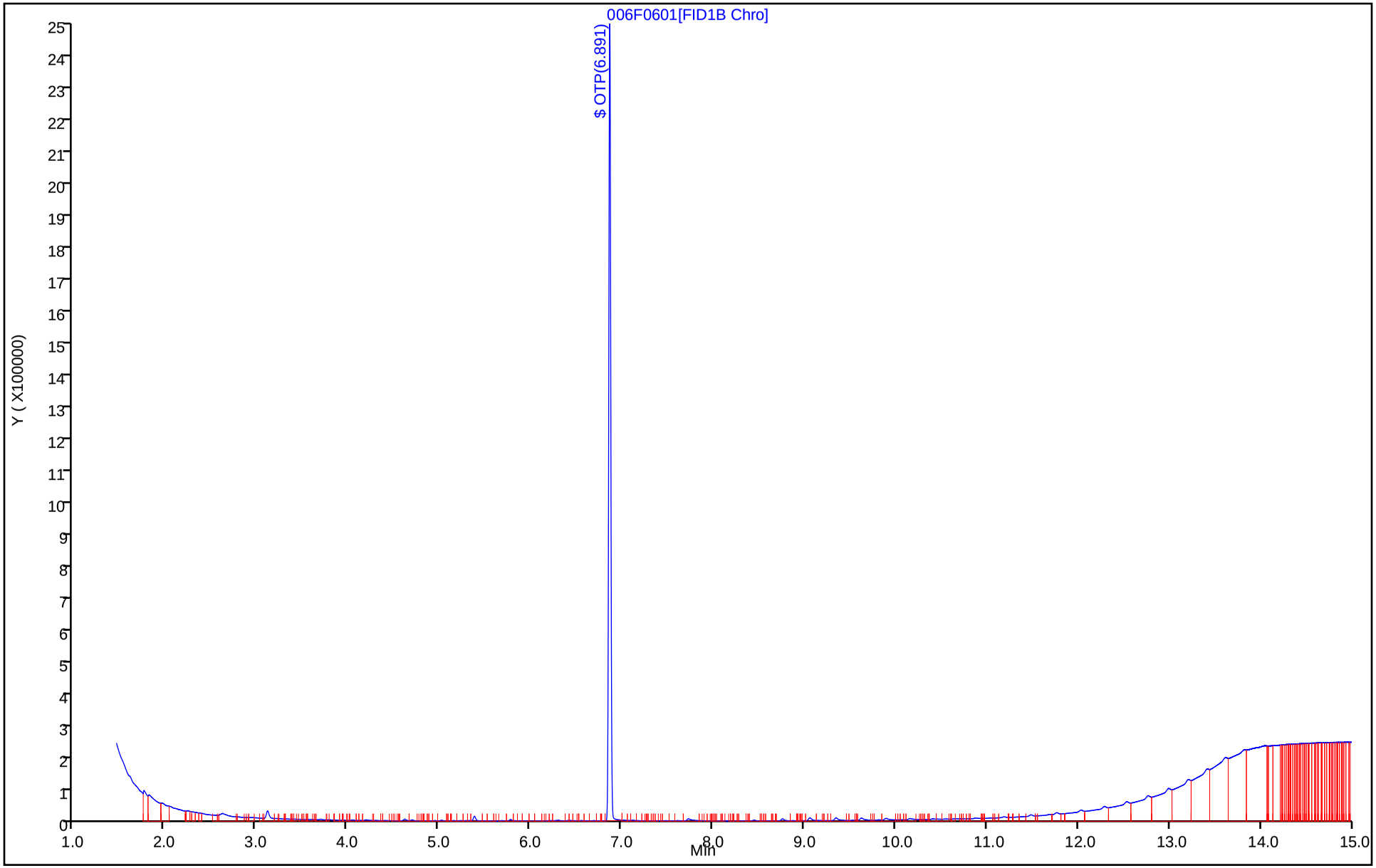
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:15 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\006F0601.D				
Injection Date:	27-Dec-2019 11:02:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPG1-RB-121719	Lab ID:	UL20021-017		
Sample Info:	UL20021-017				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:15 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

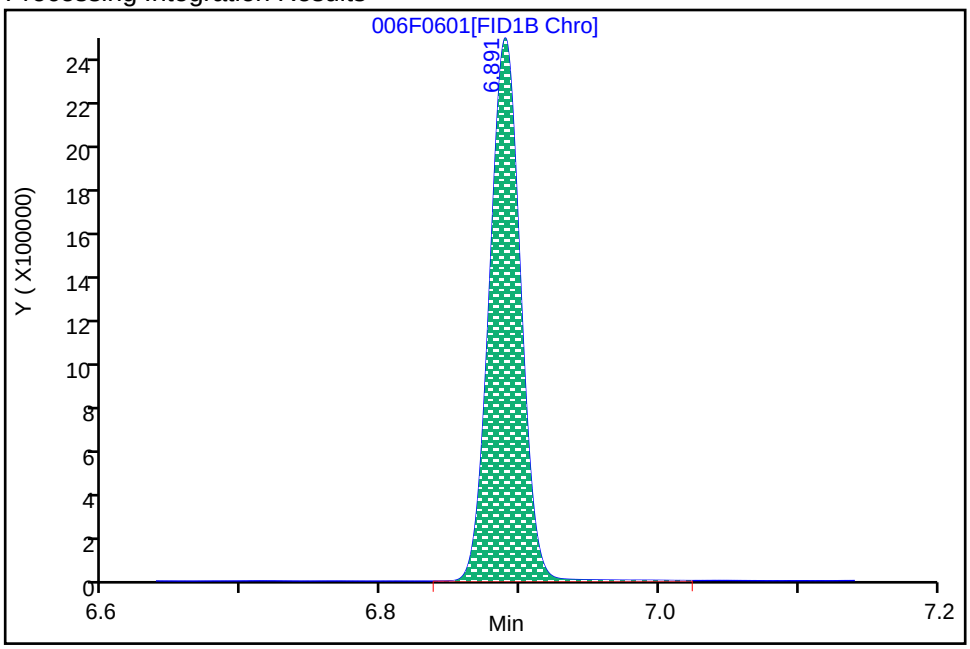
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\006F0601.D		
Injection Date:	27-Dec-2019 11:02:30	Inst. ID:	gc12.i
Client ID:	MPG1-RB-121719	Lab ID:	UL20021-017
Sample Info:	UL20021-017		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

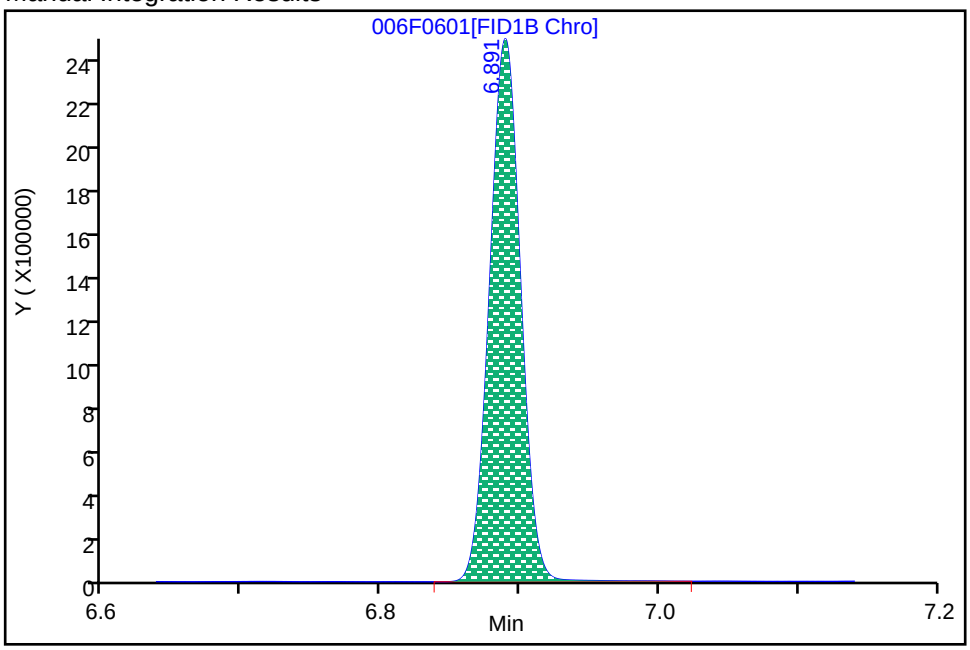
Processing Integration Results

RT: 6.891
Area: 3649545
Conc: 96.816
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 6.891
Area: 3631072
Conc: 96.326
Conc Units: ug/L



Data Editor: chg, 27-Dec-2019 12:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

CALIBRATION DATA

Shealy Environmental Services
Form 6

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

Compound	Level 1 / %Drift	Level 2 / %Drift	Level 3 / %Drift	Level 4 / %Drift	Level 5 / %Drift	B	M1	Curve	RSD/RSE	R^2	Flags
3 #2 Diesel Fuel	145449	136976	125627	120961	124560		130715	Avg	7.8		
	11.3	4.8	-3.9	-7.5	-4.7						
$ 1 OTP	122521	143856	151437	160330	175770		150783	Avg	13.1		
	-18.7	-4.6	0.4	6.3	16.6						

Shealy Environmental Services
Initial Calibration RT Report

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Avg. RRT	%Rsd RT	Flags
3 #2 Diesel Fuel	6.211	6.211	6.211	6.211	6.211	6.211	0.000	
$ 1 OTP	6.893	6.892	6.895	6.897	6.902	6.896	0.056	

Shealy Environmental Services
Form 6 Response

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

Compound	Level 1 Conc/Rsp	Level 2 Conc/Rsp	Level 3 Conc/Rsp	Level 4 Conc/Rsp	Level 5 Conc/Rsp
3 #2 Diesel Fuel	40.000	200.00	500.00	2500.00	10000
	5817979	27395229	62813543	302403095	1245597218
$ 1 OTP	5.0000	10.000	50.000	75.000	100.00
	612604	1438560	7571849	12024759	17577043

Shealy Environmental Services
Calibration History Report

Batch:	\\Organics\EE\chem\gc12.i\112019F1.b		
Method:	8015CLVI.M	Instrument:	gc12
Cal Start Date:	20-Nov-2019 10:20:30	Cal End Date:	20-Nov-2019 11:37:30
Last Modified:	20-Nov-2019 13:17:30		
No.Compounds:	8	Integrator:	falcon
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

No. Cal Levels: 5 No. Cal Levels: 5

No.	Ical Level	Lab Sample ID	Injection Date/Time	Batch Name	Data File	Sublist	Batch Number	Sample Number
1	1	SVGC-1659	20-Nov-2019 10:20:30	112019F1.b	003F0401.D	Diesel.sub	48652367	48656830
2	2	SVGC-1660	20-Nov-2019 10:40:30	112019F1.b	004F0501.D	Diesel.sub	48652367	48659042
3	3	SVGC-1661	20-Nov-2019 10:59:30	112019F1.b	005F0601.D	Diesel.sub	48652367	48661209
4	4	SVGC-1662	20-Nov-2019 11:18:30	112019F1.b	006F0701.D	Diesel.sub	48652367	48661595
5	5	SVGC-1663	20-Nov-2019 11:37:30	112019F1.b	007F0801.D	Diesel.sub	48652367	48663631

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\003F0401.D		
Lab Sample ID:	SVGC-1659	Client Sample ID:	D1H1
Injection Date:	20-Nov-2019 10:20:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1659		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 1	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:14:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	5817979	40.000	44.509	M
$	1 OTP	6.893	6.893	0.000	612604	5.0000	3.1225	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

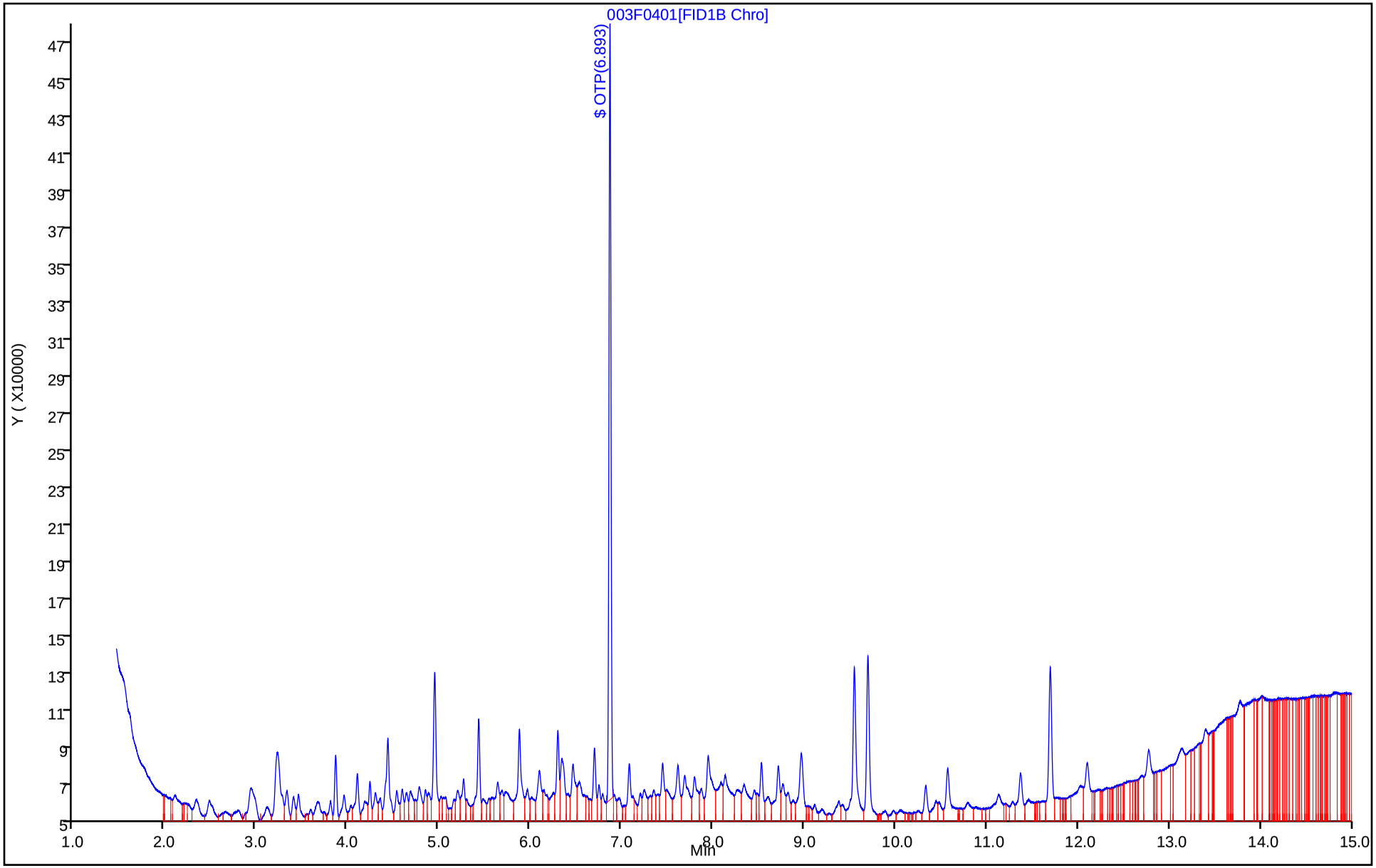
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\003F0401.D				
Injection Date:	20-Nov-2019 10:20:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D1H1	Lab ID:	SVGC-1659		
Sample Info:	SVGC-1659				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:20 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

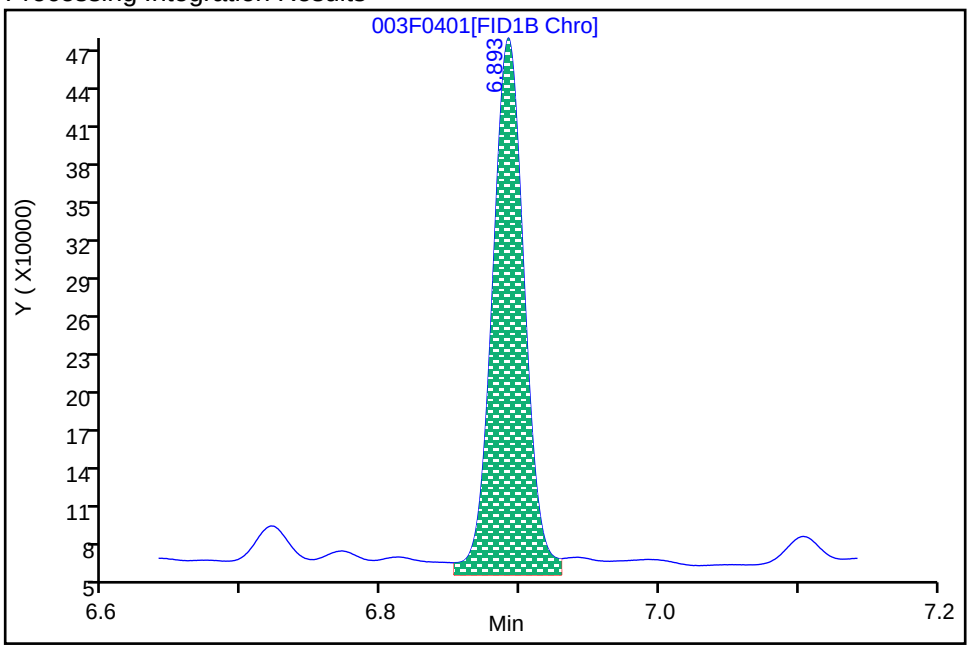
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\003F0401.D		
Injection Date:	20-Nov-2019 10:20:30	Inst. ID:	gc12.i
Client ID:	D1H1	Lab ID:	SVGC-1659
Sample Info:	SVGC-1659		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

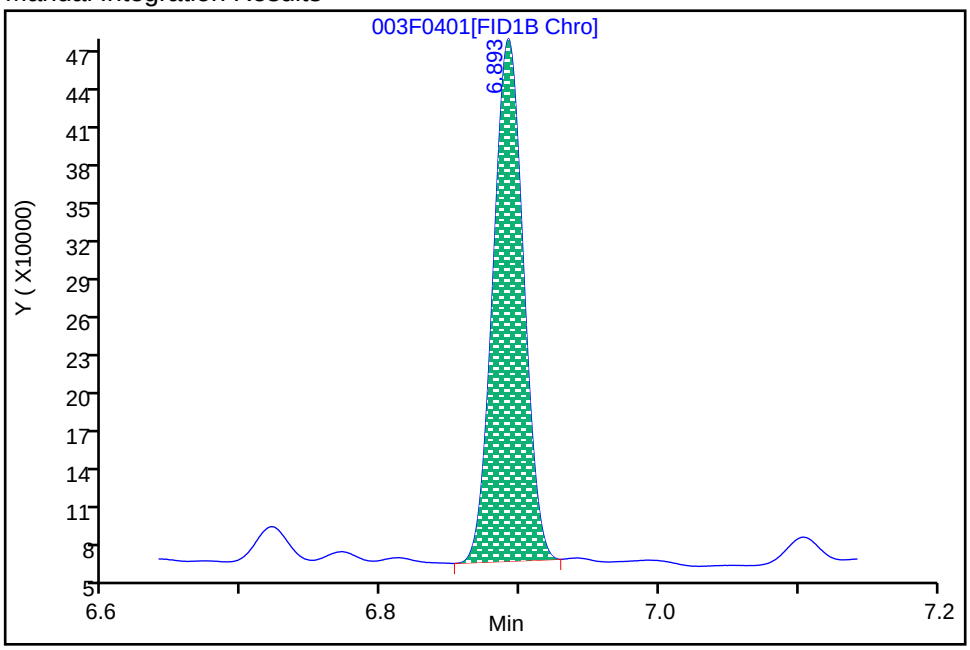
Processing Integration Results

RT: 6.893
Area: 664212
Amount: 5.0000
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.893
Area: 612604
Amount: 3.1225
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:14:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\004F0501.D		
Lab Sample ID:	SVGC-1660	Client Sample ID:	D2H1
Injection Date:	20-Nov-2019 10:40:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1660		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 2	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:14:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	27395229	200.00	209.58	M
$	1 OTP	6.892	6.892	0.000	1438560	10.000	7.5703	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

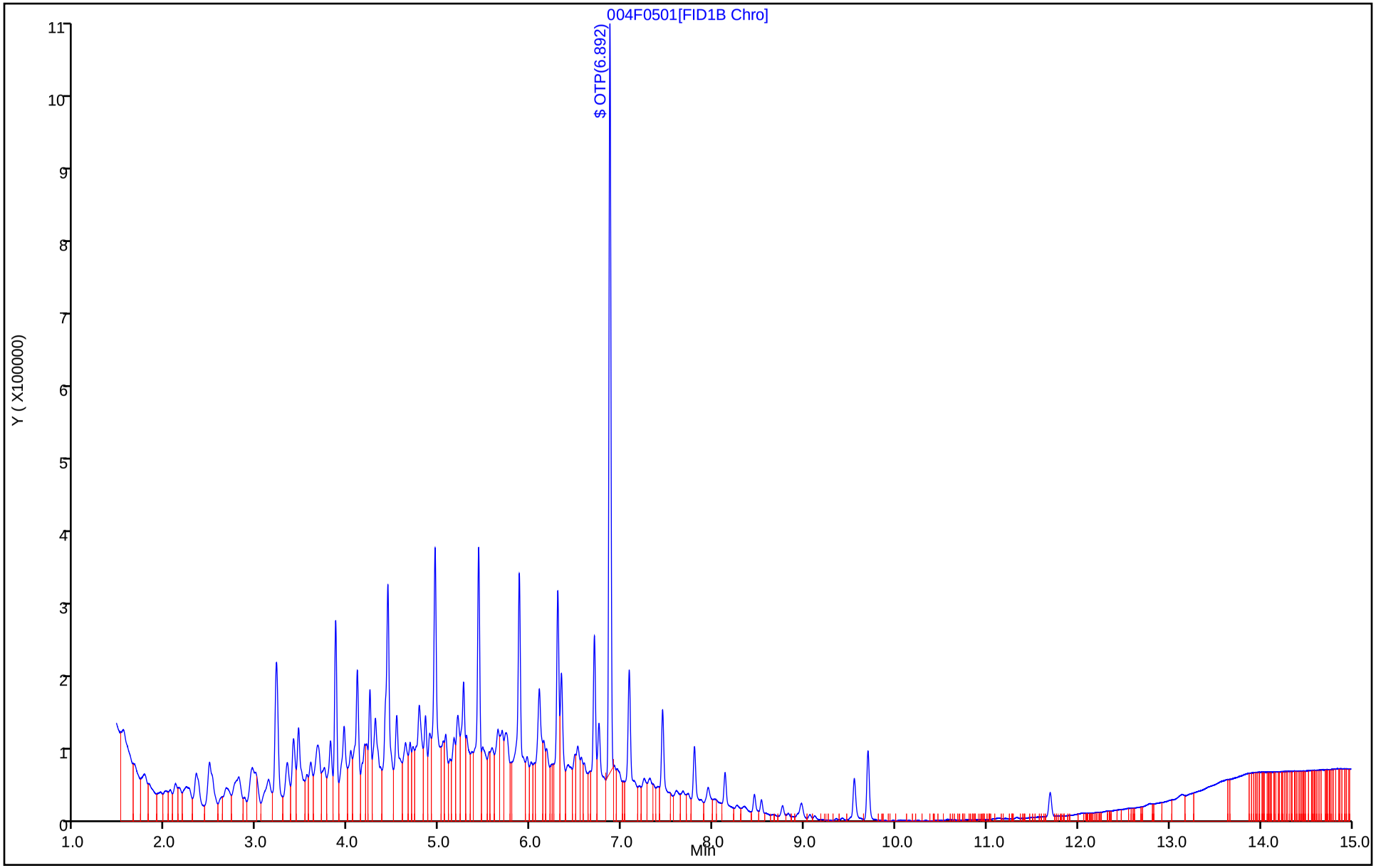
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\004F0501.D				
Injection Date:	20-Nov-2019 10:40:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D2H1	Lab ID:	SVGC-1660		
Sample Info:	SVGC-1660				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

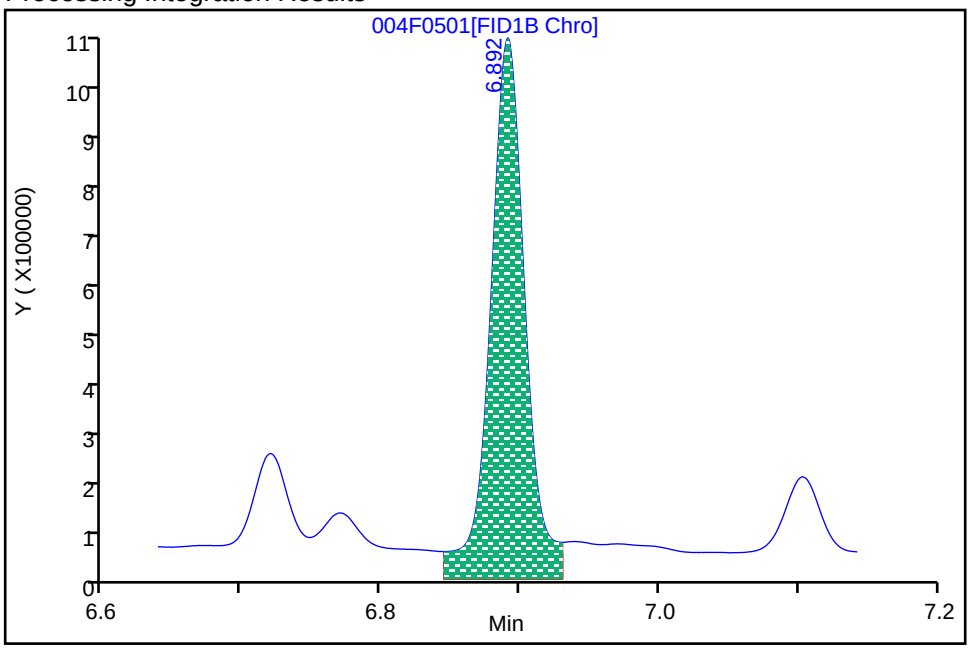
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\004F0501.D		
Injection Date:	20-Nov-2019 10:40:30	Inst. ID:	gc12.i
Client ID:	D2H1	Lab ID:	SVGC-1660
Sample Info:	SVGC-1660		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

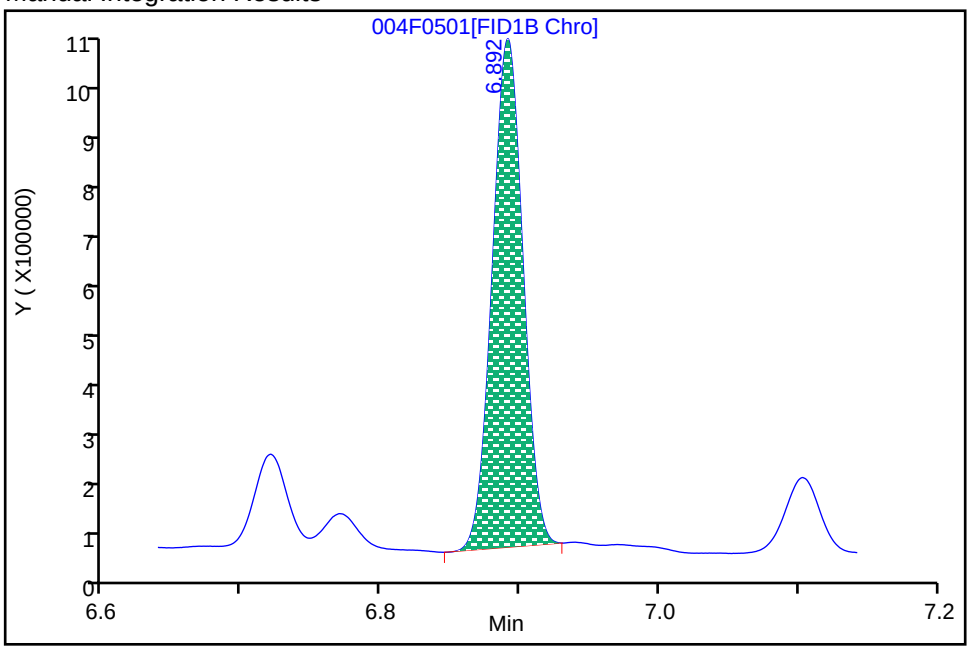
Processing Integration Results

RT: 6.892
Area: 1746694
Amount: 11.360
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.892
Area: 1438560
Amount: 7.5703
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:14:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\005F0601.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H1
Injection Date:	20-Nov-2019 10:59:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 3	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:15:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	62813543	500.00	480.54	M
$	1 OTP	6.895	6.895	0.000	7571849	50.000	50.217	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

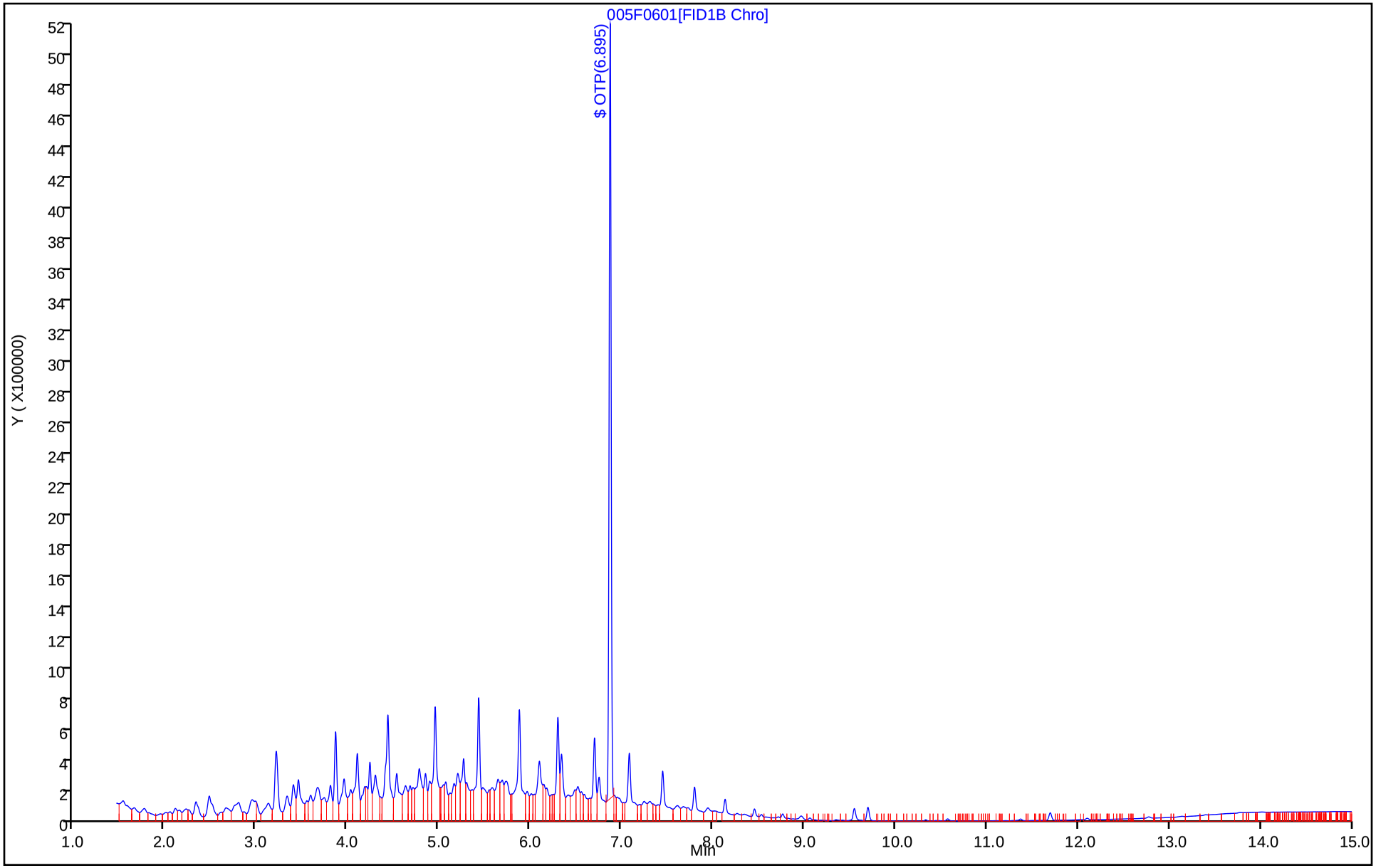
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\005F0601.D				
Injection Date:	20-Nov-2019 10:59:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H1	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:21 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

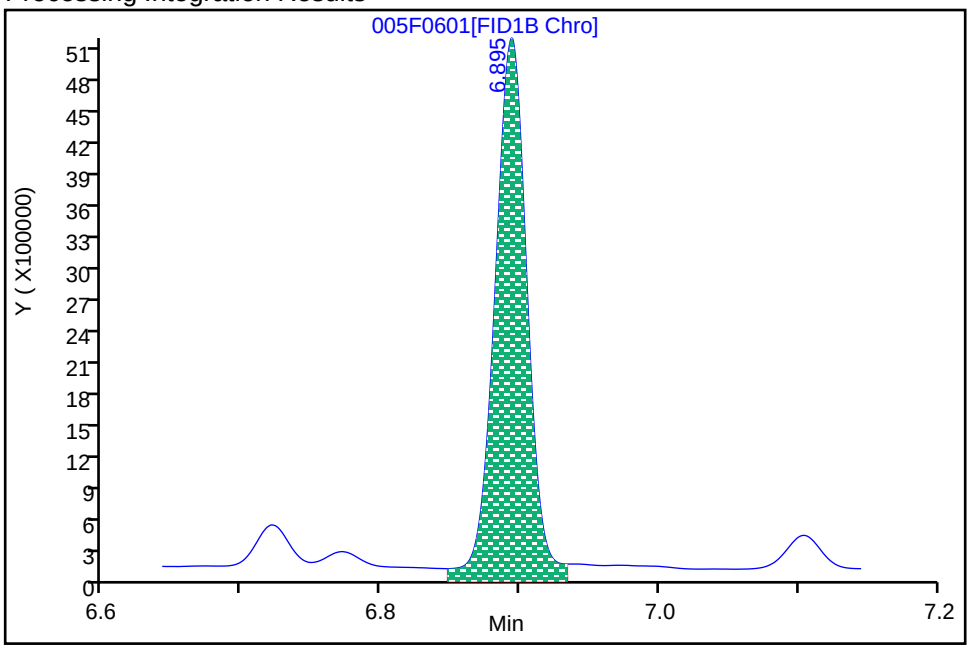
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\005F0601.D		
Injection Date:	20-Nov-2019 10:59:30	Inst. ID:	gc12.i
Client ID:	D3H1	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

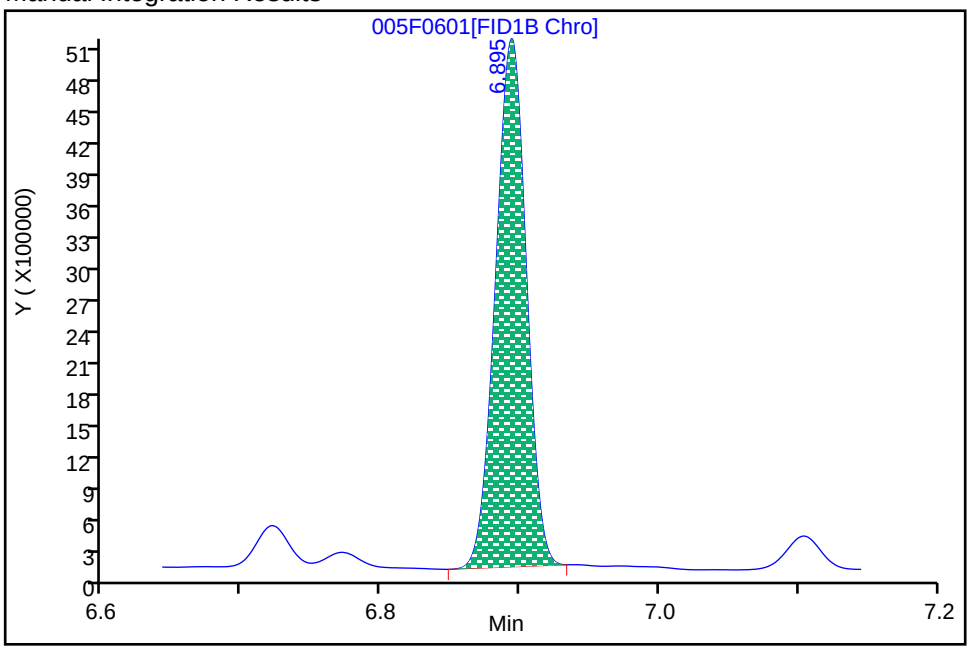
Processing Integration Results

RT: 6.895
Area: 8314254
Amount: 52.644
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.895
Area: 7571849
Amount: 50.217
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:15:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\006F0701.D		
Lab Sample ID:	SVGC-1662	Client Sample ID:	D4H1
Injection Date:	20-Nov-2019 11:18:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1662		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 4	ALS Bottle:	6
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:15:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	302403095	2500.00	2313.46	M
$	1 OTP	6.897	6.897	0.000	12024759	75.000	67.600	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

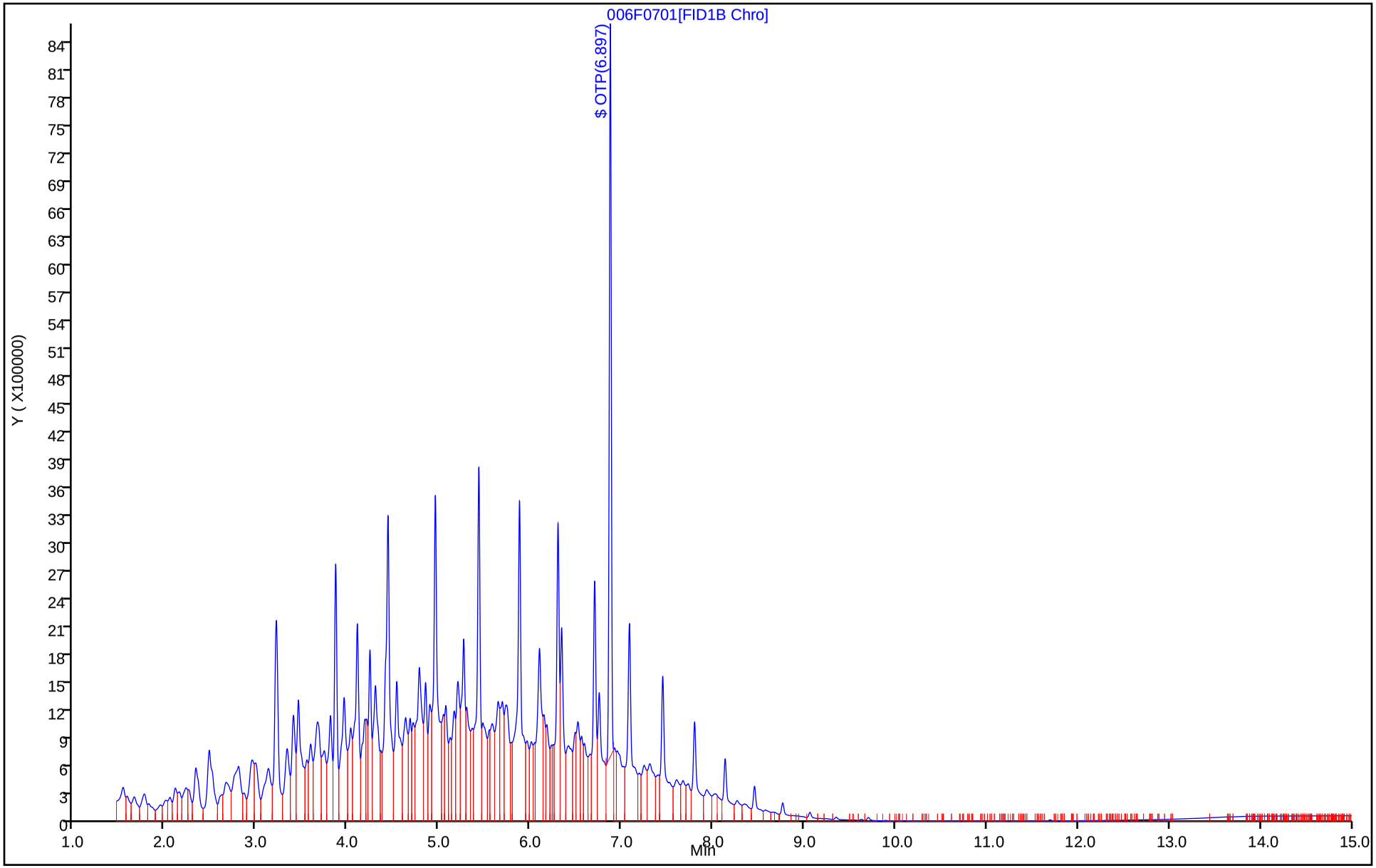
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\006F0701.D				
Injection Date:	20-Nov-2019 11:18:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D4H1	Lab ID:	SVGC-1662		
Sample Info:	SVGC-1662				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:22 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

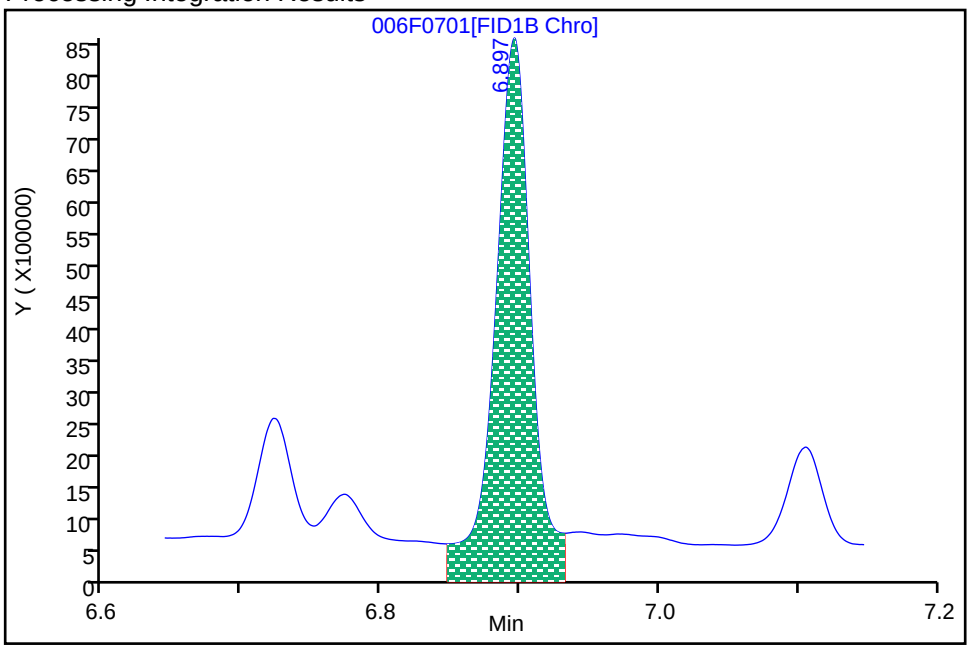
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\006F0701.D		
Injection Date:	20-Nov-2019 11:18:30	Inst. ID:	gc12.i
Client ID:	D4H1	Lab ID:	SVGC-1662
Sample Info:	SVGC-1662		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

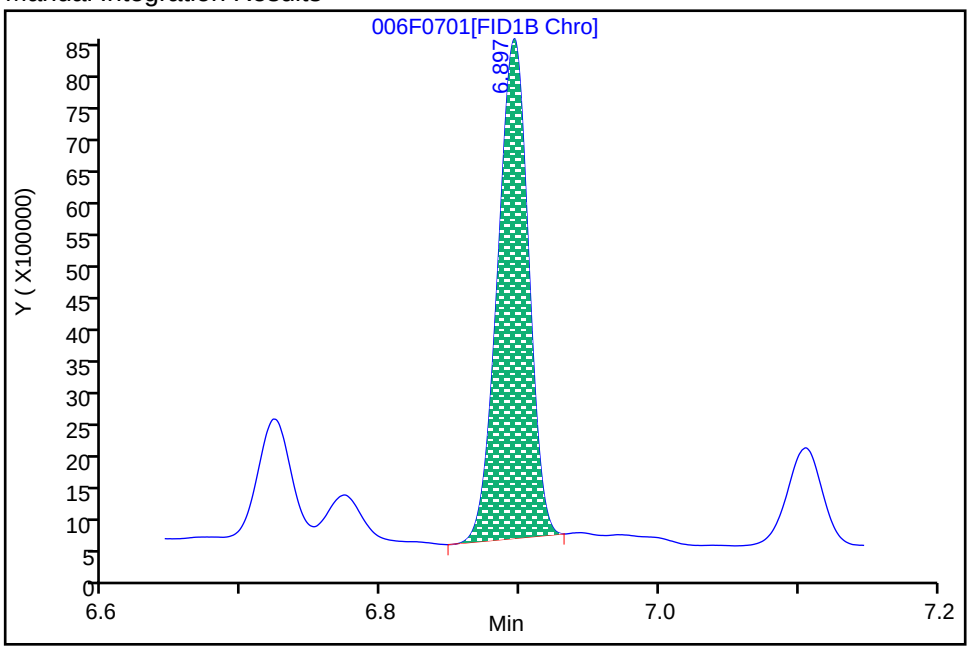
Processing Integration Results

RT: 6.897
Area: 15465755
Amount: 90.974
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.897
Area: 12024759
Amount: 67.600
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:15:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\007F0801.D		
Lab Sample ID:	SVGC-1663	Client Sample ID:	D5H1
Injection Date:	20-Nov-2019 11:37:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1663		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	Ical, Level: 5	ALS Bottle:	7
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:15:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1245597218	10000	9529.13	M
$	1 OTP	6.902	6.902	0.000	17577043	100.00	116.57	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

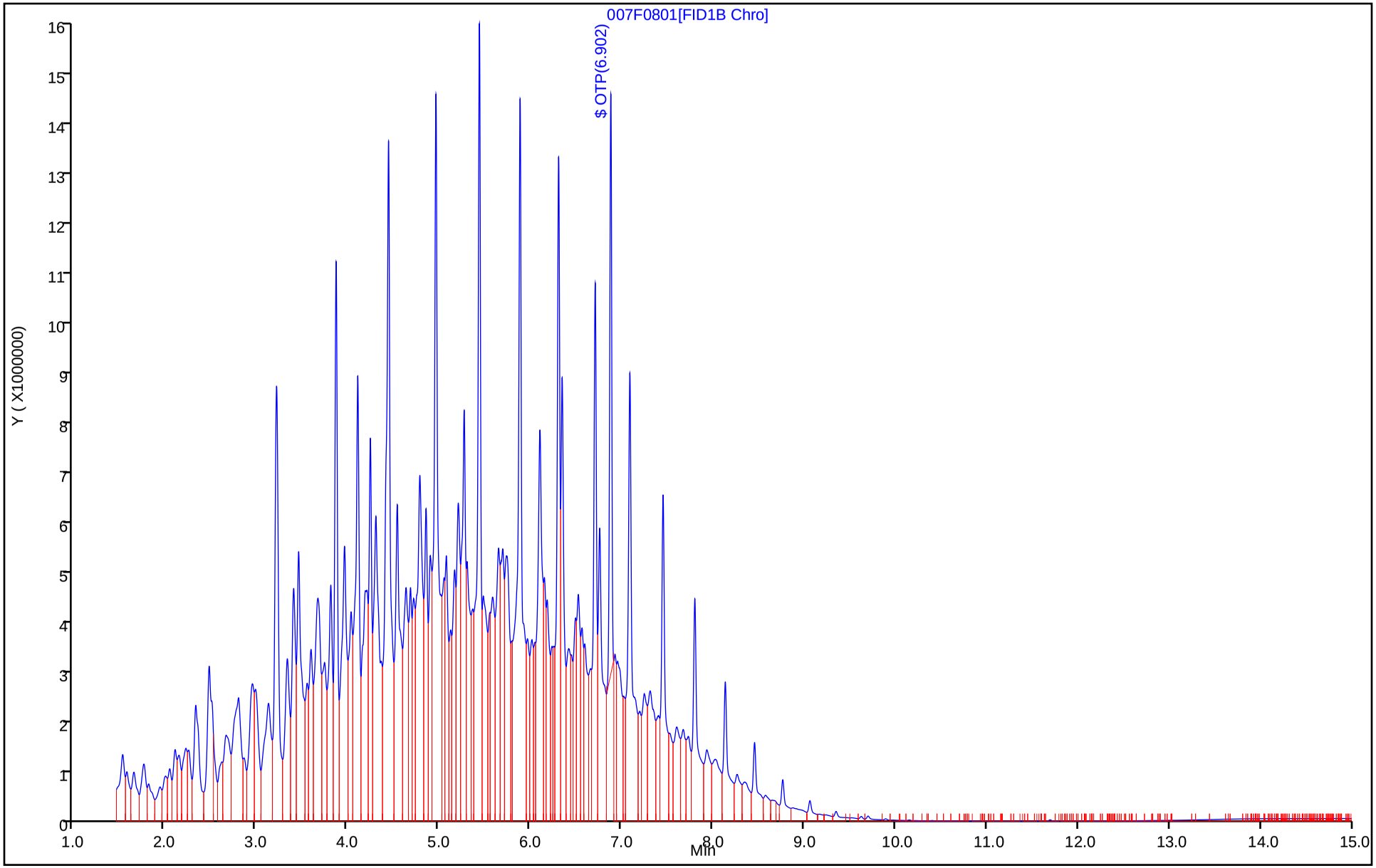
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\007F0801.D				
Injection Date:	20-Nov-2019 11:37:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D5H1	Lab ID:	SVGC-1663		
Sample Info:	SVGC-1663				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

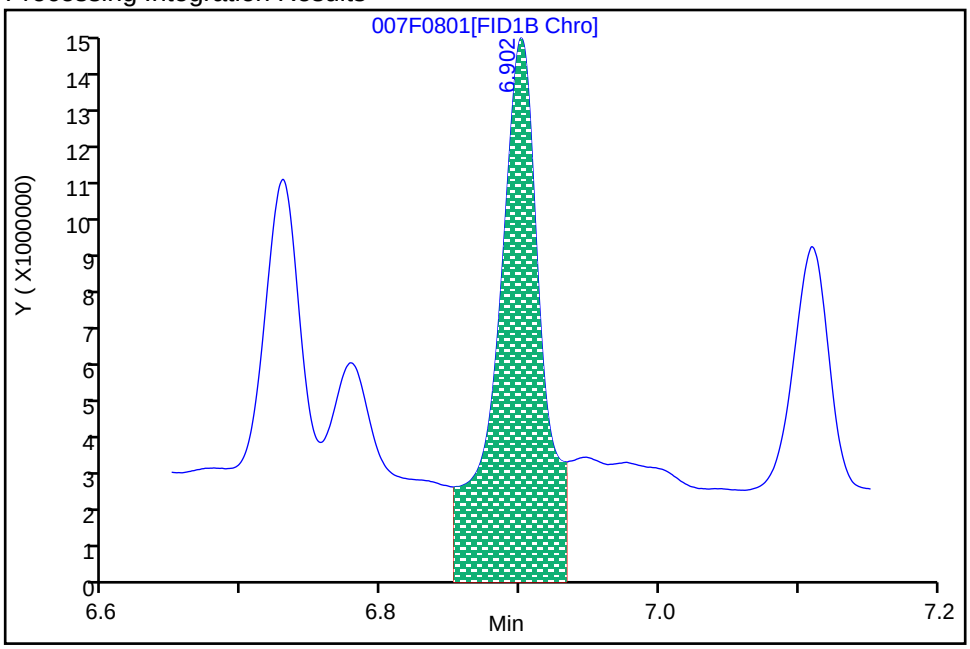
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\007F0801.D		
Injection Date:	20-Nov-2019 11:37:30	Inst. ID:	gc12.i
Client ID:	D5H1	Lab ID:	SVGC-1663
Sample Info:	SVGC-1663		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

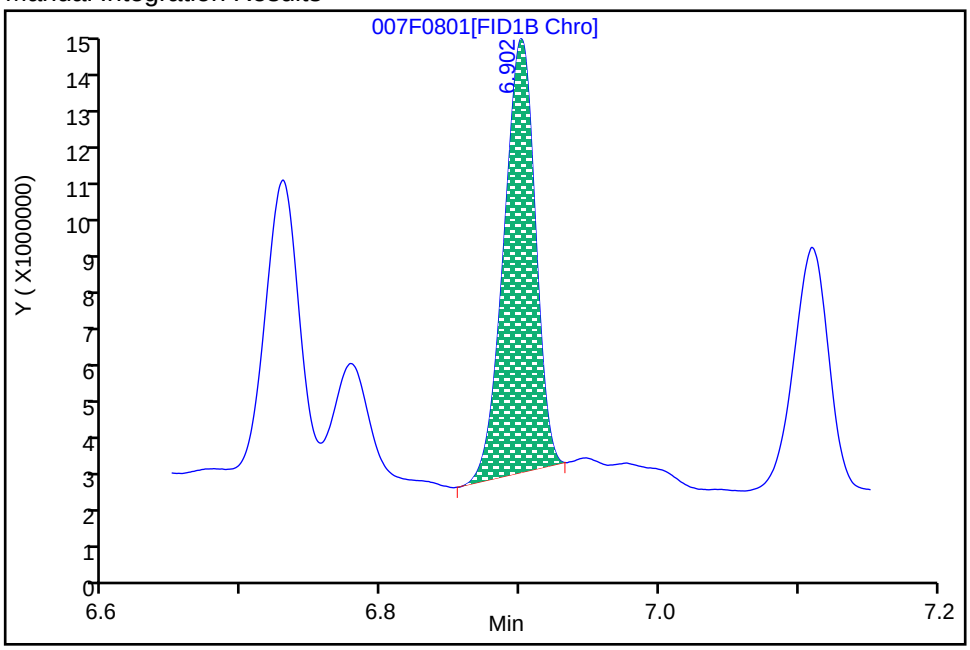
Processing Integration Results

RT: 6.902
Area: 31126074
Amount: 157.00
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.902
Area: 17577043
Amount: 116.57
Amount Units: ng



Data Editor: chg, 20-Nov-2019 13:15:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D		
Lab Sample ID:	SVGC-1711	Client Sample ID:	DICVH
Injection Date:	20-Nov-2019 12:15:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1711		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	8
Cpnd Sublist:	Diesel.sub	Spike List File:	DODICV.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	250000	247404	-1	99	80- 120

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D		
Lab Sample ID:	SVGC-1711	Client Sample ID:	DICVH
Injection Date:	20-Nov-2019 12:15:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1711		
Method:	\\Organics\EE\chem\gc12.i\112019F1.b\8015CLVI.m		
Method Date:	20-Nov-2019 13:17:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	8
Cpnd Sublist:	Diesel.sub	Spike List File:	DODICV.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	20-Nov-2019 13:16:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	64678782	494.81	247404	M
$	1 OTP	6.895	6.895	0.000	7707418	51.116	25558	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

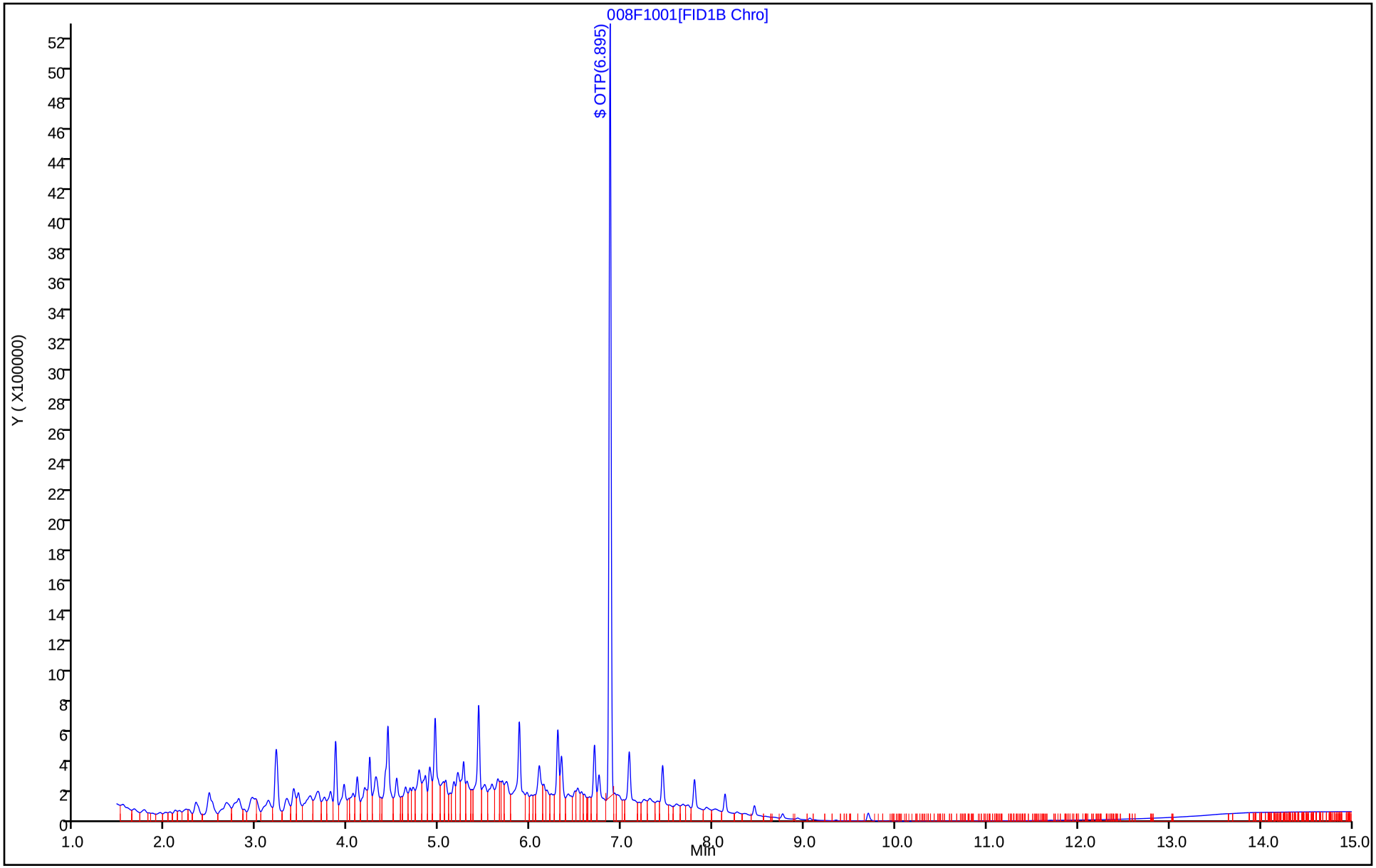
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 20-Nov-2019 15:05:23 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D				
Injection Date:	20-Nov-2019 12:15:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DICVH	Lab ID:	SVGC-1711		
Sample Info:	SVGC-1711				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 20-Nov-2019 15:05:24 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

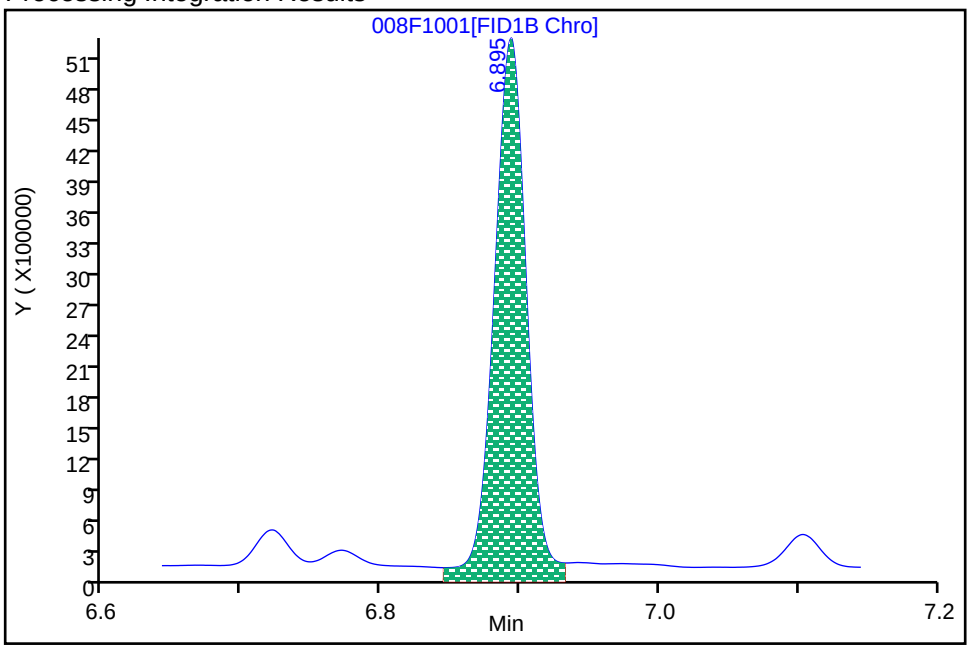
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\112019F1.b\008F1001.D		
Injection Date:	20-Nov-2019 12:15:30	Inst. ID:	gc12.i
Client ID:	DICVH	Lab ID:	SVGC-1711
Sample Info:	SVGC-1711		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

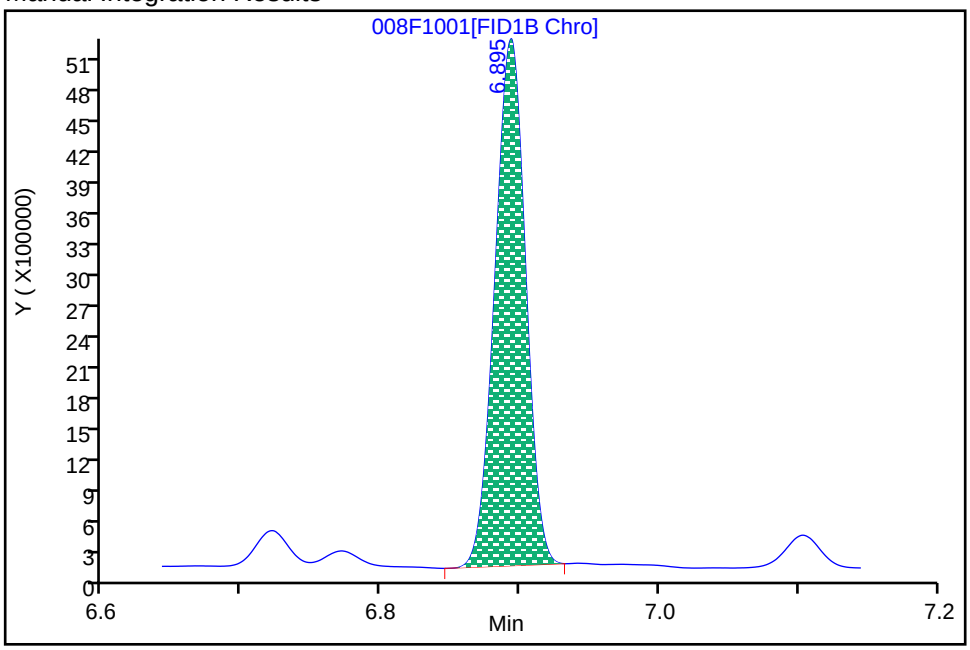
Processing Integration Results

RT: 6.895
Area: 8533074
Conc: 28296
Conc Units: ug/Kg
Conc:



Manual Integration Results

RT: 6.895
Area: 7707418
Conc: 25558
Conc Units: ug/Kg



Data Editor: chg, 20-Nov-2019 13:16:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F0301.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H44
Injection Date:	24-Dec-2019 09:51:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	166998	0.01	10.8	20	111
3 #2 Diesel Fuel	130715	133436	0.01	2.1	20	102

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F0301.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H44
Injection Date:	24-Dec-2019 09:51:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:49:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	66717796	500.00	510.41	M
$	1 OTP	6.896	6.895	0.001	8349922	50.000	55.377	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

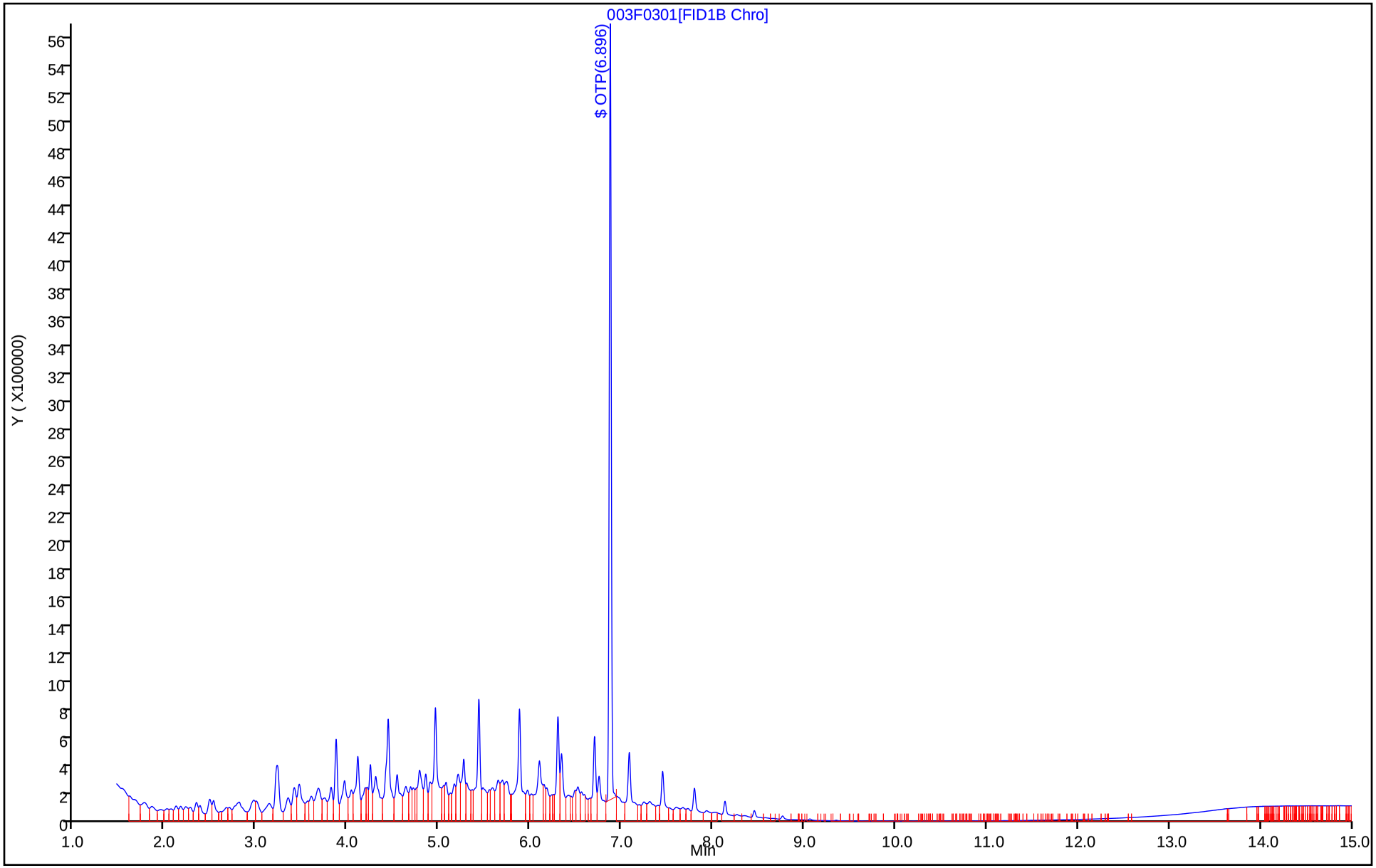
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:49:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F0301.D				
Injection Date:	24-Dec-2019 09:51:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H44	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:49:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

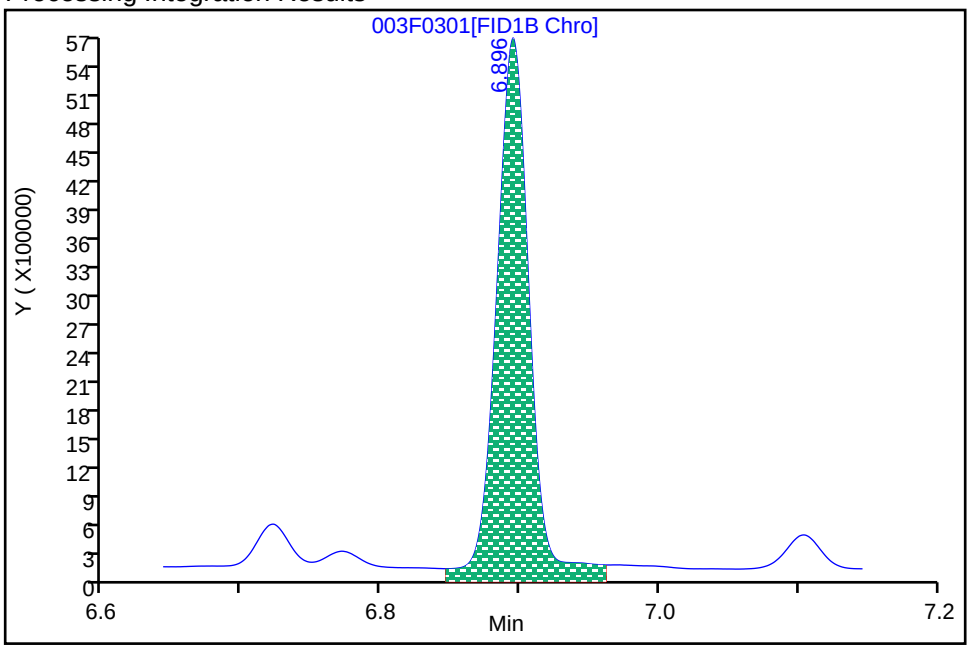
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F0301.D		
Injection Date:	24-Dec-2019 09:51:30	Inst. ID:	gc12.i
Client ID:	D3H44	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

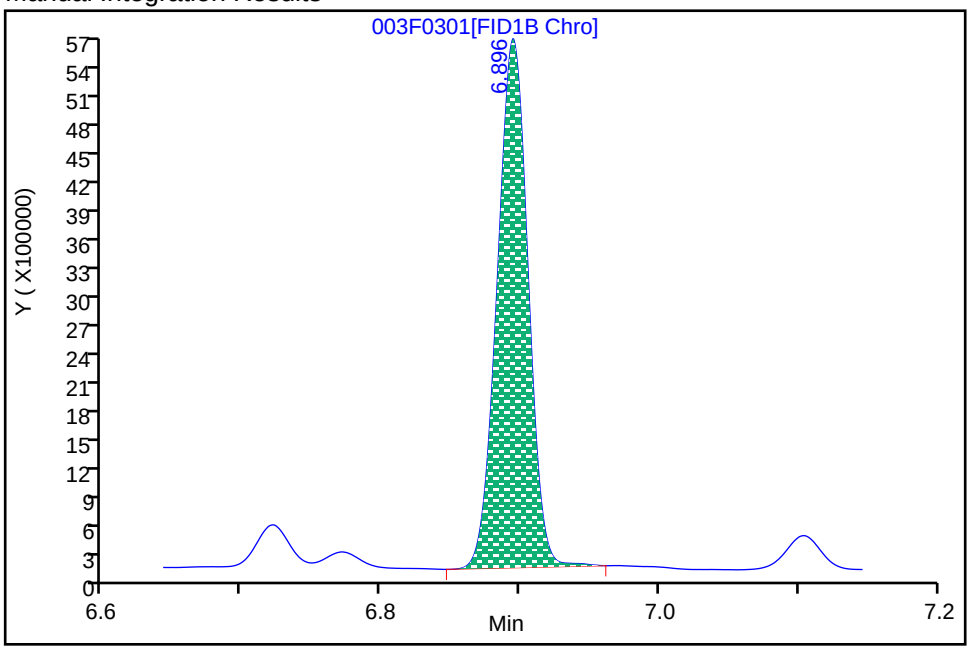
Processing Integration Results

RT: 6.896
Area: 9416871
Amount: 62.453
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.896
Area: 8349922
Amount: 55.377
Amount Units: ng



Data Editor: chg, 24-Dec-2019 16:49:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Shealy Environmental Services
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F2401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H45
Injection Date:	24-Dec-2019 16:34:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	168257	0.01	11.6	20	112
3 #2 Diesel Fuel	130715	135419	0.01	3.6	20	104

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F2401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H45
Injection Date:	24-Dec-2019 16:34:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:49:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	67709365	500.00	517.99	M
$	1 OTP	6.897	6.895	0.001	8412870	50.000	55.795	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

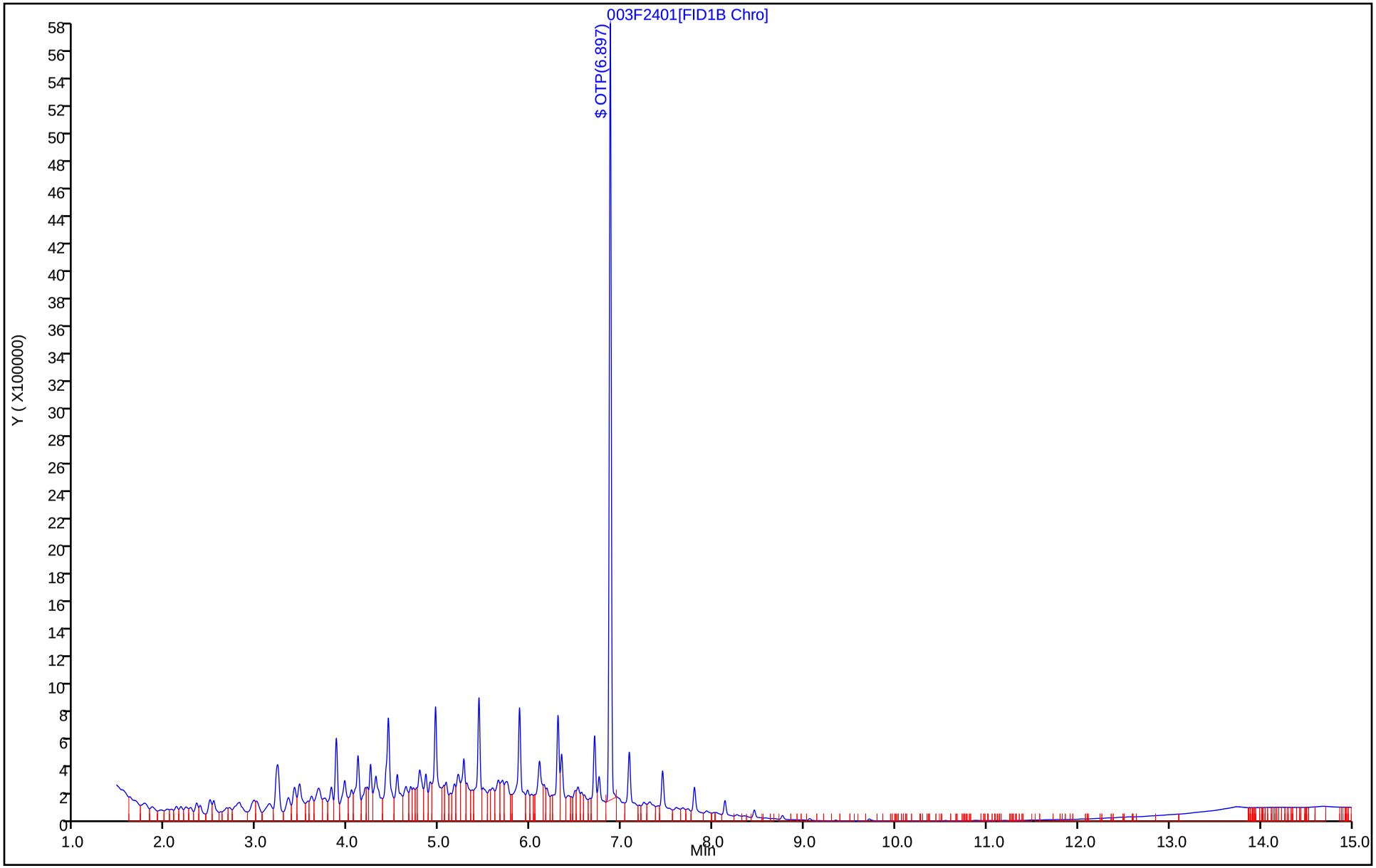
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:49:51 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F2401.D				
Injection Date:	24-Dec-2019 16:34:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H45	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:49:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

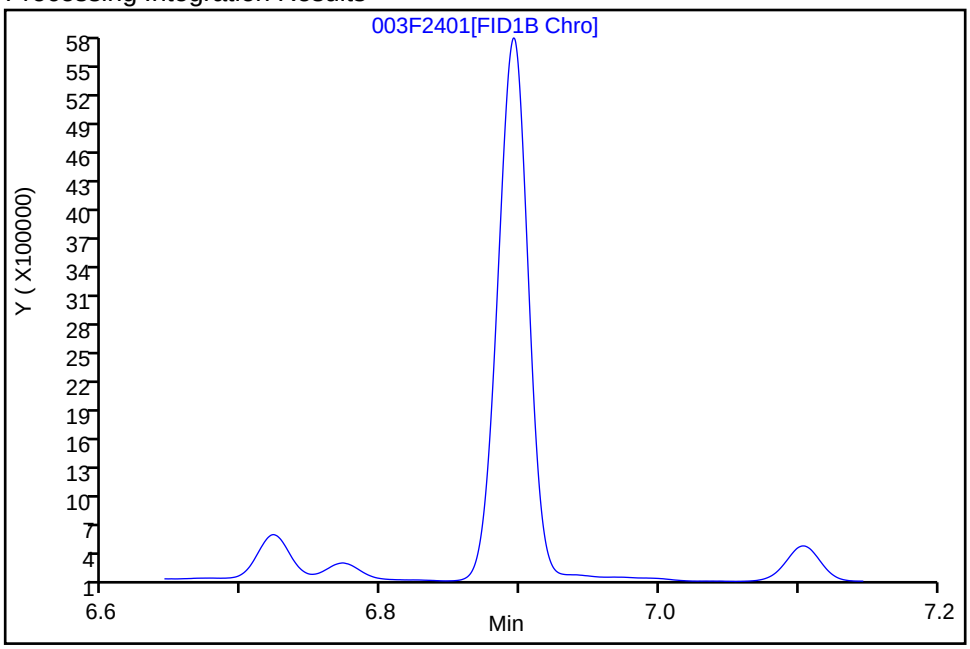
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\003F2401.D		
Injection Date:	24-Dec-2019 16:34:30	Inst. ID:	gc12.i
Client ID:	D3H45	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

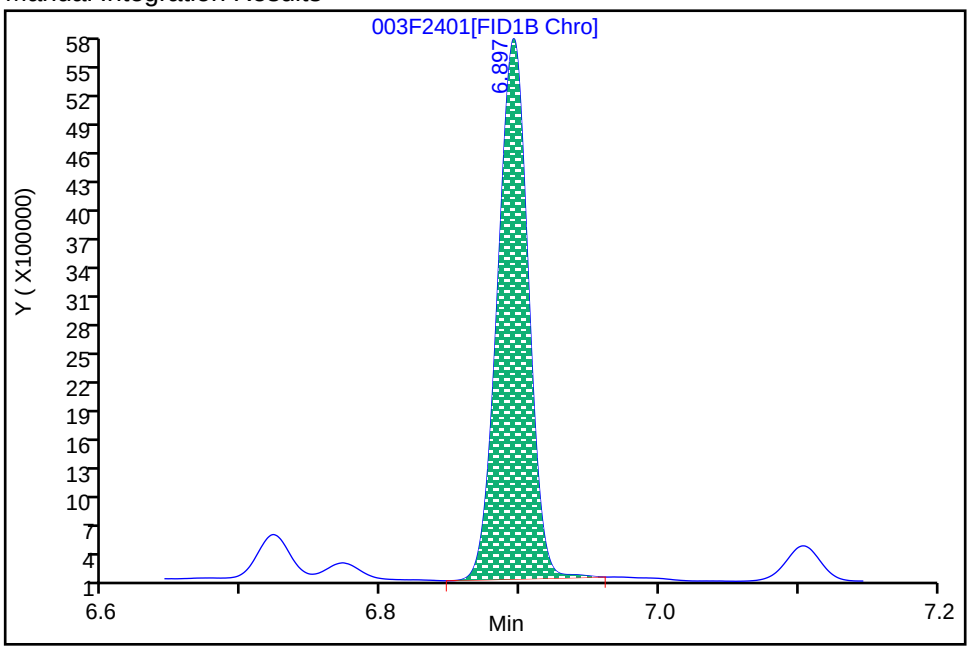
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.897
Area: 8412870
Amount: 55.795
Amount Units: ng



Data Editor: chg, 24-Dec-2019 16:49:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Pace Analytical Services, LLC
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F0301.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H46
Injection Date:	26-Dec-2019 10:02:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	167818	0.01	11.3	20	111
3 #2 Diesel Fuel	130715	132371	0.01	1.3	20	101

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F0301.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H46
Injection Date:	26-Dec-2019 10:02:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 11:49:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	66185390	500.00	506.33	M
$	1 OTP	6.892	6.895	-0.003	8390886	50.000	55.649	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

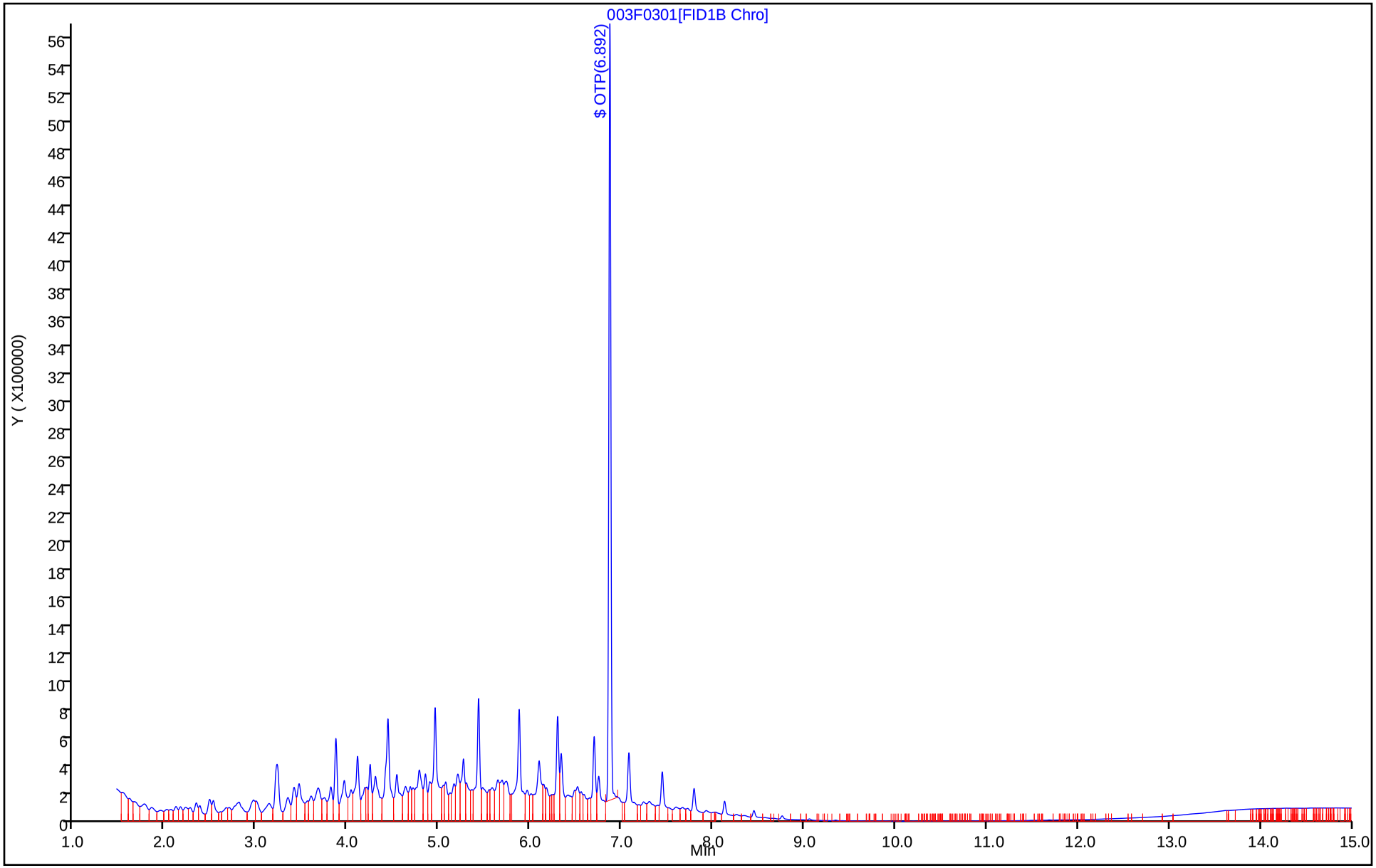
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:00 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F0301.D				
Injection Date:	26-Dec-2019 10:02:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H46	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

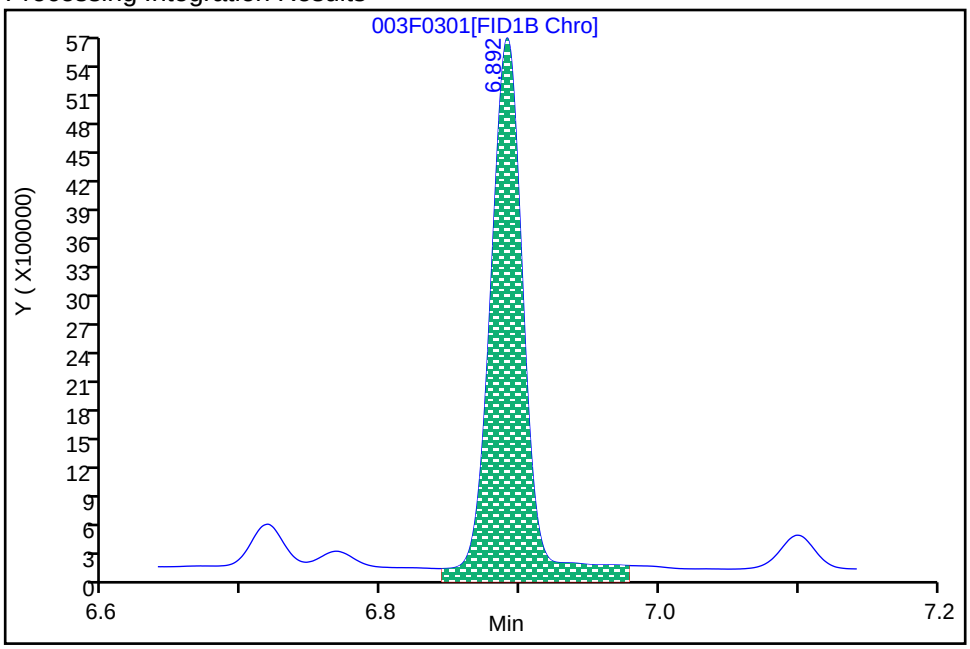
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F0301.D		
Injection Date:	26-Dec-2019 10:02:30	Inst. ID:	gc12.i
Client ID:	D3H46	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

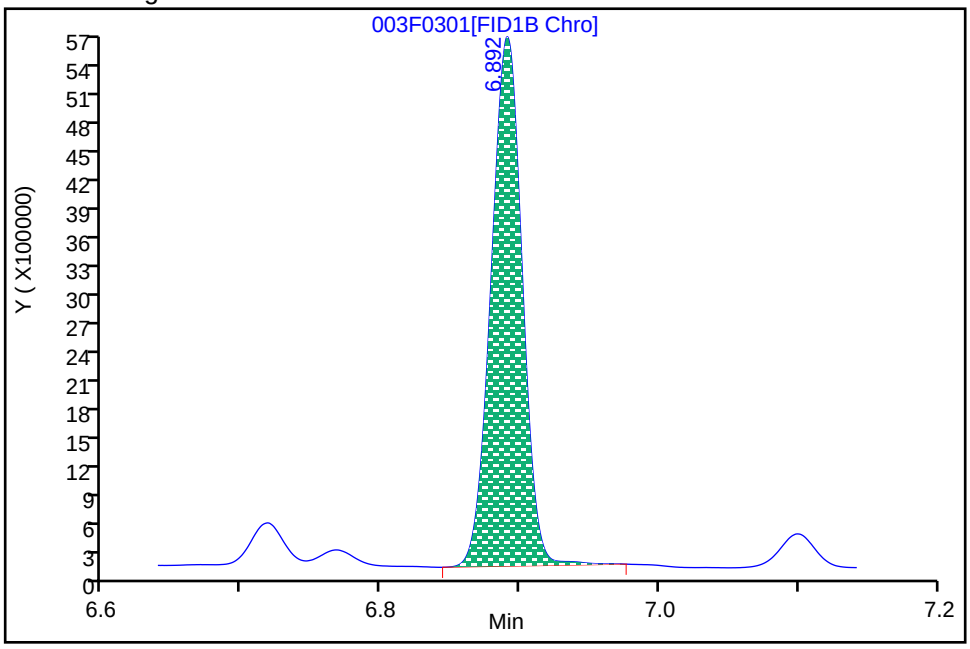
Processing Integration Results

RT: 6.892
Area: 9616669
Amount: 63.778
Amount Units: ng
Conc:



Manual Integration Results

RT: 6.892
Area: 8390886
Amount: 55.649
Amount Units: ng



Data Editor: chg, 26-Dec-2019 11:49:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Pace Analytical Services, LLC
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H47
Injection Date:	26-Dec-2019 16:45:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	164134	0.01	8.9	20	109
3 #2 Diesel Fuel	130715	125426	0.01	-4	20	96

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2401.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H47
Injection Date:	26-Dec-2019 16:45:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 17:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	62713164	500.00	479.77	M
$	1 OTP	6.894	6.895	-0.001	8206720	50.000	54.427	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

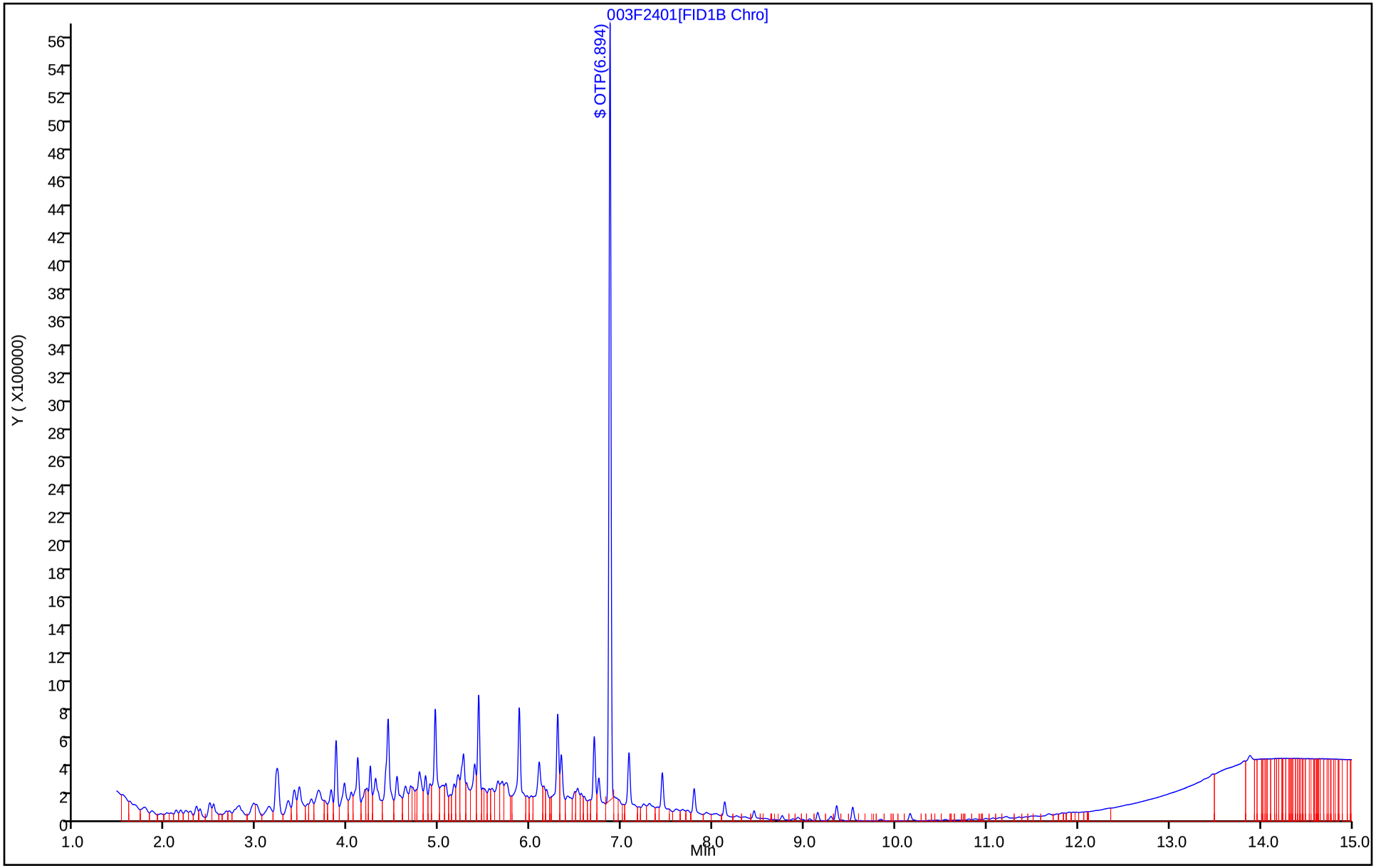
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2401.D				
Injection Date:	26-Dec-2019 16:45:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H47	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:01 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

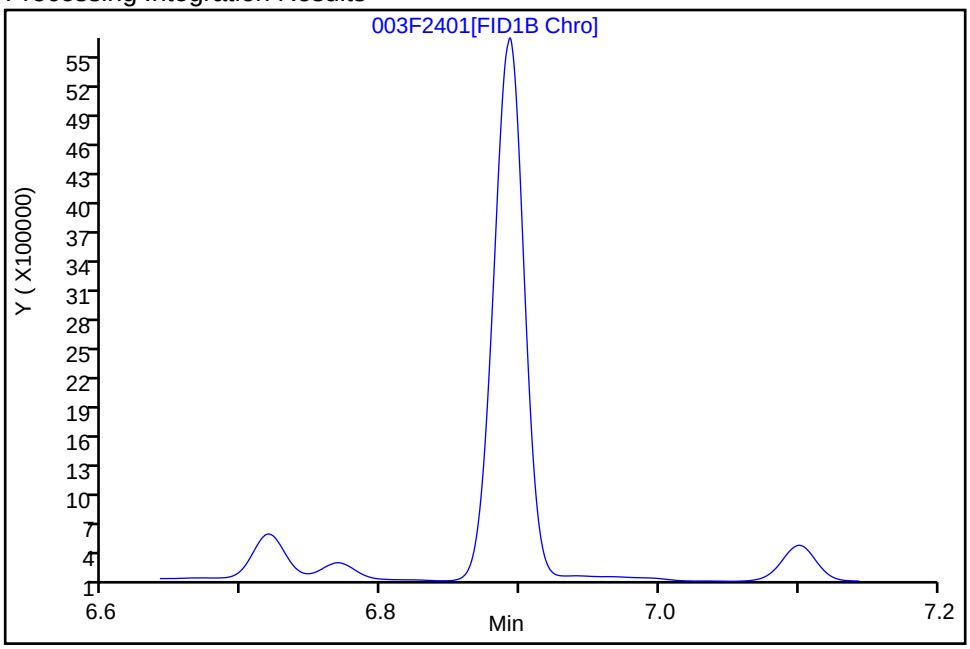
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2401.D		
Injection Date:	26-Dec-2019 16:45:30	Inst. ID:	gc12.i
Client ID:	D3H47	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

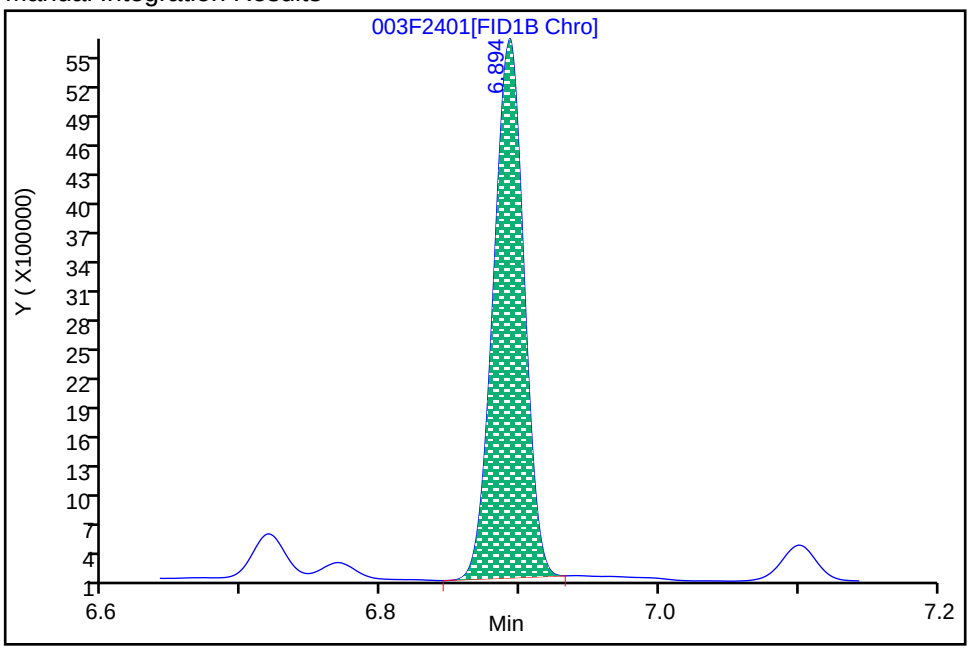
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.894
Area: 8206720
Amount: 54.427
Amount Units: ng



Data Editor: chg, 26-Dec-2019 17:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Pace Analytical Services, LLC
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2701.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H48
Injection Date:	26-Dec-2019 17:42:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	163132	0.01	8.2	20	108
3 #2 Diesel Fuel	130715	131763	0.01	0.8	20	101

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2701.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H48
Injection Date:	26-Dec-2019 17:42:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 10:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	65881600	500.00	504.01	M
$	1 OTP	6.893	6.895	-0.001	8156585	50.000	54.095	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

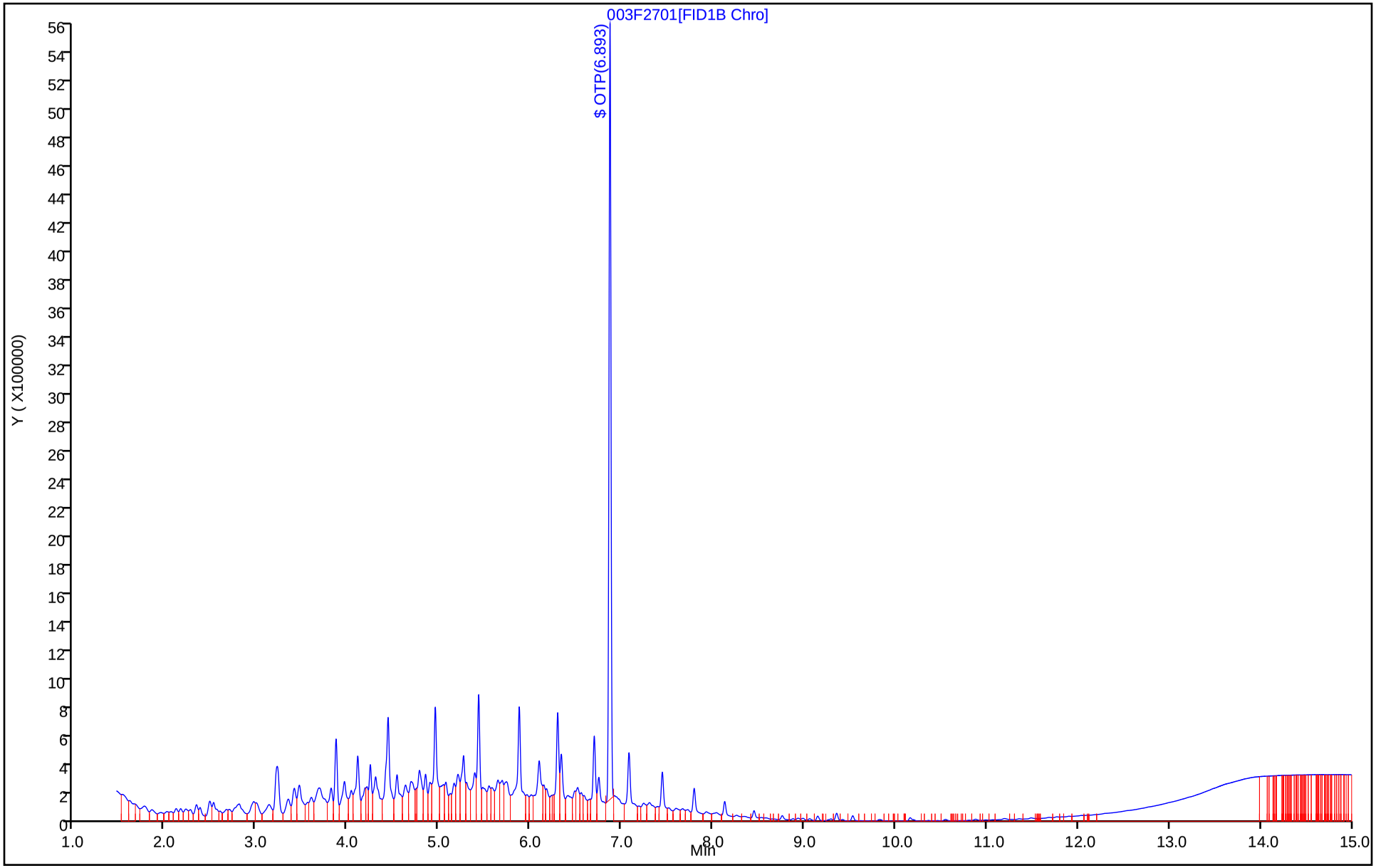
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2701.D				
Injection Date:	26-Dec-2019 17:42:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H48	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:03 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

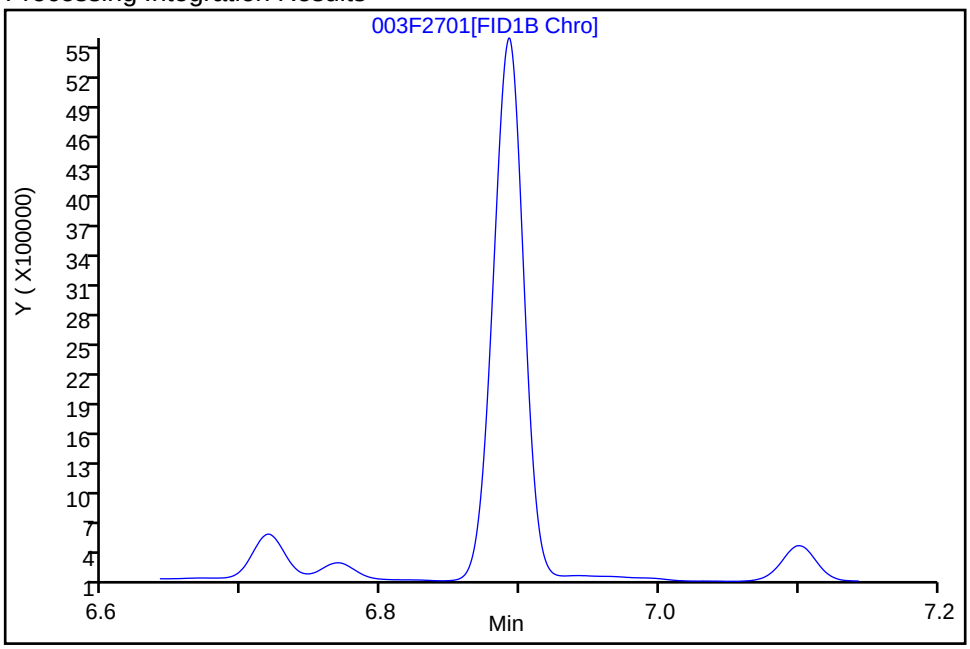
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\003F2701.D		
Injection Date:	26-Dec-2019 17:42:30	Inst. ID:	gc12.i
Client ID:	D3H48	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

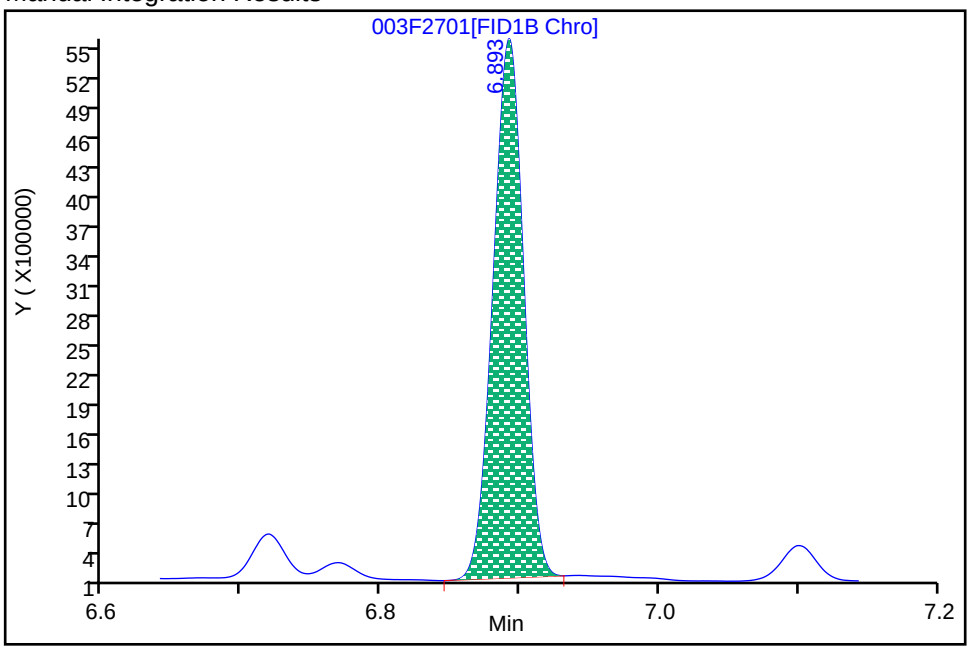
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.893
Area: 8156585
Amount: 54.095
Amount Units: ng



Data Editor: chg, 27-Dec-2019 10:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Pace Analytical Services, LLC
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0301.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H49
Injection Date:	27-Dec-2019 10:05:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	160213	0.01	6.3	20	106
3 #2 Diesel Fuel	130715	131821	0.01	0.8	20	101

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0301.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H49
Injection Date:	27-Dec-2019 10:05:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 10:36:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	65910647	500.00	504.23	M
$	1 OTP	6.892	6.895	-0.003	8010670	50.000	53.127	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

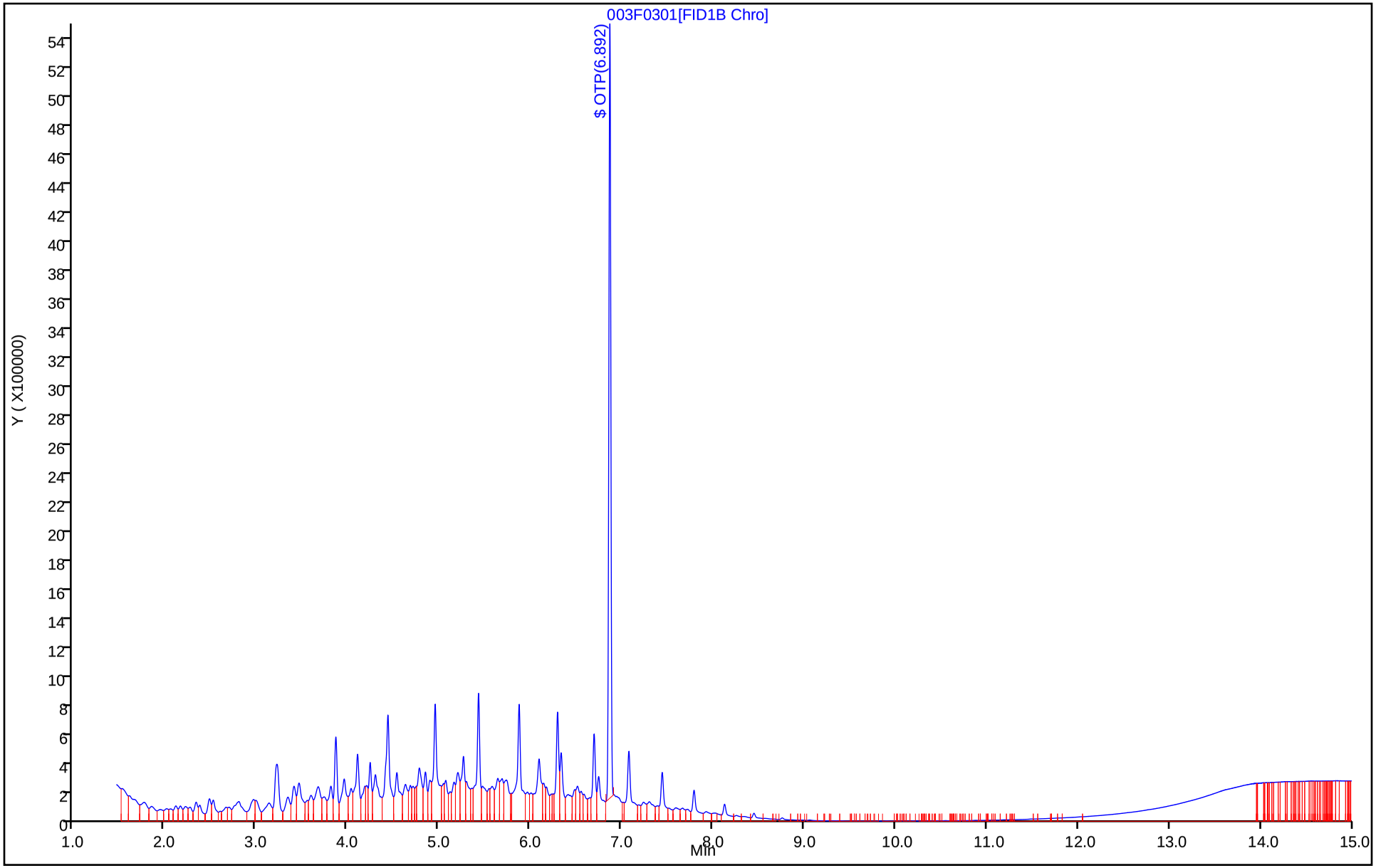
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:11 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0301.D				
Injection Date:	27-Dec-2019 10:05:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H49	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:12 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

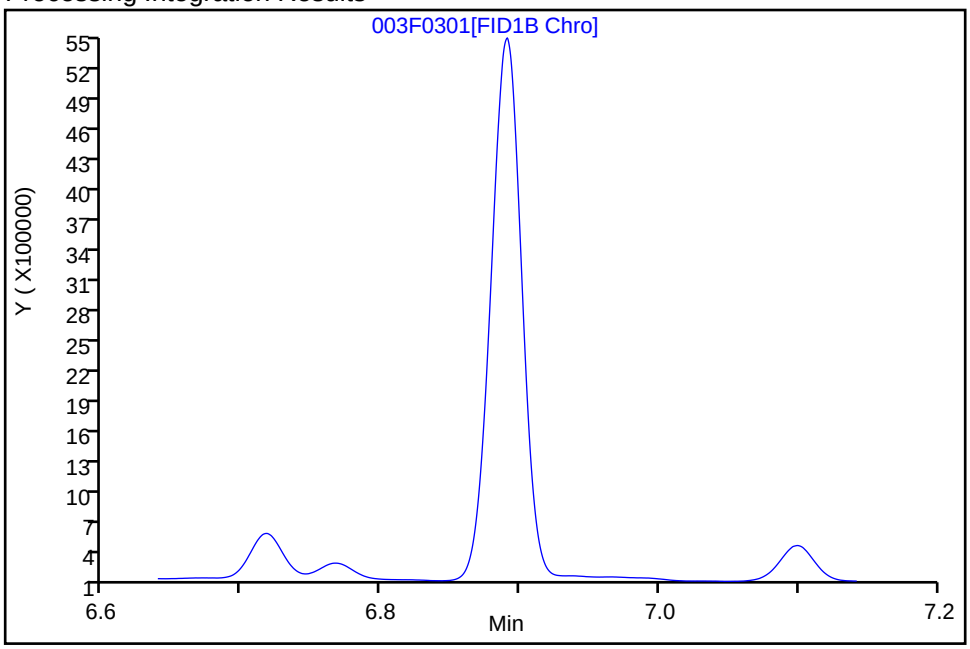
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0301.D		
Injection Date:	27-Dec-2019 10:05:30	Inst. ID:	gc12.i
Client ID:	D3H49	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

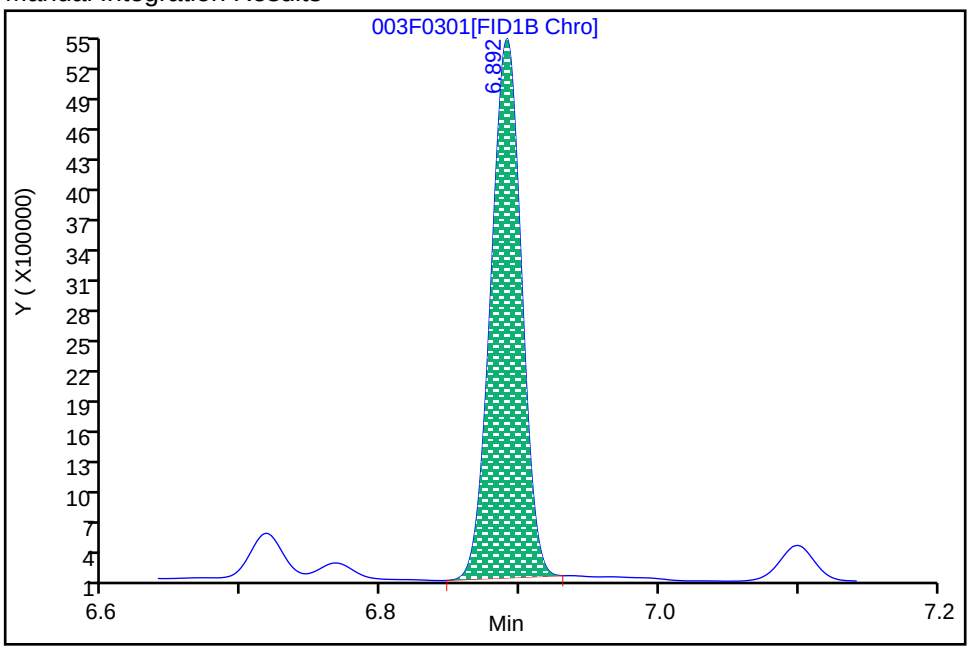
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 8010670
Amount: 53.127
Amount Units: ng



Data Editor: chg, 27-Dec-2019 10:36:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

Pace Analytical Services, LLC
Continuing Calibration Verification Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0901.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H50
Injection Date:	27-Dec-2019 11:59:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Standard RRF	Ccal RF	Min. RRF	%D	Max. %D	%Rec
$ 1 OTP	150783	161127	0.01	6.9	20	107
3 #2 Diesel Fuel	130715	130851	0.01	0.1	20	100

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0901.D		
Lab Sample ID:	SVGC-1661	Client Sample ID:	D3H50
Injection Date:	27-Dec-2019 11:59:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	SVGC-1661		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	CCV	ALS Bottle:	3
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	10.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 12:20:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	Cal Amt ng	OnCol Amt ng	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	65425604	500.00	500.52	M
$	1 OTP	6.892	6.895	-0.002	8056363	50.000	53.430	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

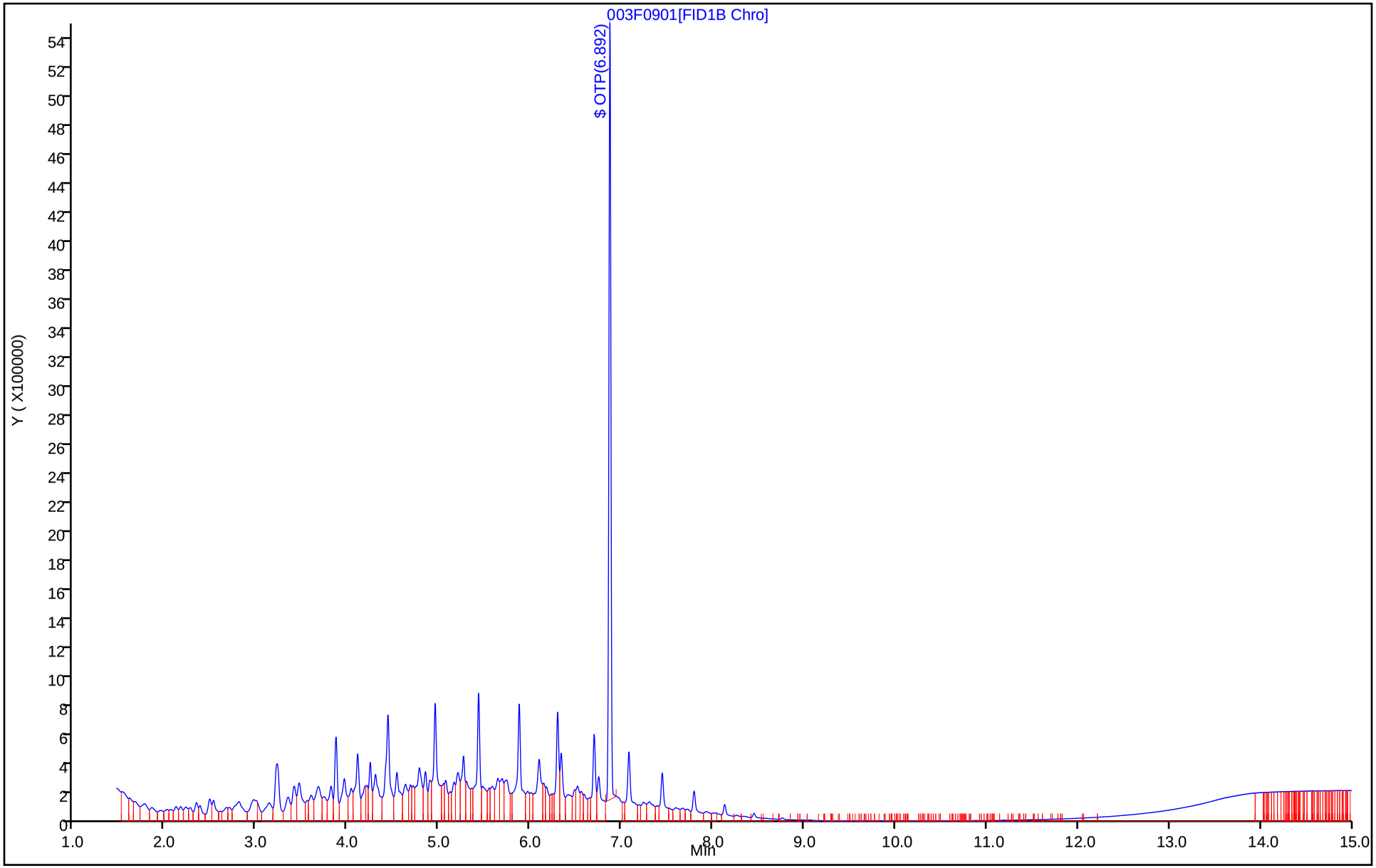
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:12 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0901.D				
Injection Date:	27-Dec-2019 11:59:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	D3H50	Lab ID:	SVGC-1661		
Sample Info:	SVGC-1661				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:12 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

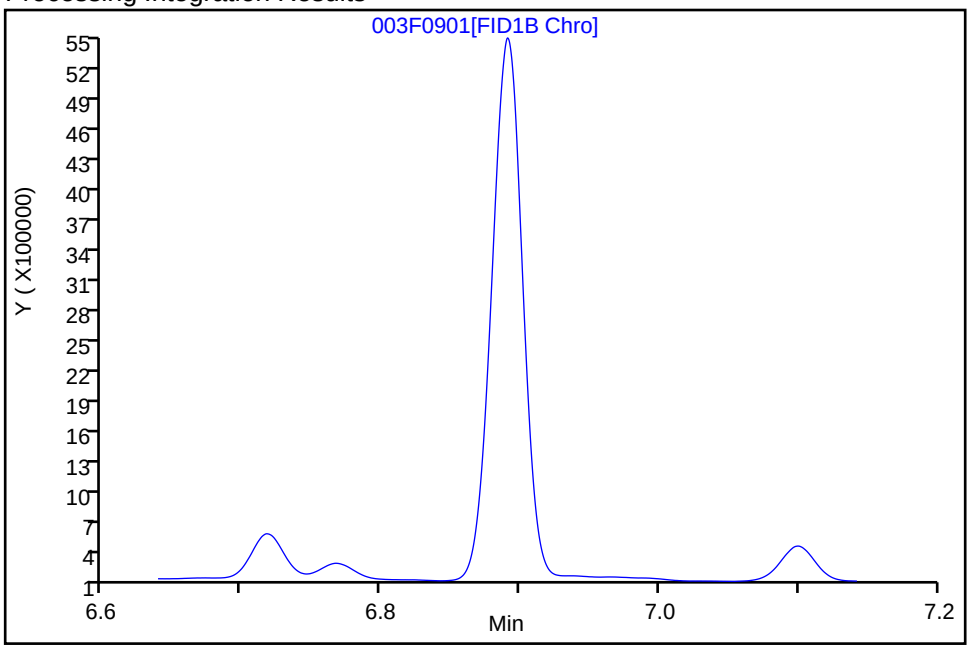
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\003F0901.D		
Injection Date:	27-Dec-2019 11:59:30	Inst. ID:	gc12.i
Client ID:	D3H50	Lab ID:	SVGC-1661
Sample Info:	SVGC-1661		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

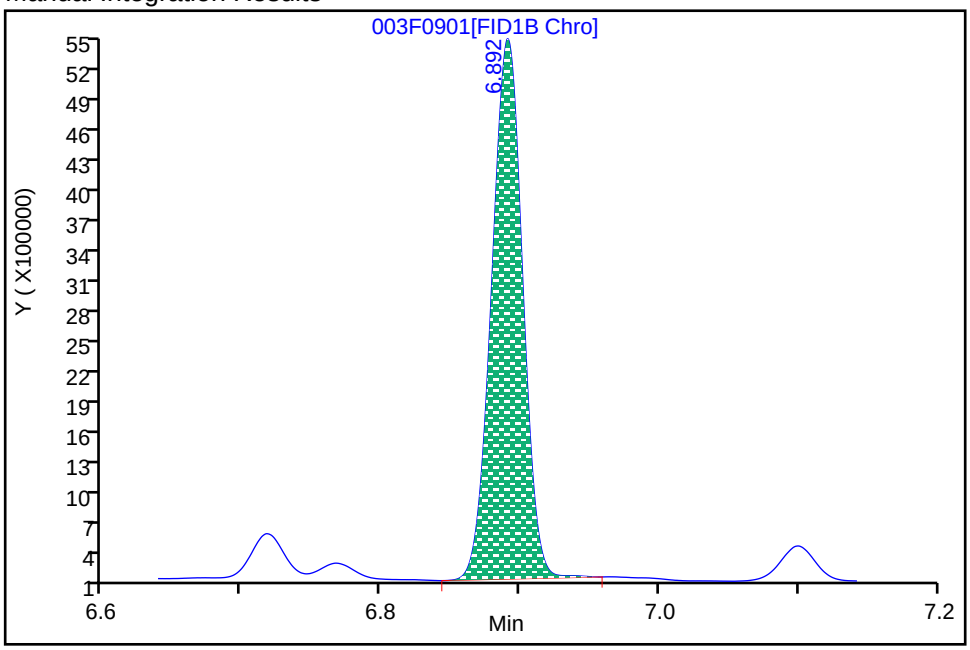
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 8056363
Amount: 53.430
Amount Units: ng



Data Editor: chg, 27-Dec-2019 12:20:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

RAW QC DATA

TPH - DRO - MB

Sample ID: UQ39962-001
Batch: 39962
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/23/2019 2339

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/24/2019 1011

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		101	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\004F0401.D		
Lab Sample ID:	UQ39962-001	Client Sample ID:	DBLK62
Injection Date:	24-Dec-2019 10:11:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ39962-001		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:42:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1283227	9.8170	1636.17	eM
$	1 OTP	6.896	6.895	0.000	7583089	50.291	8381.91	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

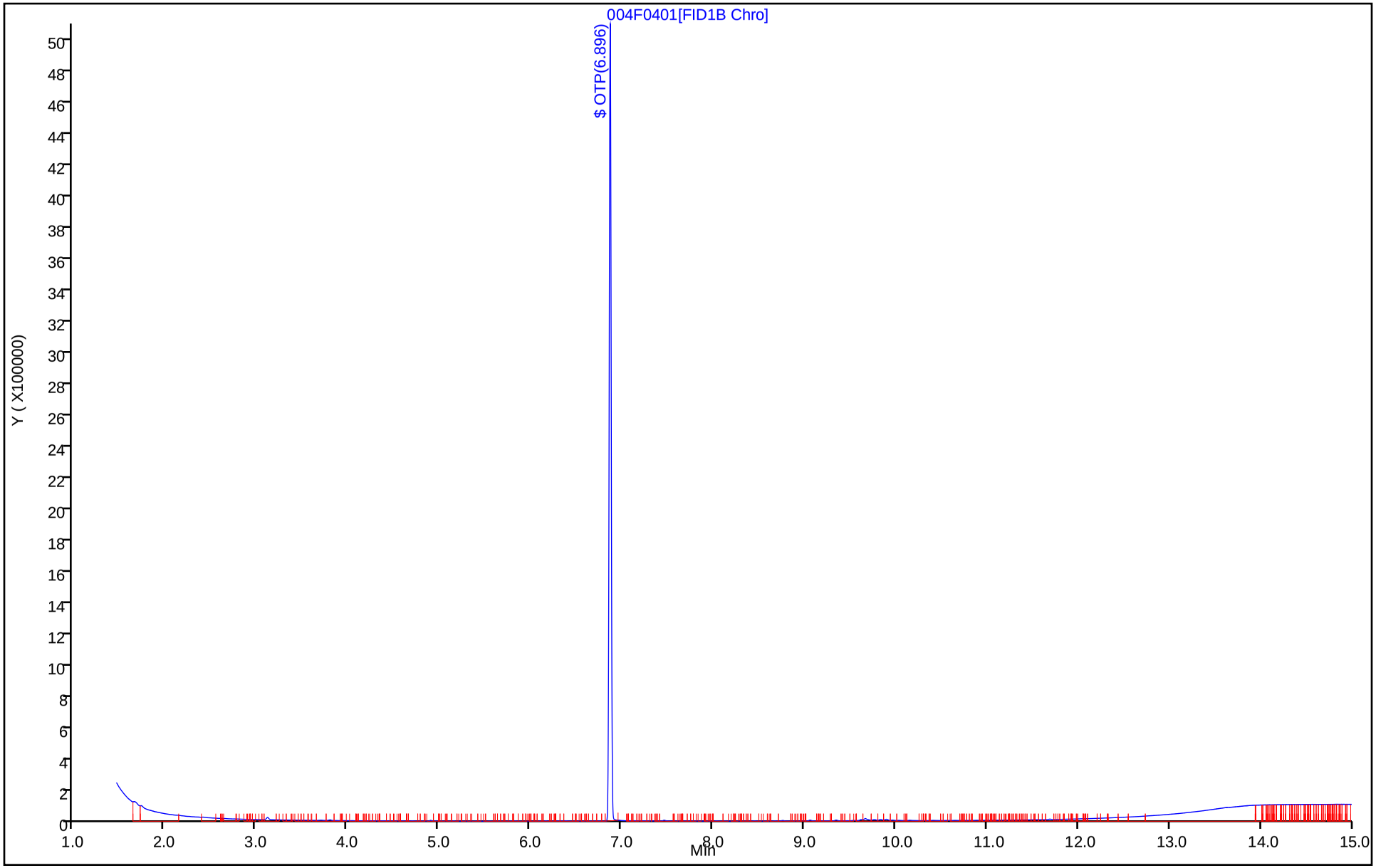
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:49:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\004F0401.D				
Injection Date:	24-Dec-2019 10:11:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DBLK62	Lab ID:	UQ39962-001		
Sample Info:	UQ39962-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:49:52 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

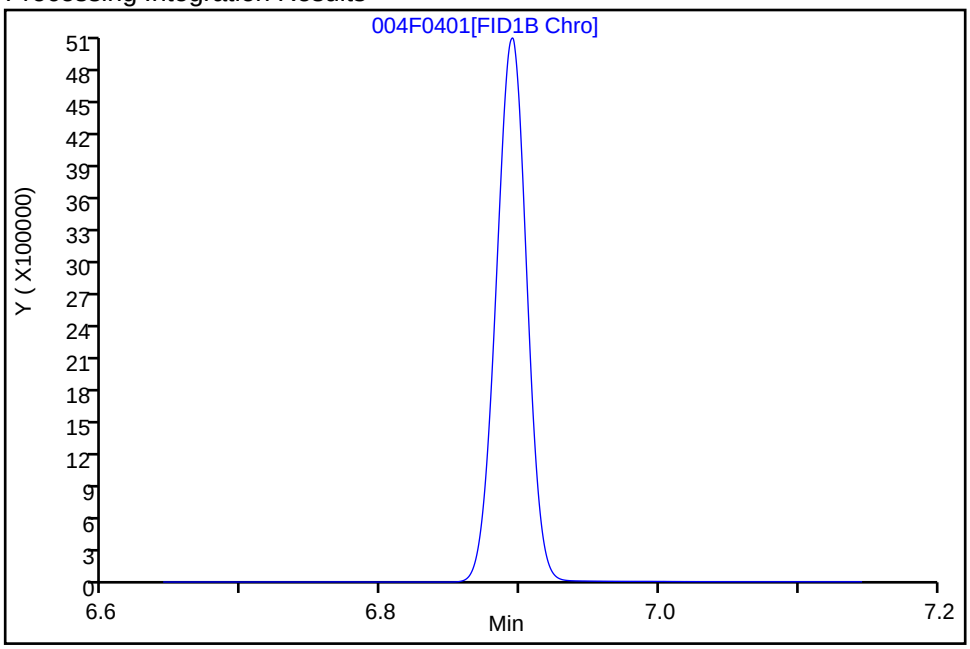
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\004F0401.D		
Injection Date:	24-Dec-2019 10:11:30	Inst. ID:	gc12.i
Client ID:	DBLK62	Lab ID:	UQ39962-001
Sample Info:	UQ39962-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

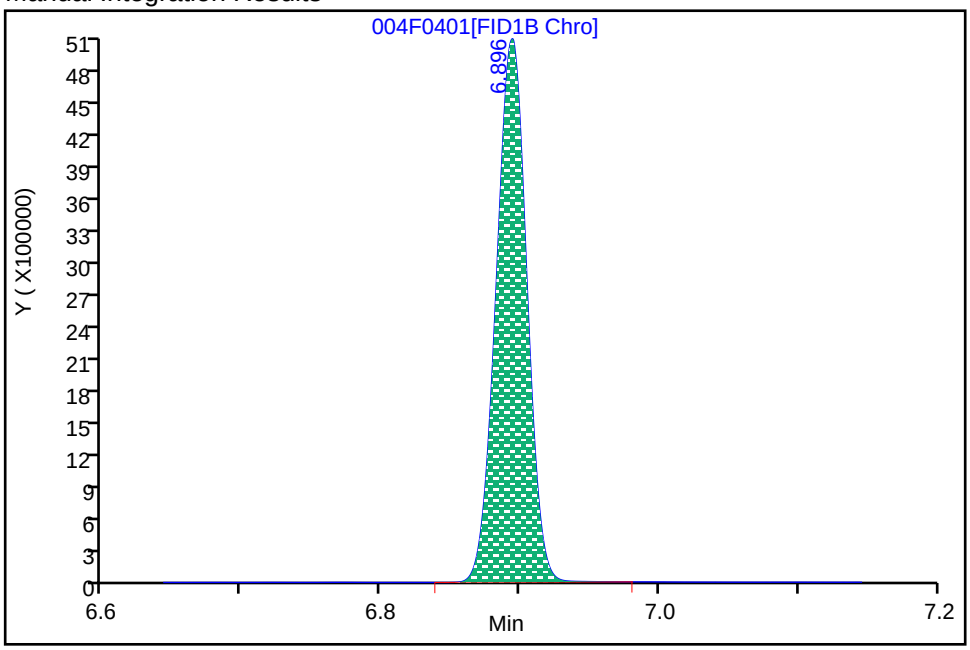
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.896
Area: 7583089
Conc: 8381.91
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - MB

Sample ID: UQ40054-001
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/26/2019 1021

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		100	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\004F0401.D		
Lab Sample ID:	UQ40054-001	Client Sample ID:	DBLK54
Injection Date:	26-Dec-2019 10:21:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ40054-001		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 11:53:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1253127	9.5867	1597.79	eM
$	1 OTP	6.893	6.895	-0.002	7519958	49.873	8312.13	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

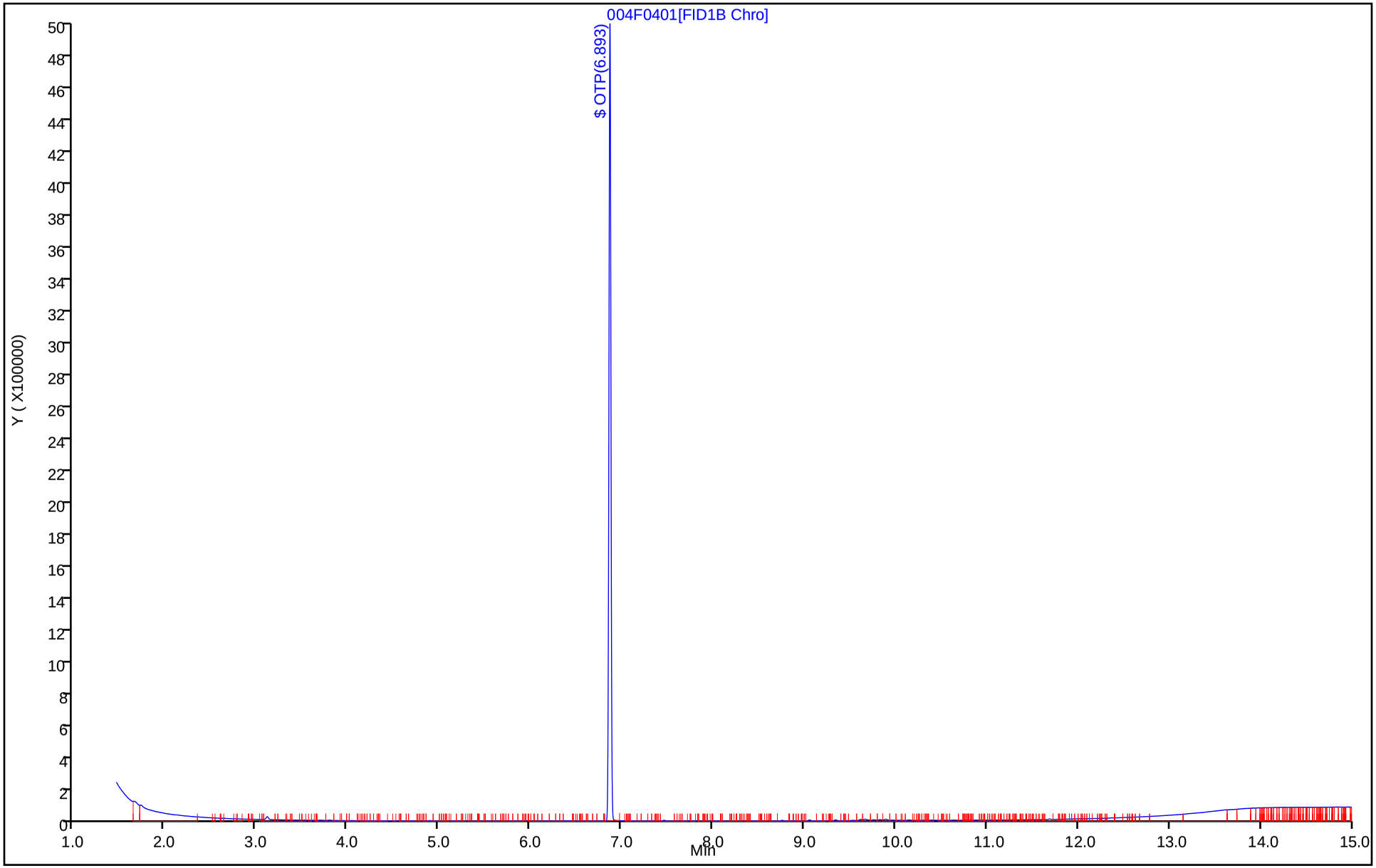
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:06 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\004F0401.D				
Injection Date:	26-Dec-2019 10:21:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DBLK54	Lab ID:	UQ40054-001		
Sample Info:	UQ40054-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:07 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

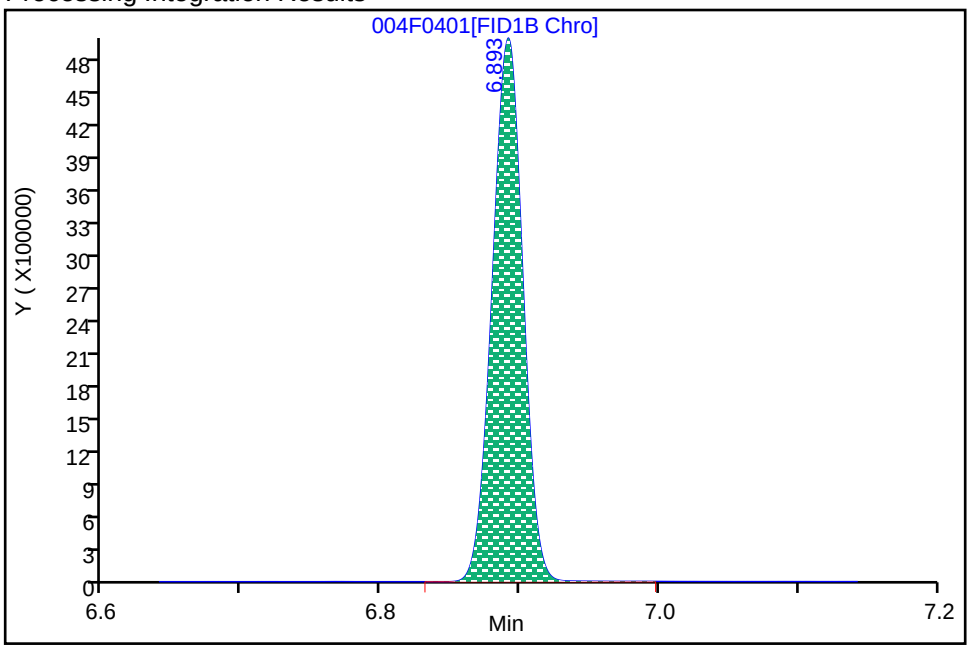
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\004F0401.D		
Injection Date:	26-Dec-2019 10:21:30	Inst. ID:	gc12.i
Client ID:	DBLK54	Lab ID:	UQ40054-001
Sample Info:	UQ40054-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

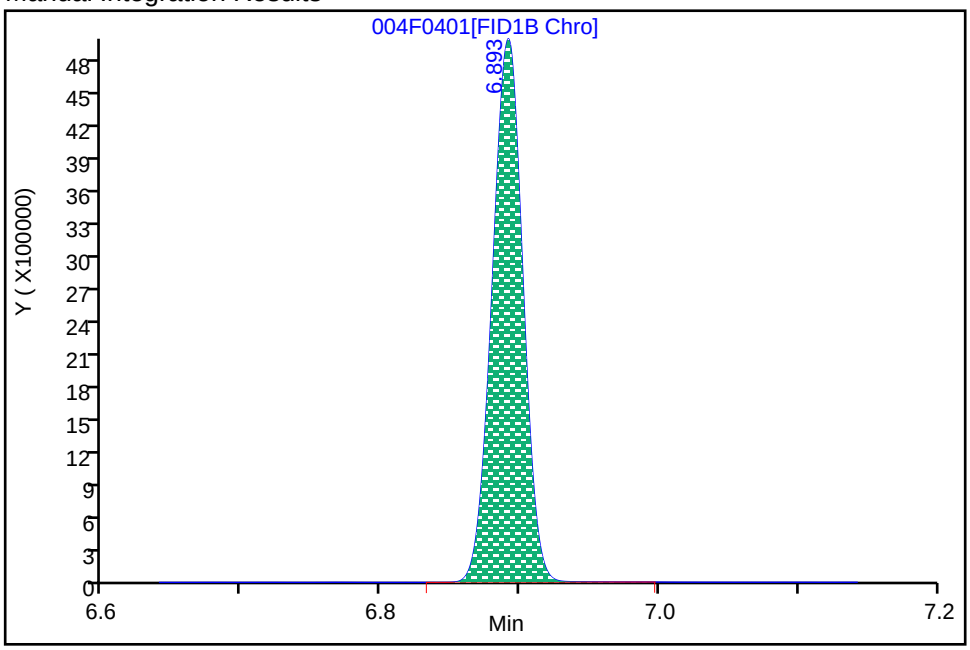
Processing Integration Results

RT: 6.893
Area: 7542491
Conc: 8337.03
Conc Units: ug/Kg
Conc:



Manual Integration Results

RT: 6.893
Area: 7519958
Conc: 8312.13
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 11:53:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH-DRO - MB

Sample ID: UQ40144-001
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	200	43	ug/L	12/27/2019 1024

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		74	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\004F0401.D		
Lab Sample ID:	UQ40144-001	Client Sample ID:	DBLK44
Injection Date:	27-Dec-2019 10:24:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ40144-001		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	BLANK	ALS Bottle:	4
Cpnd Sublist:	Diesel.sub		
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vi	5.0000	Volume of Injection
Vt	5000.00	Final Extract Volume(uL)
Vo	250.00	Extracted Sample Vol(mL)
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 12:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	1049882	8.0319	32.127	eM
$	1 OTP	6.891	6.895	-0.003	5546723	36.786	147.14	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

e - Compound Concentration Below Quantitation Limit

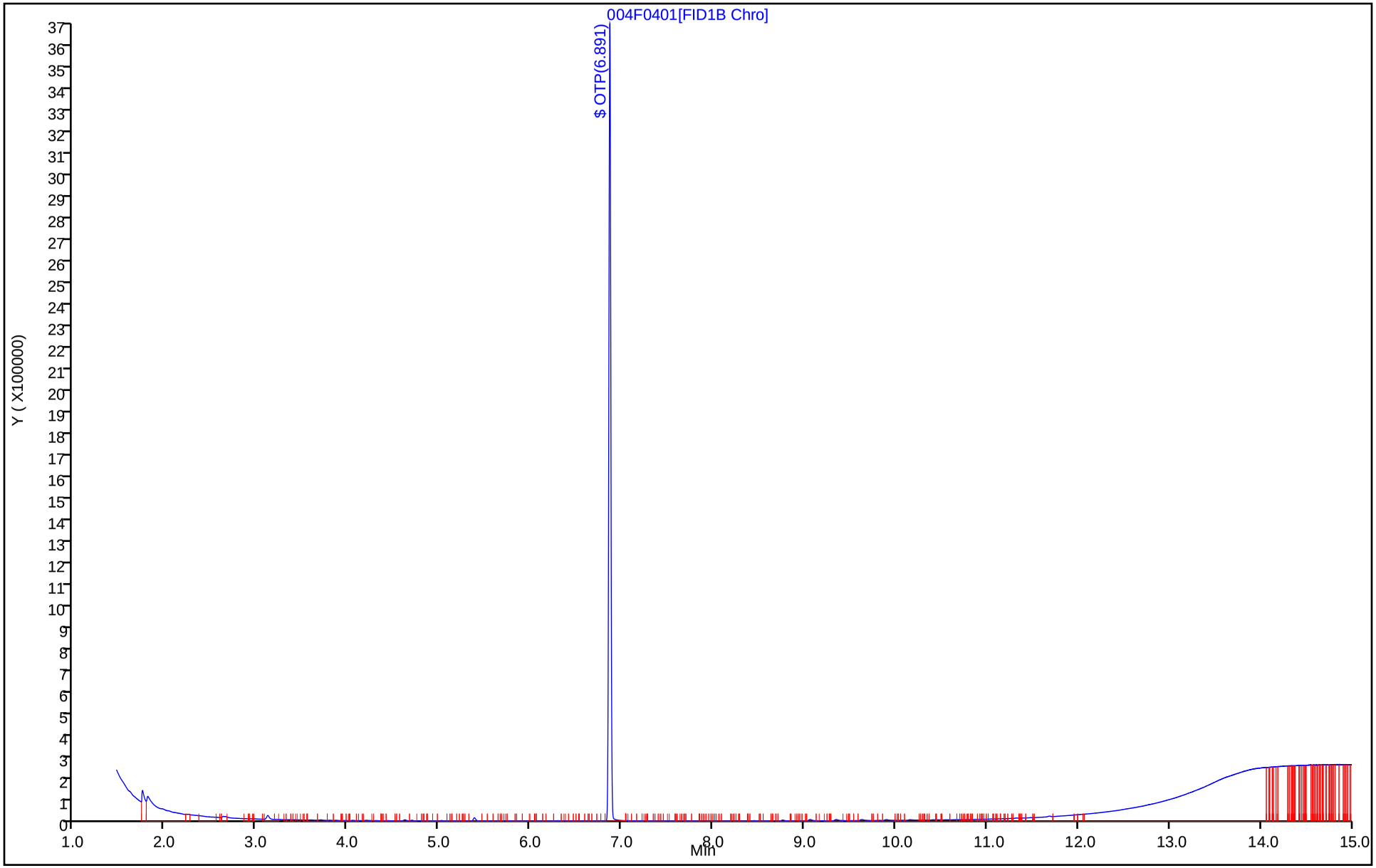
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\004F0401.D				
Injection Date:	27-Dec-2019 10:24:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DBLK44	Lab ID:	UQ40144-001		
Sample Info:	UQ40144-001				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

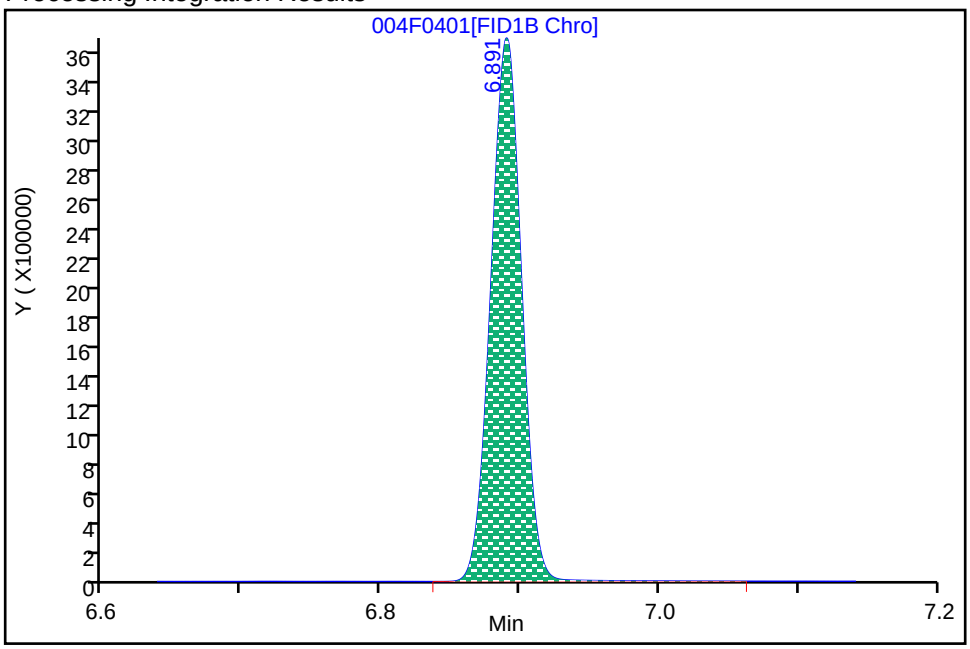
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\004F0401.D		
Injection Date:	27-Dec-2019 10:24:30	Inst. ID:	gc12.i
Client ID:	DBLK44	Lab ID:	UQ40144-001
Sample Info:	UQ40144-001		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

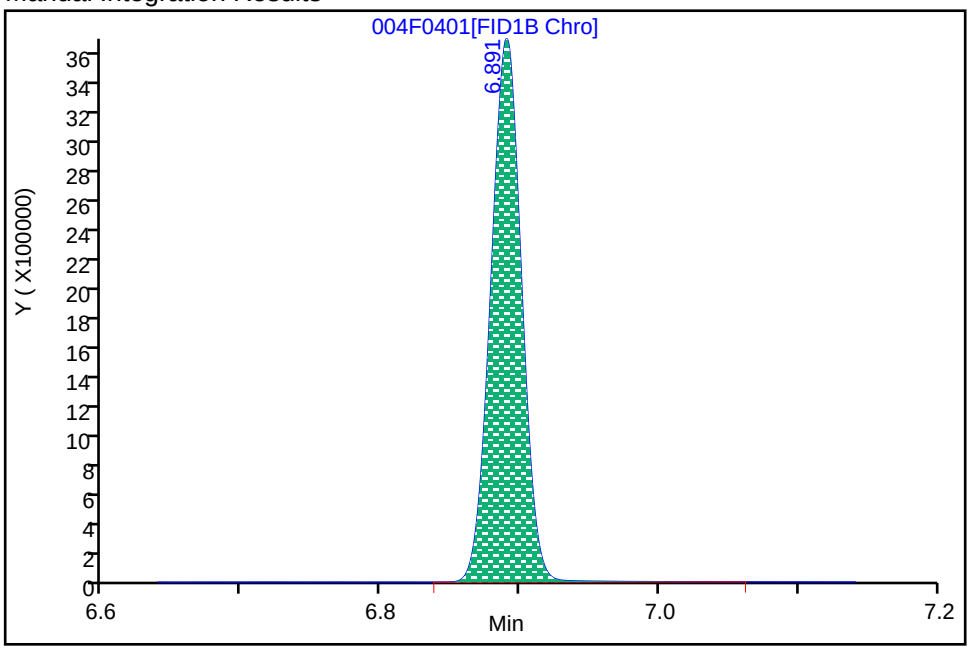
Processing Integration Results

RT: 6.891
Area: 5566291
Conc: 147.66
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 6.891
Area: 5546723
Conc: 147.14
Conc Units: ug/L



Data Editor: chg, 27-Dec-2019 12:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - LCS

Sample ID: UQ39962-002
Batch: 39962
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/23/2019 2339

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	75000		1	91	70-130	12/24/2019 1030

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		106	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services

LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\005F0501.D		
Lab Sample ID:	UQ39962-002	Client Sample ID:	DLCS62
Injection Date:	24-Dec-2019 10:30:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ39962-002		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	83333	75456	-9.5	90.5	70- 130

Shealy Environmental Services
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\005F0501.D		
Lab Sample ID:	UQ39962-002	Client Sample ID:	DLCS62
Injection Date:	24-Dec-2019 10:30:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ39962-002		
Method:	\\Organics\EE\chem\gc12.i\122419F1.b\8015CLVI.m		
Method Date:	24-Dec-2019 16:49:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	24-Dec-2019 16:42:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	59179284	452.74	75456	M
$	1 OTP	6.896	6.895	0.001	7958212	52.779	8796.55	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

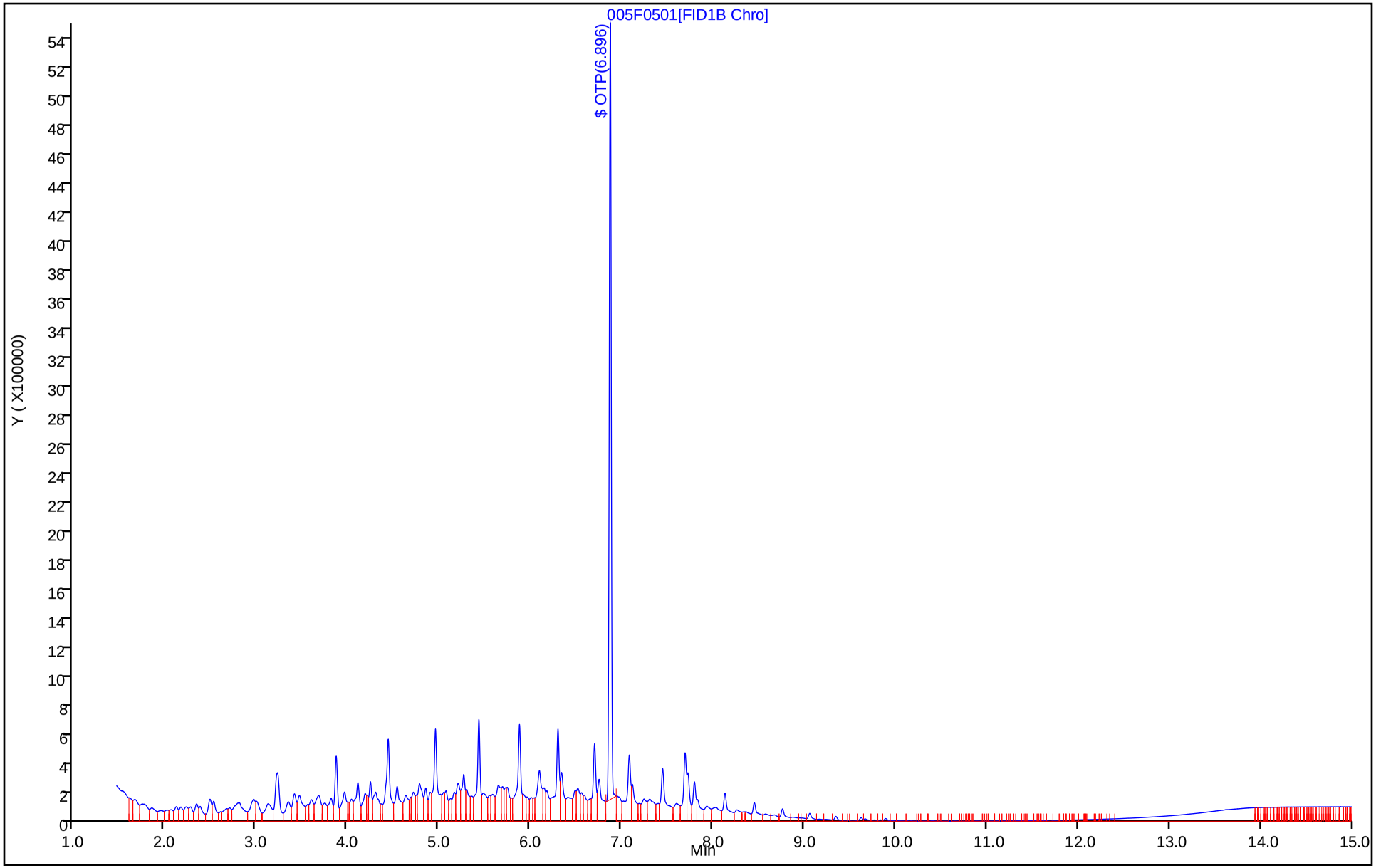
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 24-Dec-2019 16:49:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\005F0501.D				
Injection Date:	24-Dec-2019 10:30:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DLCS62	Lab ID:	UQ39962-002		
Sample Info:	UQ39962-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 24-Dec-2019 16:49:54 AIM Revision: 1.0 11-Sep-2019 14:31:36

Shealy Environmental Services

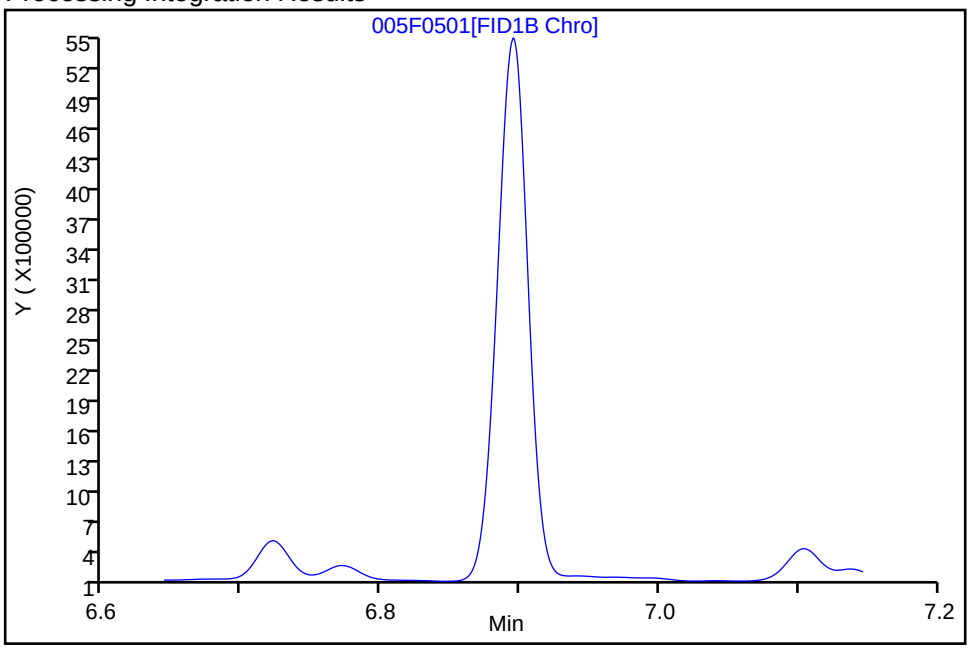
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122419F1.b\005F0501.D		
Injection Date:	24-Dec-2019 10:30:30	Inst. ID:	gc12.i
Client ID:	DLCS62	Lab ID:	UQ39962-002
Sample Info:	UQ39962-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

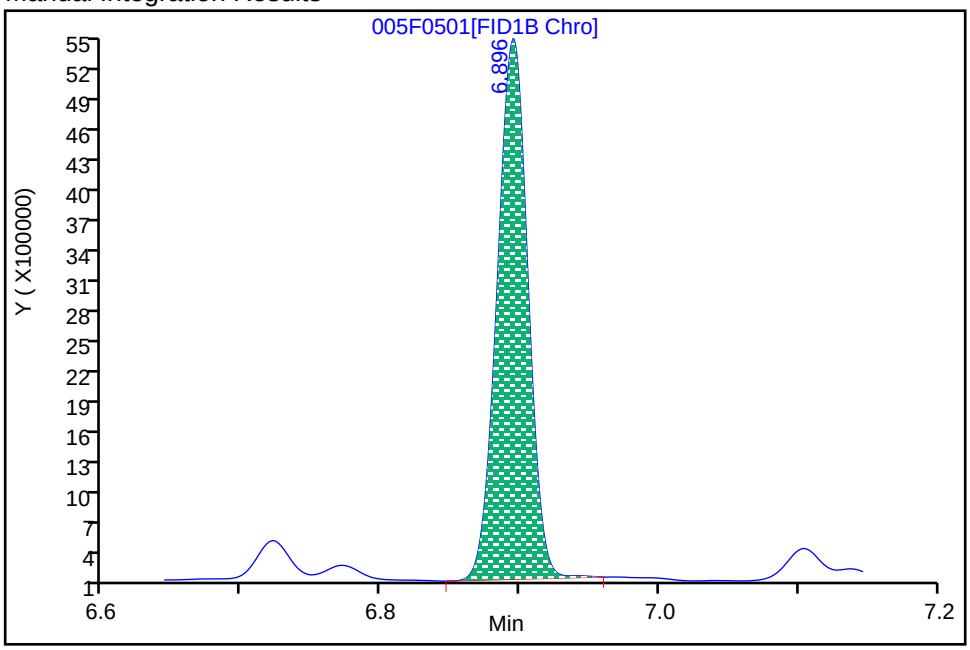
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.896
Area: 7958212
Conc: 8796.55
Conc Units: ug/Kg



Data Editor: chg, 24-Dec-2019 16:42:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - LCS

Sample ID: UQ40054-002
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	78000		1	93	70-130	12/26/2019 1040

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		108	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\005F0501.D		
Lab Sample ID:	UQ40054-002	Client Sample ID:	DLCS54
Injection Date:	26-Dec-2019 10:40:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ40054-002		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	83333	77847	-6.6	93.4	70- 130

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\005F0501.D		
Lab Sample ID:	UQ40054-002	Client Sample ID:	DLCS54
Injection Date:	26-Dec-2019 10:40:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ40054-002		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.000	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 11:52:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	61054747	467.08	77847	M
$	1 OTP	6.893	6.895	-0.001	8175630	54.221	9036.87	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

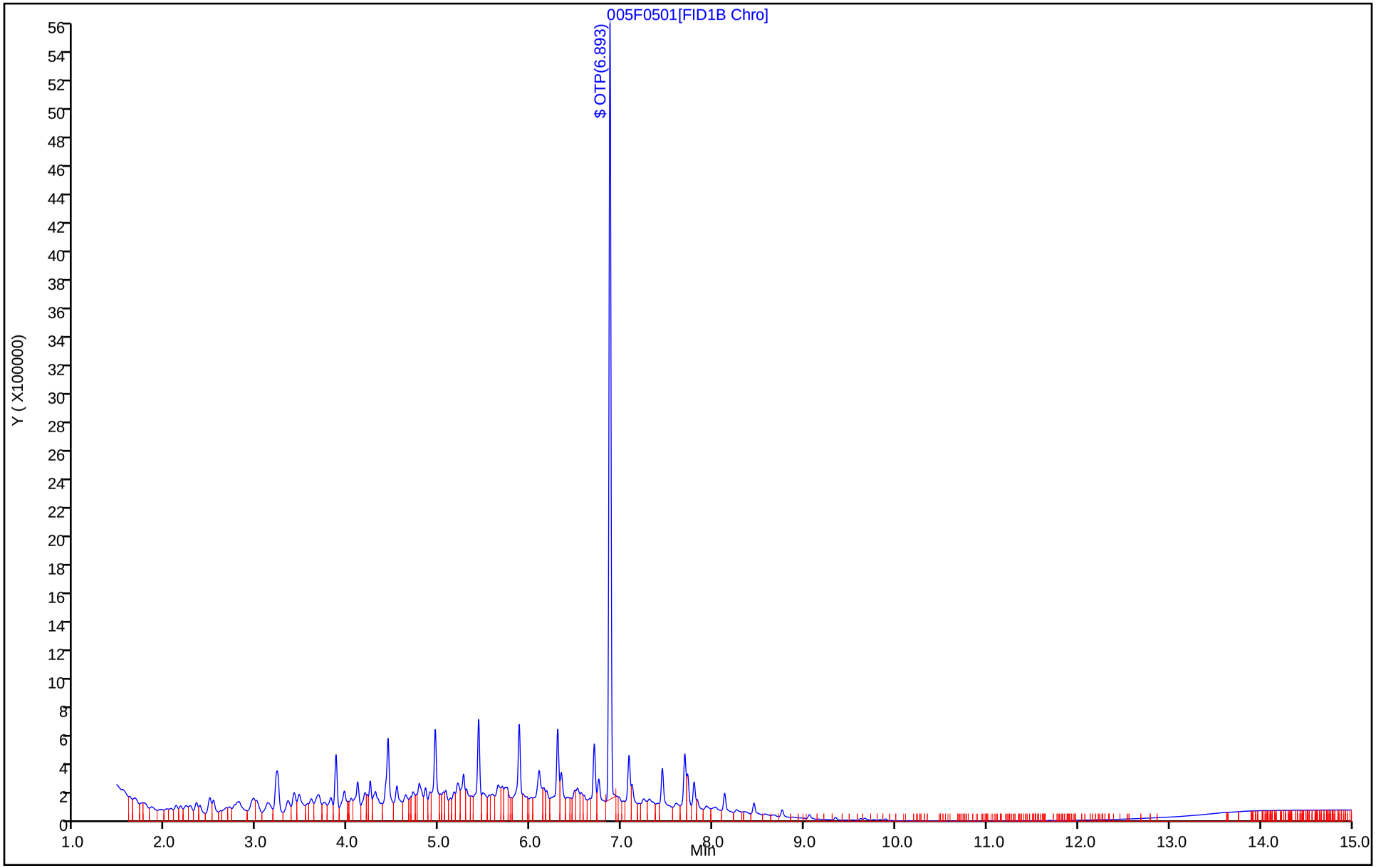
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\005F0501.D				
Injection Date:	26-Dec-2019 10:40:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DLCS54	Lab ID:	UQ40054-002		
Sample Info:	UQ40054-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:09 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

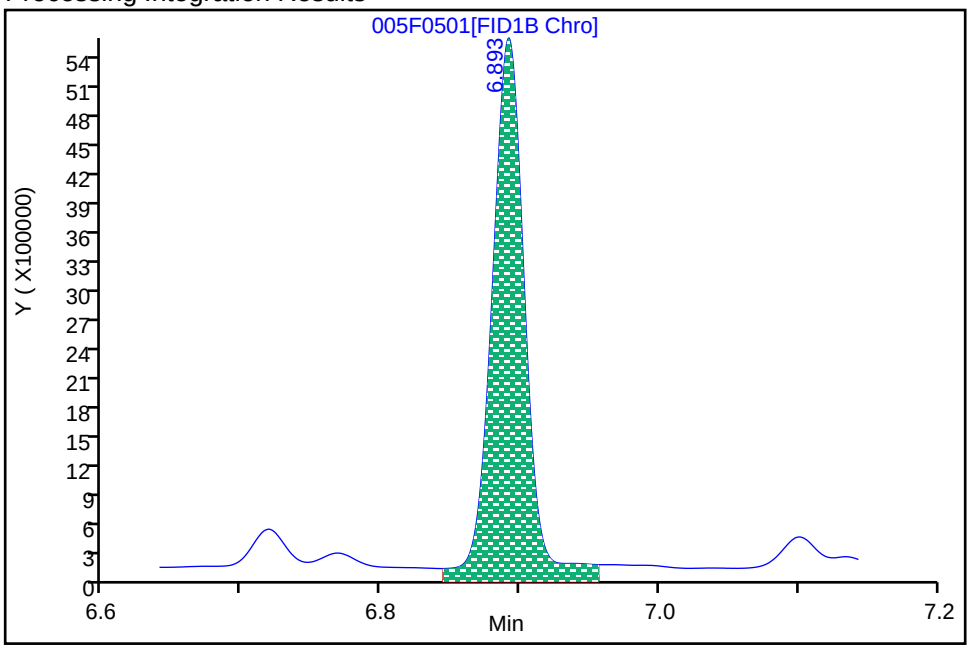
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\005F0501.D		
Injection Date:	26-Dec-2019 10:40:30	Inst. ID:	gc12.i
Client ID:	DLCS54	Lab ID:	UQ40054-002
Sample Info:	UQ40054-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

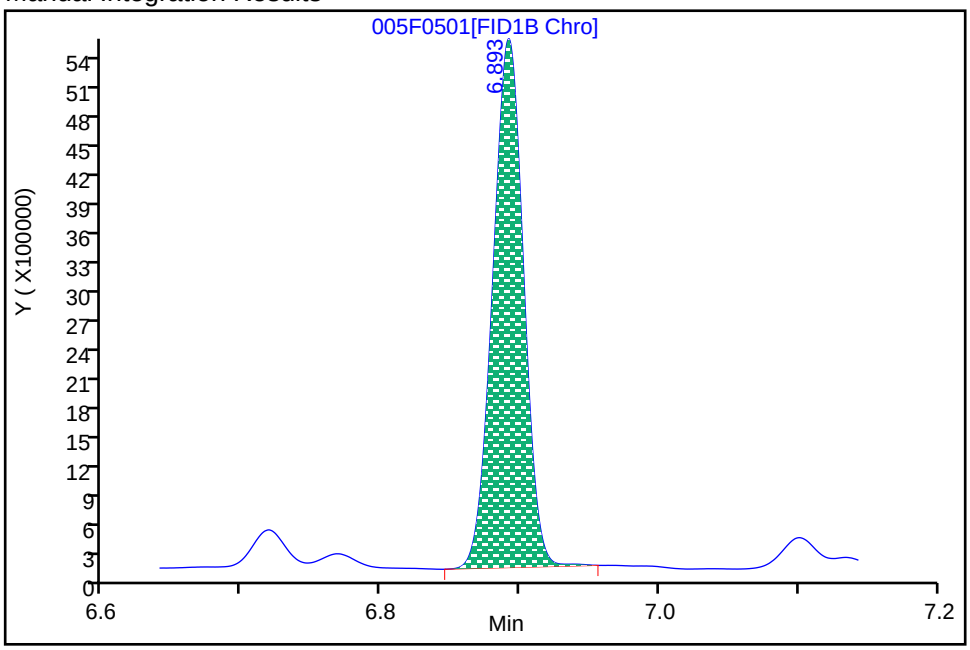
Processing Integration Results

RT: 6.893
Area: 9202553
Conc: 10172
Conc Units: ug/Kg
Conc:



Manual Integration Results

RT: 6.893
Area: 8175630
Conc: 9036.87
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 11:52:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH-DRO - LCS

Sample ID: UQ40144-002
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	2000	1200	N	1	60	70-130	12/27/2019 1043

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		81	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
LCS, Lab Control Spike Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\005F0501.D		
Lab Sample ID:	UQ40144-002	Client Sample ID:	DLCS44
Injection Date:	27-Dec-2019 10:43:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ40144-002		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Compound	Amount Added	Amount Detected	%Drift	%Rec	%Rec Limits
3 #2 Diesel Fuel	2000	1196.18	-40.2	* 59.8	70- 130

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\005F0501.D		
Lab Sample ID:	UQ40144-002	Client Sample ID:	DLCS44
Injection Date:	27-Dec-2019 10:43:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UQ40144-002		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	LCS	ALS Bottle:	5
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vi	5.0000	Volume of Injection
Vt	5000.00	Final Extract Volume(uL)
Vo	250.00	Extracted Sample Vol(mL)
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 12:01:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	39089448	299.04	1196.18	MR
$	1 OTP	6.891	6.895	-0.003	6130720	40.659	162.64	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

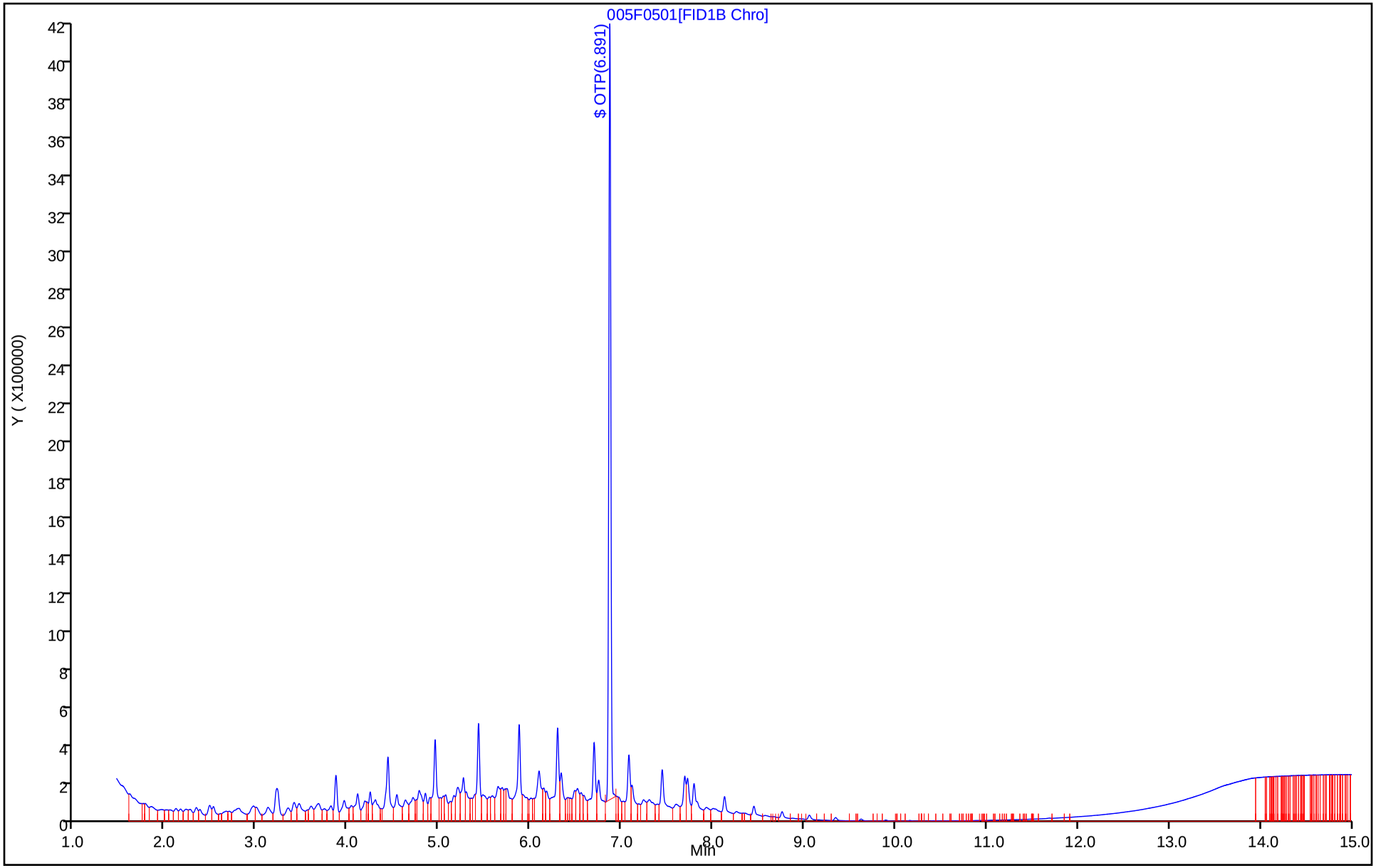
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:13 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\005F0501.D				
Injection Date:	27-Dec-2019 10:43:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	DLCS44	Lab ID:	UQ40144-002		
Sample Info:	UQ40144-002				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:14 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

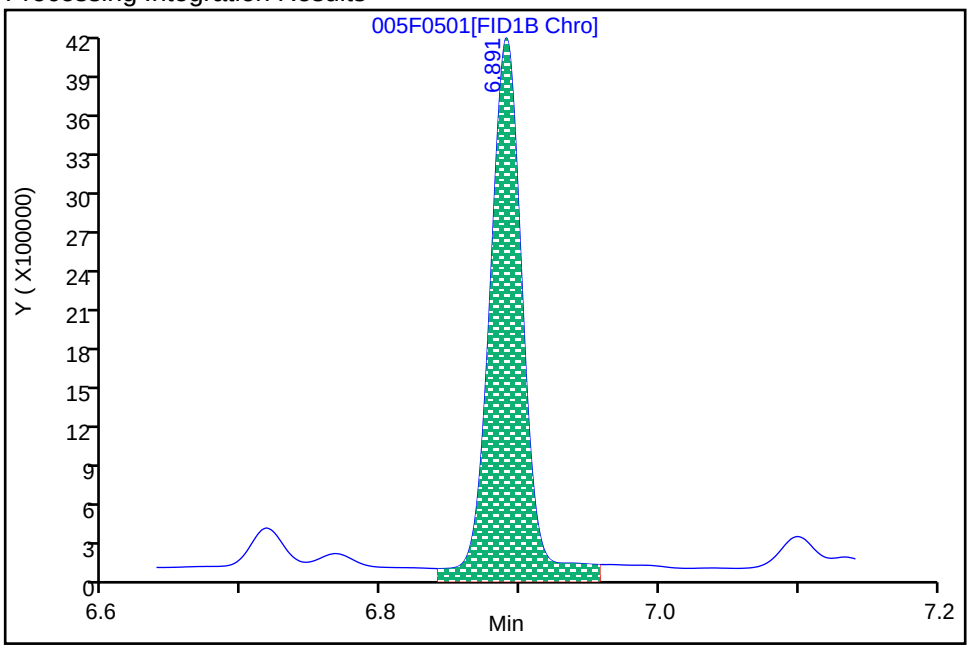
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\005F0501.D		
Injection Date:	27-Dec-2019 10:43:30	Inst. ID:	gc12.i
Client ID:	DLCS44	Lab ID:	UQ40144-002
Sample Info:	UQ40144-002		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

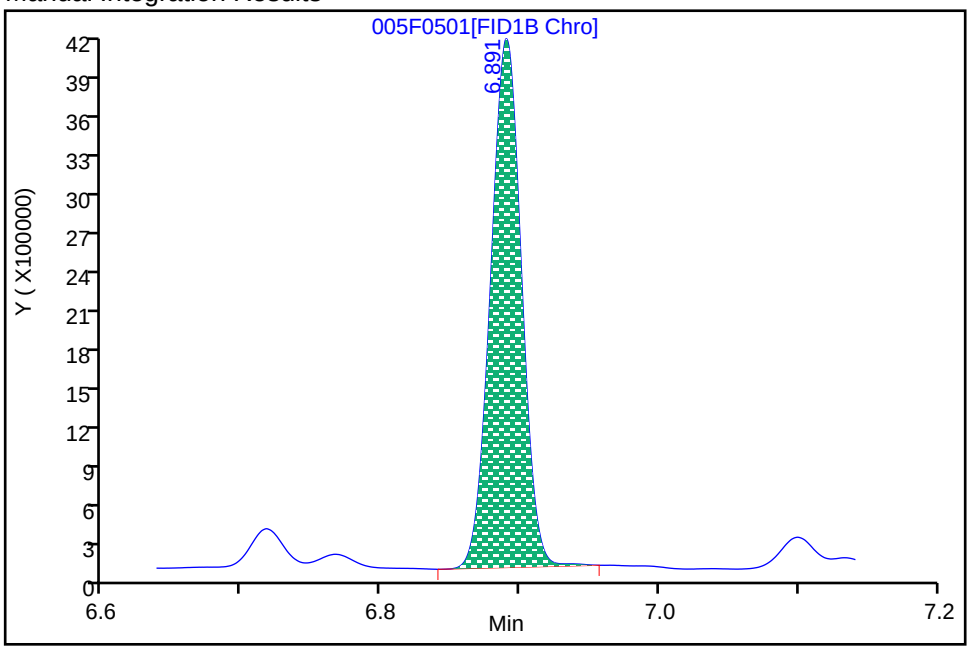
Processing Integration Results

RT: 6.891
Area: 6923119
Conc: 183.66
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 6.891
Area: 6130720
Conc: 162.64
Conc Units: ug/L



Data Editor: chg, 27-Dec-2019 12:01:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - MS

Sample ID: UL20021-001MS
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	41000	110000	69000	N	1	26	70-130	12/26/2019 1157

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		69	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\009F0901.D		
Lab Sample ID:	UL20021-001MS	Client Sample ID:	MPGI-SF-Soil-09-1MS
Injection Date:	26-Dec-2019 11:57:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-001MS		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	MS	ALS Bottle:	9
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.400	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 13:11:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	41865484	320.28	52678	MR
$	1 OTP	6.893	6.895	-0.002	5173103	34.308	5642.81	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

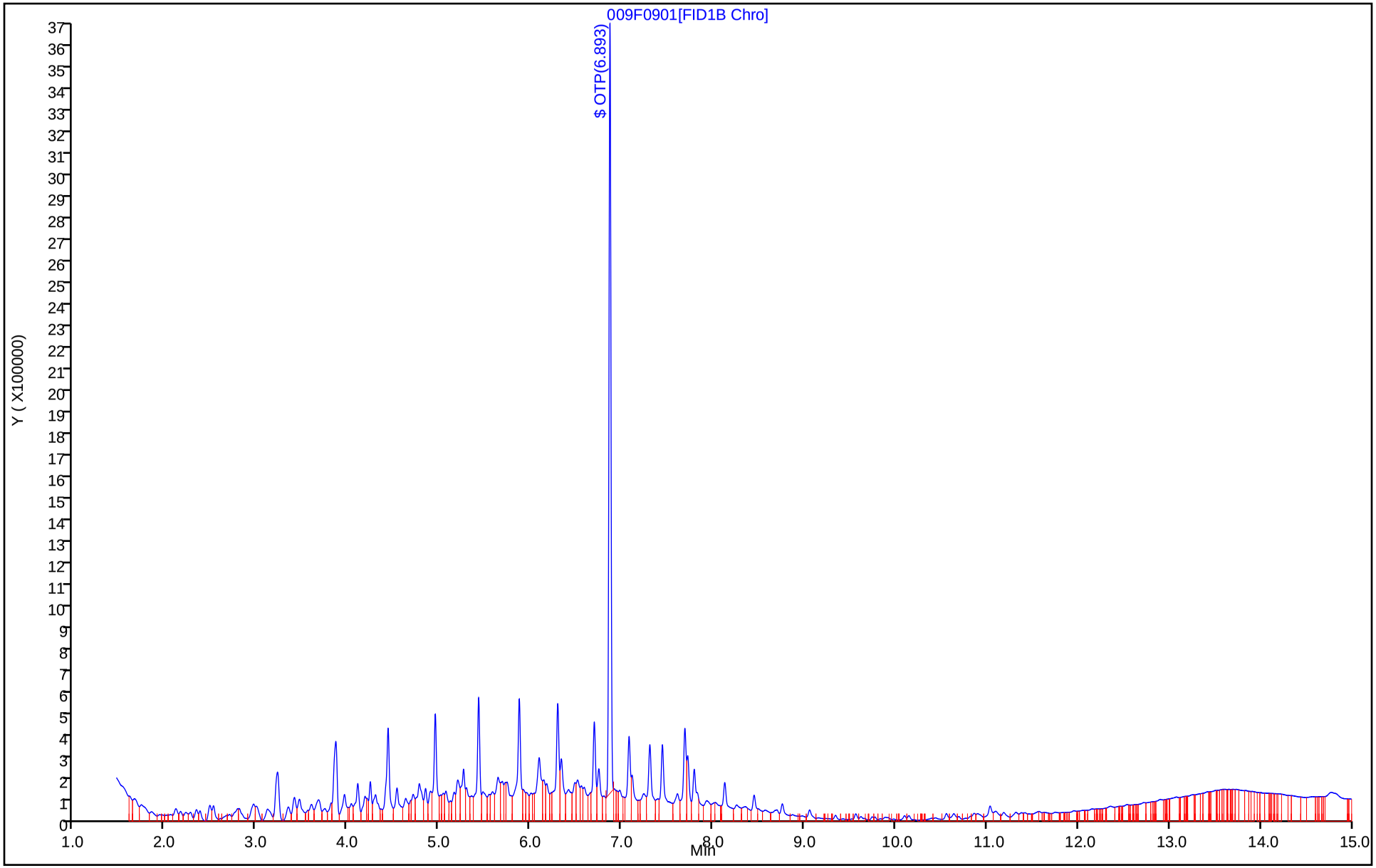
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\009F0901.D				
Injection Date:	26-Dec-2019 11:57:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-09-1MS	Lab ID:	UL20021-001MS		
Sample Info:	UL20021-001MS				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:17 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

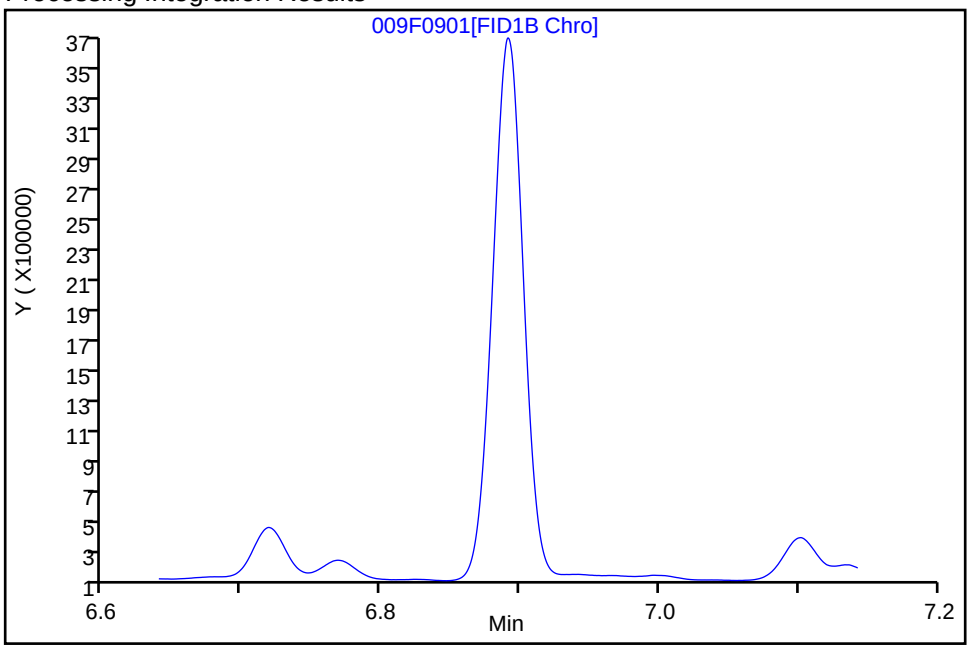
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\009F0901.D		
Injection Date:	26-Dec-2019 11:57:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-09-1MS	Lab ID:	UL20021-001MS
Sample Info:	UL20021-001MS		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

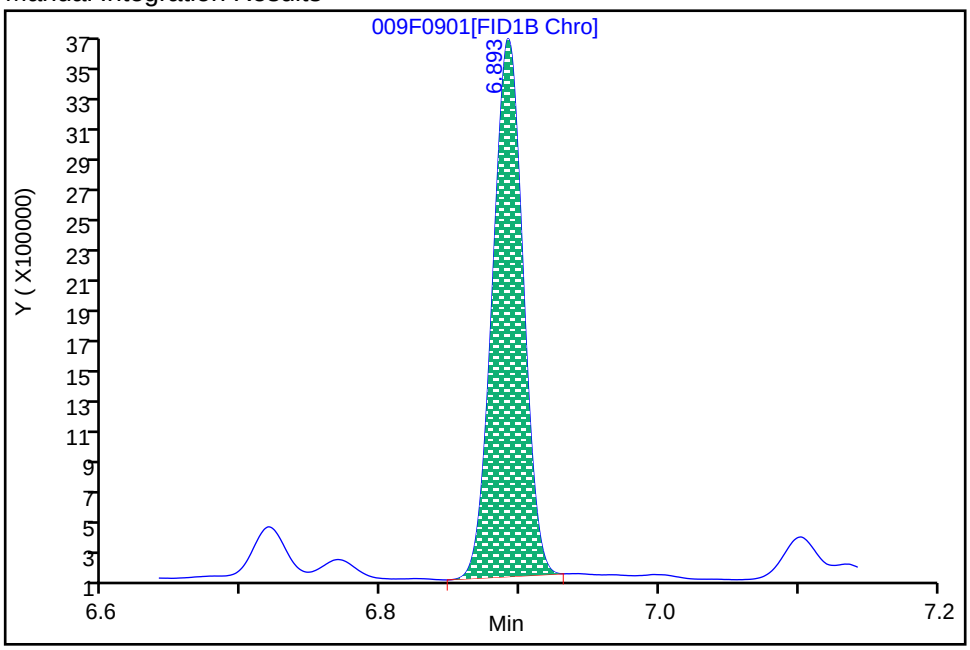
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.893
Area: 5173103
Conc: 5642.81
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 13:11:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH-DRO - MS

Sample ID: UL20021-017MS
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	ND	2000	1100	N	1	57	70-130	12/27/2019 1121

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		74	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\007F0701.D		
Lab Sample ID:	UL20021-017MS	Client Sample ID:	MPG1-RB-121719MS
Injection Date:	27-Dec-2019 11:21:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-017MS		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	MS	ALS Bottle:	7
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vi	5.0000	Volume of Injection
Vt	5000.00	Final Extract Volume(uL)
Vo	250.00	Extracted Sample Vol(mL)
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 12:02:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	37054172	283.47	1133.89	MR
$	1 OTP	6.891	6.895	-0.004	5598504	37.130	148.52	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

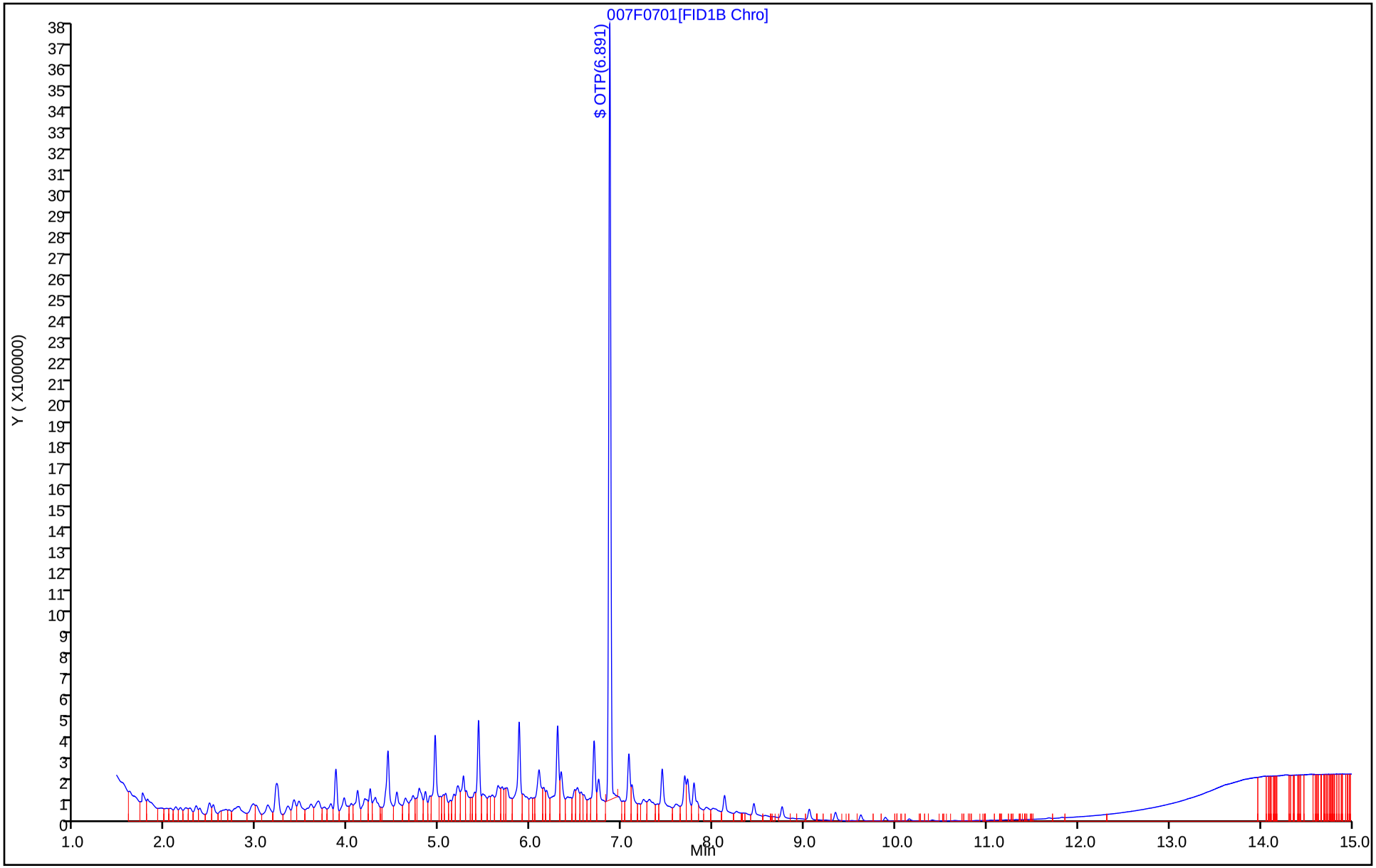
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\007F0701.D				
Injection Date:	27-Dec-2019 11:21:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPG1-RB-121719MS	Lab ID:	UL20021-017MS		
Sample Info:	UL20021-017MS				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

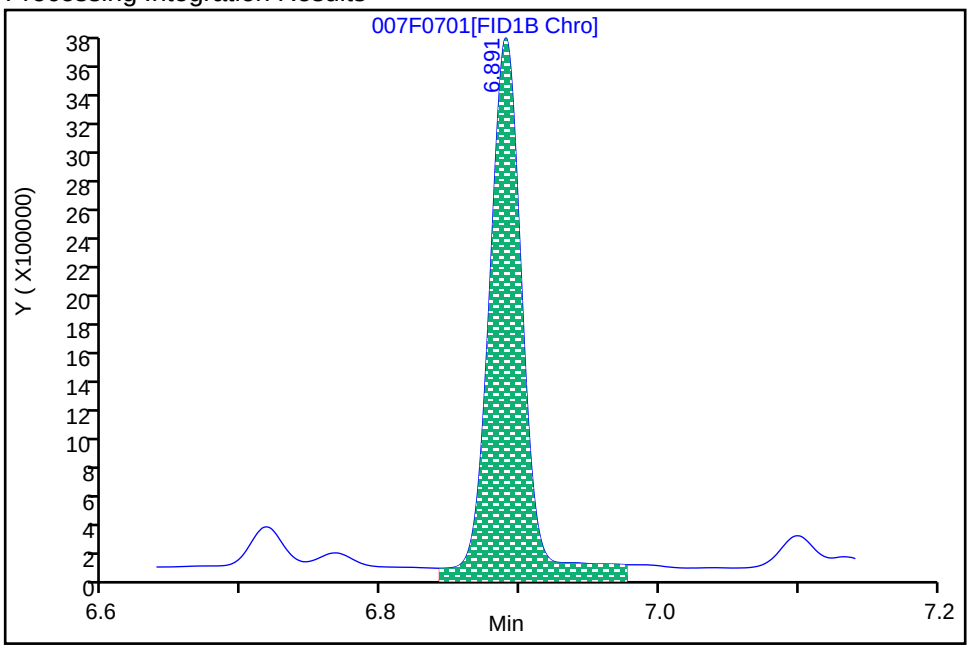
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\007F0701.D		
Injection Date:	27-Dec-2019 11:21:30	Inst. ID:	gc12.i
Client ID:	MPG1-RB-121719MS	Lab ID:	UL20021-017MS
Sample Info:	UL20021-017MS		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

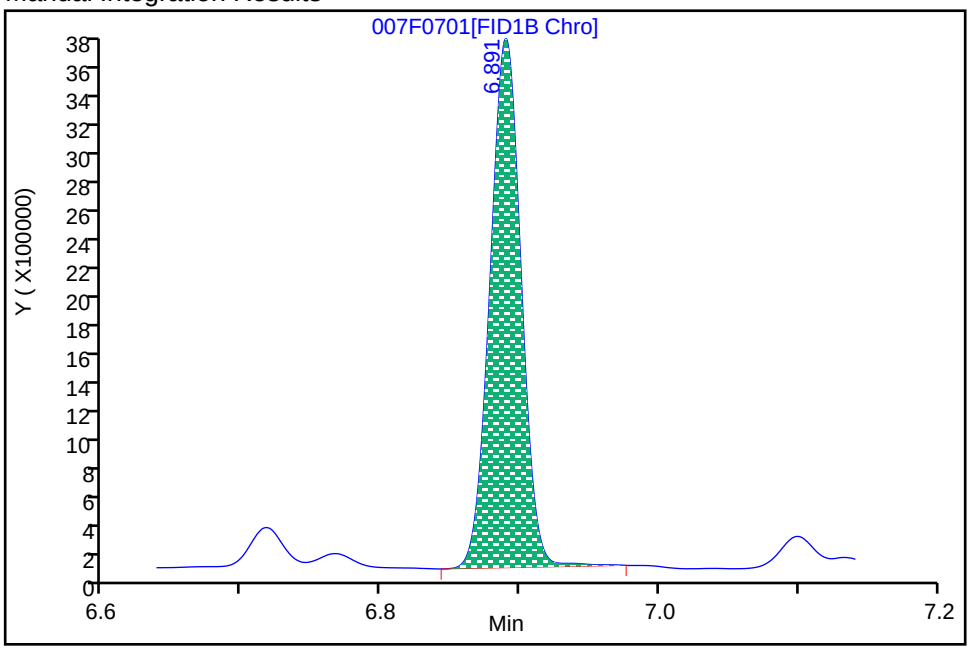
Processing Integration Results

RT: 6.891
Area: 6429219
Conc: 170.56
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 6.891
Area: 5598504
Conc: 148.52
Conc Units: ug/L



Data Editor: chg, 27-Dec-2019 12:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH - DRO - MSD

Sample ID: UL20021-001MD
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	41000	110000	74000	N	1	30	6.4	70-130	20	12/26/2019 1216

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\010F1001.D		
Lab Sample ID:	UL20021-001MD	Client Sample ID:	MPGI-SF-Soil-09-1MD
Injection Date:	26-Dec-2019 12:16:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-001MD		
Method:	\\Organics\EE\chem\gc12.i\122619F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 10:01:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	MSD	ALS Bottle:	10
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Soil/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Uf*Vt/(Vi * Ws) * M/100) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Uf	5.0000	Unit Correction Factor
Vt	5000.00	Volume of Final Extract(uL)
Vi	5.0000	Volume of Injection
Ws	30.500	Weight of Sample Extracted(g)
M	100.00	Percent Solids
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	26-Dec-2019 13:11:30

Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/Kg	Flags
3 #2 Diesel Fuel	6.211	6.211	0.000	44767955	342.49	56145	MR
$ 1 OTP	6.892	6.895	-0.002	4352479	28.866	4732.11	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

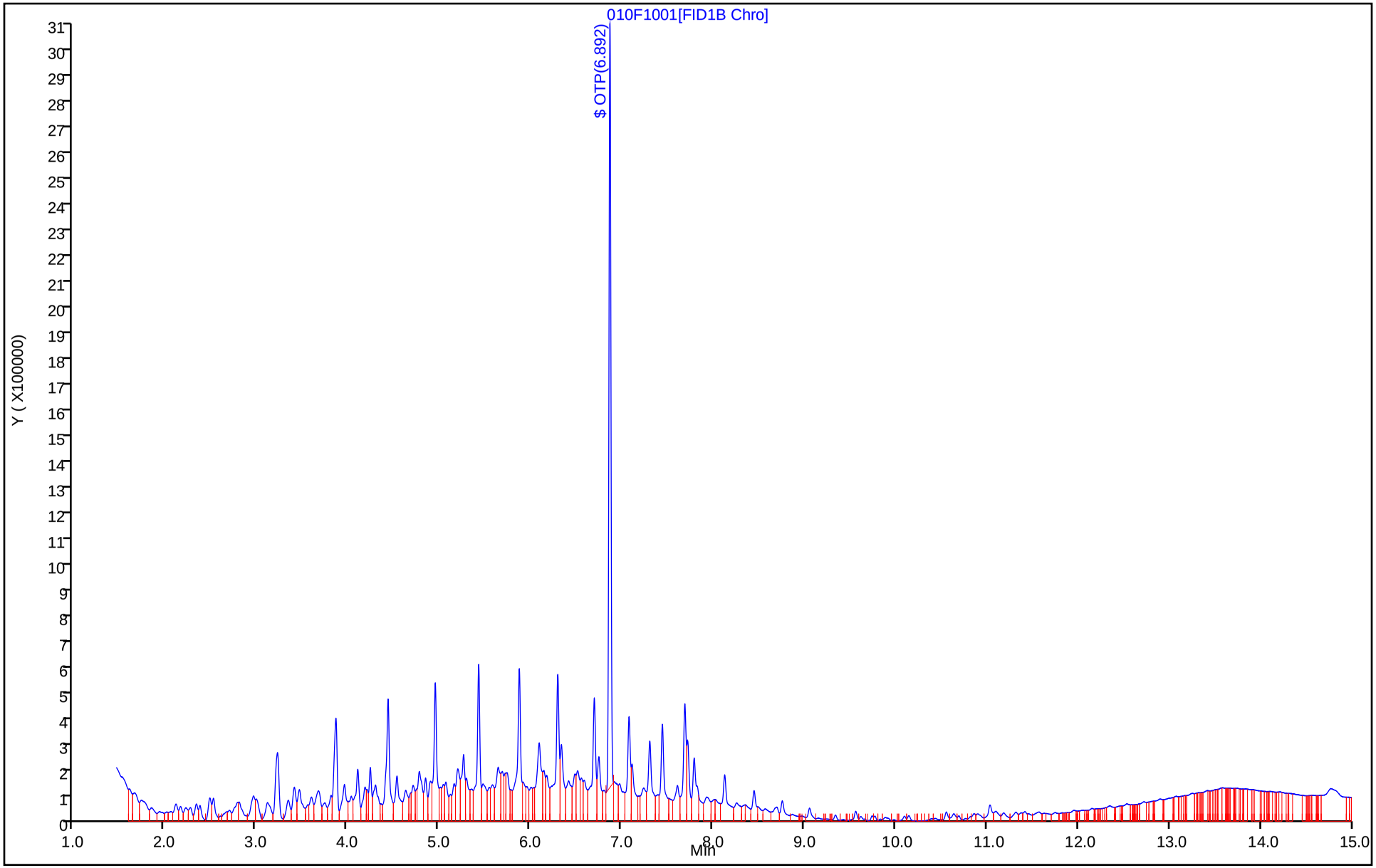
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 27-Dec-2019 10:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\010F1001.D				
Injection Date:	26-Dec-2019 12:16:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPGI-SF-Soil-09-1MD	Lab ID:	UL20021-001MD		
Sample Info:	UL20021-001MD				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 27-Dec-2019 10:04:18 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

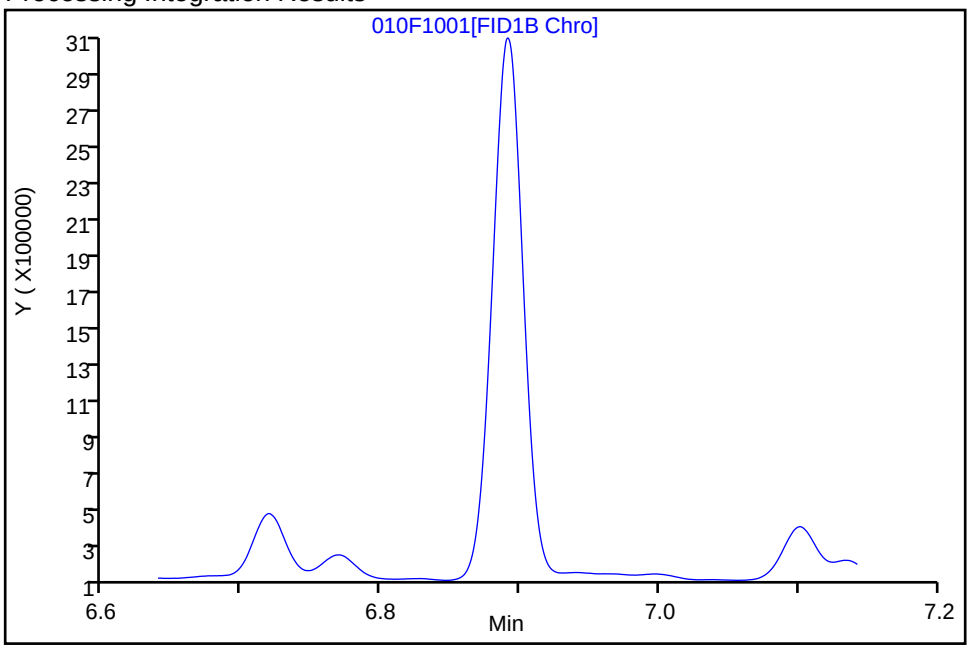
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122619F1.b\010F1001.D		
Injection Date:	26-Dec-2019 12:16:30	Inst. ID:	gc12.i
Client ID:	MPGI-SF-Soil-09-1MD	Lab ID:	UL20021-001MD
Sample Info:	UL20021-001MD		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

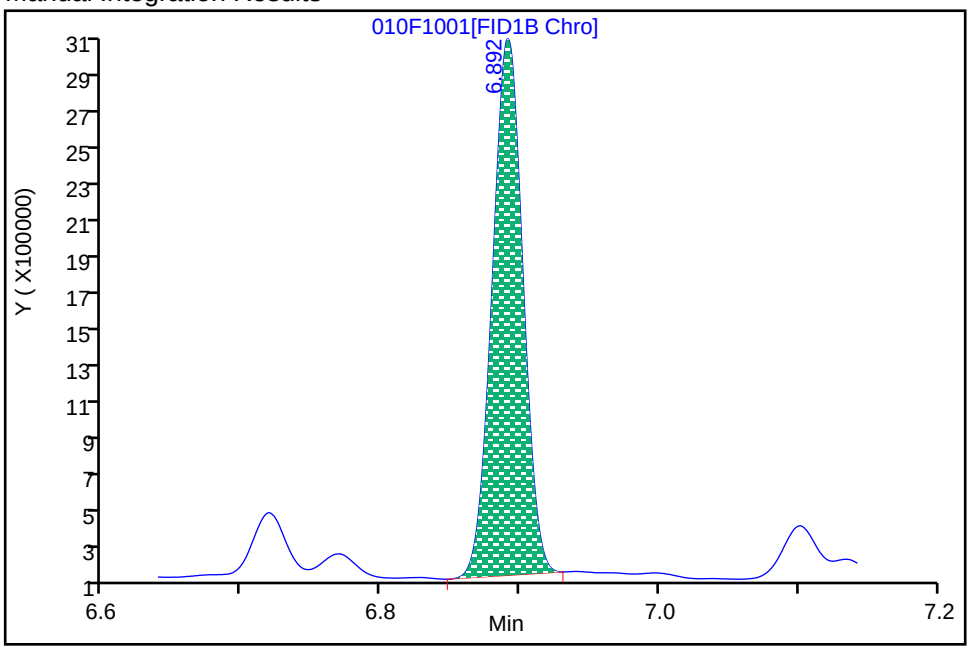
Processing Integration Results

Not Detected
Expected RT: 6.895
RT Window: 6.865-6.925



Manual Integration Results

RT: 6.892
Area: 4352479
Conc: 4732.11
Conc Units: ug/Kg



Data Editor: chg, 26-Dec-2019 13:11:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

TPH-DRO - MSD

Sample ID: UL20021-017MD
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	ND	2000	1300	N	1	63	11	70-130	20	12/27/2019 1140

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		84	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC
Target Compound Quantitation Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\008F0801.D		
Lab Sample ID:	UL20021-017MD	Client Sample ID:	MPG1-RB-121719MD
Injection Date:	27-Dec-2019 11:40:30	Dil. Factor:	1.0
Operator:	SYSTEM	Inst. ID:	gc12.i
Sample Info:	UL20021-017MD		
Method:	\\Organics\EE\chem\gc12.i\122719F1.b\8015CLVI.m		
Method Date:	27-Dec-2019 12:27:30	Quant Method:	ESTD
Calib Date:	20-Nov-2019 11:37:30	Calib File:	007F0801.D
Sample Type:	MSD	ALS Bottle:	8
Cpnd Sublist:	Diesel.sub	Spike List File:	diesel.spk
Matrix/Level:	Water/Low		
Target 4.14		Integrator:	falcon

Concentration Formula: Amt * DF * Vt/(Vo*Vi) * CpndVariable

Name	Value	Description
DF	1.0000	Dilution Factor
Vi	5.0000	Volume of Injection
Vt	5000.00	Final Extract Volume(uL)
Vo	250.00	Extracted Sample Vol(mL)
Cpnd Variable		Local Cpnd Variable

Column1:	MXT-1 (0.53 mm)	Detector:	FID1
Data Reviewer:	chg	Review Date:	27-Dec-2019 12:02:30

	Compound	RT (min.)	Cal RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng	Final Conc ug/L	Flags
	3 #2 Diesel Fuel	6.211	6.211	0.000	41330658	316.19	1264.76	MR
$	1 OTP	6.891	6.895	-0.003	6362579	42.197	168.79	M

Compound Type Legend

$ - Surrogate

QC Flag Legend

Processing Flags

R - Spike/Surrogte Fails %Recovery Test

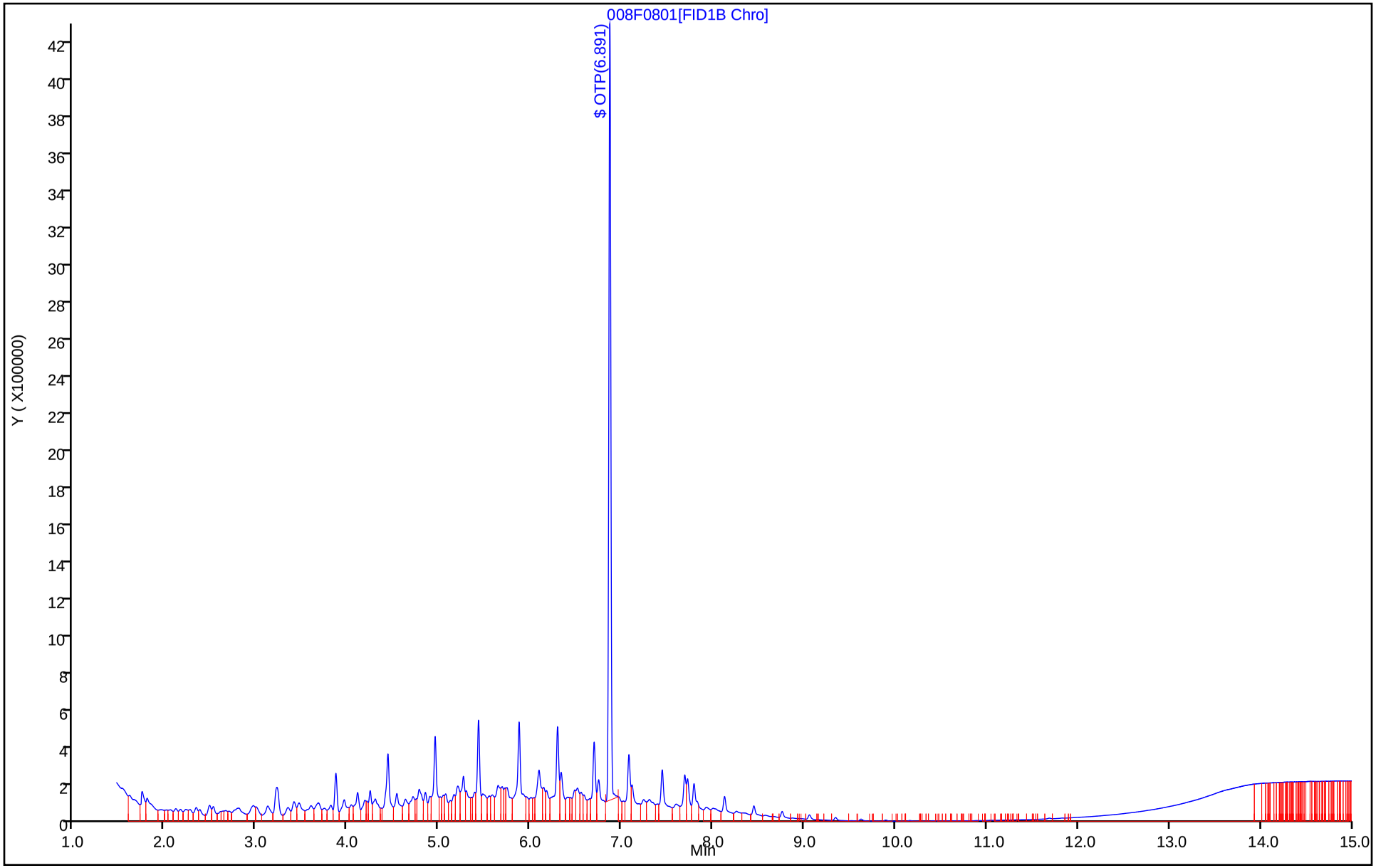
Review Flags

M - Compound Hit/Peak Manually Integrated

Report Date: 07-Jan-2020 09:06:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\008F0801.D				
Injection Date:	27-Dec-2019 11:40:30	Inst. ID:	gc12.i	Operator:	SYSTEM
Client ID:	MPG1-RB-121719MD	Lab ID:	UL20021-017MD		
Sample Info:	UL20021-017MD				
Injection Vol.	5.00 uL	Dil. Factor:	1.0		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1		



Report Date: 07-Jan-2020 09:06:16 AIM Revision: 1.0 11-Sep-2019 14:31:36

Pace Analytical Services, LLC

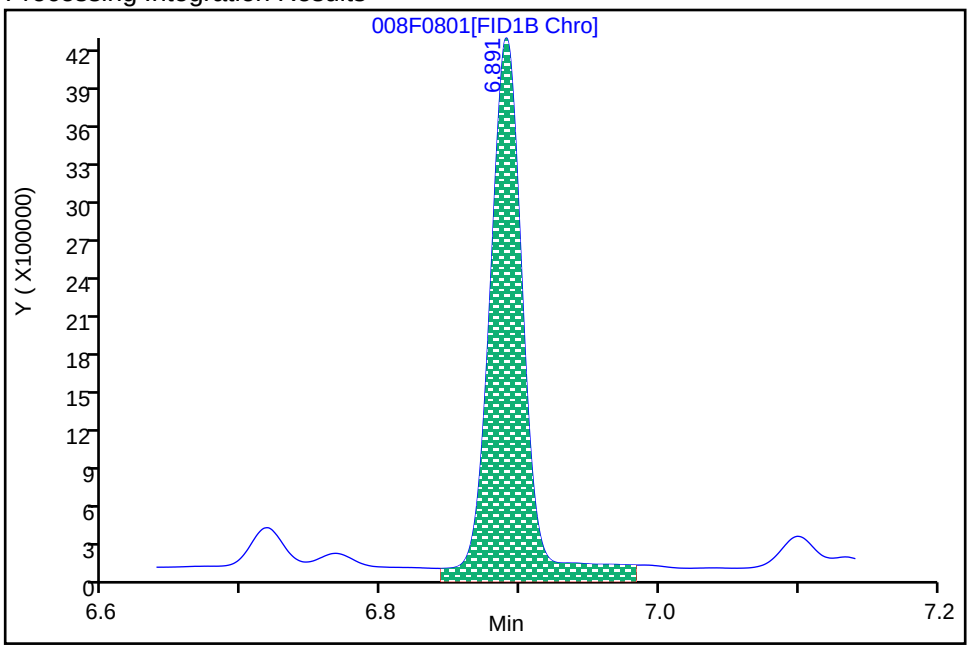
Manual Integration Report

Data File:	\\Organics\EE\chem\gc12.i\122719F1.b\008F0801.D		
Injection Date:	27-Dec-2019 11:40:30	Inst. ID:	gc12.i
Client ID:	MPG1-RB-121719MD	Lab ID:	UL20021-017MD
Sample Info:	UL20021-017MD		
Injection Vol.	5.00 uL	Dil. Factor:	1.0
Operator:	SYSTEM		
Column1:	MXT-1 (0.53 mm)	Detector:	FID1

$ 1 OTP, CAS: 84-15-1

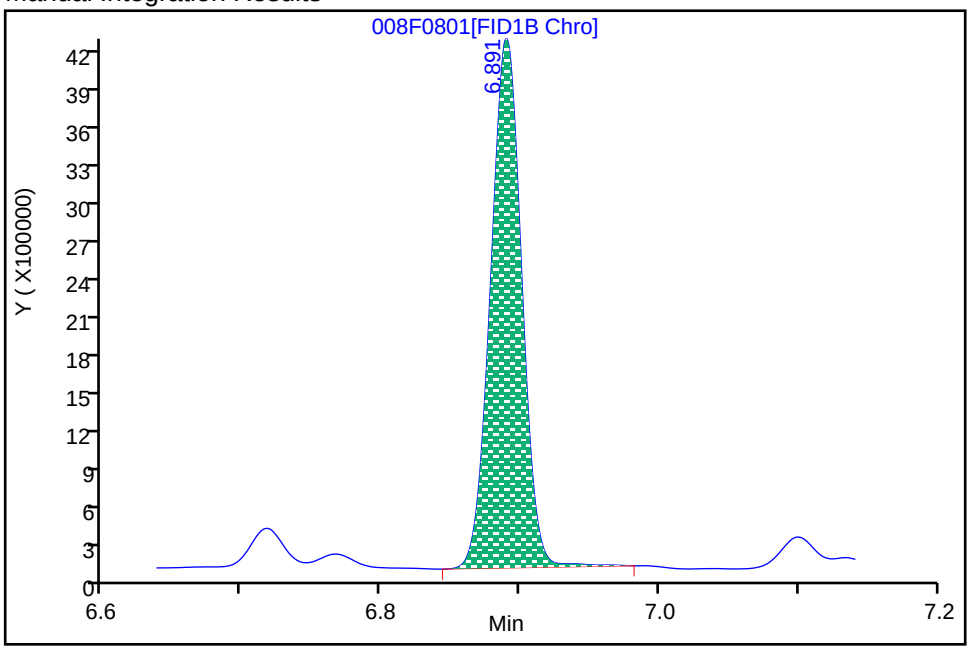
Processing Integration Results

RT: 6.891
Area: 7338250
Conc: 194.67
Conc Units: ug/L
Conc:



Manual Integration Results

RT: 6.891
Area: 6362579
Conc: 168.79
Conc Units: ug/L



Data Editor: chg, 27-Dec-2019 12:02:30
Audit Action: Mint
Audit Reason: Incorrect Auto Integration

MISC. DATA

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\112019F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	ICal Lvl	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK	20-Nov-2019 09:23:30	001F0101.D	Client			Soil	1	Diesel						8015CLVI
1	IBLK	20-Nov-2019 09:42:30	001F0201.D	Client			Soil	1	Diesel						8015CLVI
2	SVGC-1832	20-Nov-2019 10:01:30	002F0301.D	Client		RTH1	Soil	1	rtstudy						8015CLVI
3	SVGC-1659	20-Nov-2019 10:20:30	003F0401.D	Ical	1	D1H1	Soil	1	Diesel						8015CLVI
4	SVGC-1660	20-Nov-2019 10:40:30	004F0501.D	Ical	2	D2H1	Soil	1	Diesel						8015CLVI
5	SVGC-1661	20-Nov-2019 10:59:30	005F0601.D	Ical	3	D3H1	Soil	1	Diesel						8015CLVI
6	SVGC-1662	20-Nov-2019 11:18:30	006F0701.D	Ical	4	D4H1	Soil	1	Diesel						8015CLVI
7	SVGC-1663	20-Nov-2019 11:37:30	007F0801.D	Ical	5	D5H1	Soil	1	Diesel						8015CLVI
2	SVGC-1832	20-Nov-2019 11:56:30	002F0901.D	Client		RTH2	Soil	1	rtstudy						8015CLVI
8	SVGC-1711	20-Nov-2019 12:15:30	008F1001.D	LCS		DICVH	Soil	1	Diesel	DODICV					8015CLVI
2	SVGC-1832	20-Nov-2019 12:34:30	002F1101.D	Client		RTH3	Soil	1	rtstudy						8015CLVI

Shealy Environmental Services
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\122419F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK 19-2577	24-Dec-2019 09:13:30	001F0101.D	Client		Soil	1	Diesel						8015CLVI
2	SVGC-1832	24-Dec-2019 09:32:30	002F0201.D	Client	RTH22	Soil	1	rtstudy						8015CLVI
3	SVGC-1661	24-Dec-2019 09:51:30	003F0301.D	Ccv	D3H44	Soil	1	Diesel						8015CLVI
4	UQ39962-001	24-Dec-2019 10:11:30	004F0401.D	BLANK	DBLK62	Soil	1	Diesel					39986	8015CLVI
5	UQ39962-002	24-Dec-2019 10:30:30	005F0501.D	LCS	DLCS62	Soil	1	Diesel	diesel					8015CLVI
6	UL20021-001	24-Dec-2019 10:49:30	006F0601.D	Client	MPGI-SF-Soil-09-121	Soil	1	Diesel					RX Surrogate	8015CLVI
7	UL20021-001MS	24-Dec-2019 11:08:30	007F0701.D	MS	MPGI-SF-Soil-09-1MS	Soil	1	Diesel	diesel					8015CLVI
8	UL20021-001MD	24-Dec-2019 11:27:30	008F0801.D	MSD	MPGI-SF-Soil-09-1MD	Soil	1	Diesel	diesel					8015CLVI
9	UL20021-002	24-Dec-2019 11:46:30	009F0901.D	Client	MPGI-SF-Soil-10A-12	Soil	1	Diesel					RX Surrogate	8015CLVI
10	UL20021-003	24-Dec-2019 12:06:30	010F1001.D	Client	MPGI-SF-Soil-10B-12	Soil	1	Diesel						8015CLVI
11	UL20021-004	24-Dec-2019 12:25:30	011F1101.D	Client	MPGI-SF-Soil-10C-12	Soil	1	Diesel					RX Surrogate	8015CLVI
12	UL20021-005	24-Dec-2019 12:44:30	012F1201.D	Client	MPGI-SF-Soil-11A-12	Soil	1	Diesel						8015CLVI
13	UL20021-006	24-Dec-2019 13:03:30	013F1301.D	Client	MPGI-SF-Soil-11B-12	Soil	1	Diesel					RX Surrogate	8015CLVI
14	UL20021-007	24-Dec-2019 13:22:30	014F1401.D	Client	MPGI-SF-Soil-11C-12	Soil	1	Diesel					RX Surrogate	8015CLVI
15	UL20021-008	24-Dec-2019 13:41:30	015F1501.D	Client	MPGI-SF-Soil-12A-12	Soil	1	Diesel						8015CLVI
16	UL20021-009	24-Dec-2019 14:01:30	016F1601.D	Client	MPGI-SF-Soil-12B-12	Soil	1	Diesel						8015CLVI
17	UL20021-010	24-Dec-2019 14:20:30	017F1701.D	Client	MPGI-SF-Soil-12C-12	Soil	1	Diesel					RX Surrogate	8015CLVI
18	UL20021-011	24-Dec-2019 14:39:30	018F1801.D	Client	MPGI-SF-Soil-13A-12	Soil	1	Diesel					RX Surrogate	8015CLVI
19	UL20021-012	24-Dec-2019 14:58:30	019F1901.D	Client	MPGI-SF-Soil-13B-12	Soil	1	Diesel					RX Surrogate	8015CLVI
20	UL20021-013	24-Dec-2019 15:17:30	020F2001.D	Client	MPGI-SF-Soil-14A-12	Soil	1	Diesel						8015CLVI
21	UL20021-014	24-Dec-2019 15:37:30	021F2101.D	Client	MPGI-SF-Soil-14A-12	Soil	1	Diesel						8015CLVI
22	UL20021-015	24-Dec-2019 15:56:30	022F2201.D	Client	MPGI-SF-Soil-14B-12	Soil	1	Diesel						8015CLVI
23	UL20021-016	24-Dec-2019 16:15:30	023F2301.D	Client	MPGI-SF-Soil-14C-12	Soil	1	Diesel						8015CLVI
3	SVGC-1661	24-Dec-2019 16:34:30	003F2401.D	Ccv	D3H45	Soil	1	Diesel						8015CLVI

Pace Analytical Services, LLC
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\122619F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK 19-2577	26-Dec-2019 09:24:30	001F0101.D	Client		Soil	1	Diesel						8015CLVI
2	SVGC-1832	26-Dec-2019 09:43:30	002F0201.D	Client	RTH23	Soil	1	rtstudy						8015CLVI
3	SVGC-1661	26-Dec-2019 10:02:30	003F0301.D	Ccv	D3H46	Soil	1	Diesel						8015CLVI
4	UQ40054-001	26-Dec-2019 10:21:30	004F0401.D	BLANK	DBLK54	Soil	1	Diesel					40105	8015CLVI
5	UQ40054-002	26-Dec-2019 10:40:30	005F0501.D	LCS	DLCS54	Soil	1	Diesel	diesel					8015CLVI
6	UL20020-001	26-Dec-2019 10:59:30	006F0601.D	Client	Pre	Soil	1	Diesel						8015CLVI
7	UL20020-002	26-Dec-2019 11:18:30	007F0701.D	Client	Background	Soil	1	Diesel						8015CLVI
8	UL20021-001	26-Dec-2019 11:37:30	008F0801.D	Client	MPGI-SF-Soil-09-121	Soil	1	Diesel						8015CLVI
9	UL20021-001MS	26-Dec-2019 11:57:30	009F0901.D	MS	MPGI-SF-Soil-09-1MS	Soil	1	Diesel	diesel					8015CLVI
10	UL20021-001MD	26-Dec-2019 12:16:30	010F1001.D	MSD	MPGI-SF-Soil-09-1MD	Soil	1	Diesel	diesel					8015CLVI
11	UL20021-002	26-Dec-2019 12:35:30	011F1101.D	Client	MPGI-SF-Soil-10A-12	Soil	1	Diesel						8015CLVI
12	UL20021-004	26-Dec-2019 12:54:30	012F1201.D	Client	MPGI-SF-Soil-10C-12	Soil	1	Diesel						8015CLVI
13	UL20021-006	26-Dec-2019 13:13:30	013F1301.D	Client	MPGI-SF-Soil-11B-12	Soil	1	Diesel						8015CLVI
14	UL20021-007	26-Dec-2019 13:33:30	014F1401.D	Client	MPGI-SF-Soil-11C-12	Soil	1	Diesel						8015CLVI
15	UL20021-010	26-Dec-2019 13:52:30	015F1501.D	Client	MPGI-SF-Soil-12C-12	Soil	1	Diesel						8015CLVI
16	UL20021-011	26-Dec-2019 14:11:30	016F1601.D	Client	MPGI-SF-Soil-13A-12	Soil	1	Diesel						8015CLVI
17	UL20021-012	26-Dec-2019 14:30:30	017F1701.D	Client	MPGI-SF-Soil-13B-12	Soil	1	Diesel						8015CLVI
18	UL20081-001	26-Dec-2019 14:49:30	018F1801.D	Client	SB-228 (6-8)	Soil	1	Diesel					RR 100x	8015CLVI
19	UL20081-002	26-Dec-2019 15:09:30	019F1901.D	Client	SB-231 (5-7)	Soil	1	Diesel						8015CLVI
20	UL20081-003	26-Dec-2019 15:28:30	020F2001.D	Client	SB13N-35 (7-10)	Soil	1	Diesel						8015CLVI
21	UL20081-004	26-Dec-2019 15:47:30	021F2101.D	Client	SB13N-35 (12-13.5)	Soil	1	Diesel						8015CLVI
22	UL20081-001	26-Dec-2019 16:06:30	022F2201.D	Client	SB-228 (6-8)	Soil	100	Diesel						8015CLVI
23	UL20081-002	26-Dec-2019 16:25:30	023F2301.D	Client	SB-231 (5-7)	Soil	100	Diesel						8015CLVI
3	SVGC-1661	26-Dec-2019 16:45:30	003F2401.D	Ccv	D3H47	Soil	1	Diesel						8015CLVI
24	UL20081-003	26-Dec-2019 17:04:30	024F2501.D	Client	SB13N-35 (7-10)	Soil	100	Diesel						8015CLVI
25	UL20081-004	26-Dec-2019 17:23:30	025F2601.D	Client	SB13N-35 (12-13.5)	Soil	100	Diesel						8015CLVI
3	SVGC-1661	26-Dec-2019 17:42:30	003F2701.D	Ccv	D3H48	Soil	1	Diesel						8015CLVI

Pace Analytical Services, LLC
Run Log Report

Batch Path: \\Organics\EE\chem\gc12.i\122719F1.b
Inst. ID: gc12.i Method: 8015CLVI
Matrix: Soil Operator: CHG

ALS Vial	Lab Sample ID	Injection Date/Time	Data File	Sample Type	Client Sample ID	Matrix	Dil Fact	Sublist	SpikeList	Inst QC	pH	Std Lot#	Comments	Method
1	IBLK 19-2577	27-Dec-2019 09:27:30	001F0101.D	Client		Soil	1	Diesel						8015CLVI
2	SVGC-1832	27-Dec-2019 09:46:30	002F0201.D	Client	RTH24	Soil	1	rtstudy						8015CLVI
3	SVGC-1661	27-Dec-2019 10:05:30	003F0301.D	Ccv	D3H49	Soil	1	Diesel						8015CLVI
4	UQ40144-001	27-Dec-2019 10:24:30	004F0401.D	BLANK	DBLK44	Water	1	Diesel						8015CLVI
5	UQ40144-002	27-Dec-2019 10:43:30	005F0501.D	LCS	DLCS44	Water	1	Diesel	diesel					8015CLVI
6	UL20021-017	27-Dec-2019 11:02:30	006F0601.D	Client	MPG1-RB-121719	Water	1	Diesel						8015CLVI
7	UL20021-017MS	27-Dec-2019 11:21:30	007F0701.D	MS	MPG1-RB-121719MS	Water	1	Diesel	diesel					8015CLVI
8	UL20021-017MD	27-Dec-2019 11:40:30	008F0801.D	MSD	MPG1-RB-121719MD	Water	1	Diesel	diesel					8015CLVI
3	SVGC-1661	27-Dec-2019 11:59:30	003F0901.D	Ccv	D3H50	Soil	1	Diesel						8015CLVI
5	UQ40144-002	27-Dec-2019 12:24:30	005F1001.D	Client		Water	1	Diesel						8015CLVI
6	UL20021-017	27-Dec-2019 12:43:30	006F1101.D	Client	MPG1-RB-121719	Water	1	Diesel						8015CLVI
3	SVGC-1661	27-Dec-2019 13:02:30	003F1201.D	Client		Soil	1	Diesel						8015CLVI

Analyst: GLT **Level 2 Analyst:** ALM

Status: Level 2 review released

Matrix: Solid

Printed: 01/09/20 09:11

Prep Batch: 39962
3550C DRO - Ultrasonic Extraction

Start Date: 12/23/2019 23:39
End Date: 12/24/2019 01:46

Conc Analyst: GLT
Conc Start Date: 12/24/2019 00:28
Conc End Date: 12/24/2019 02:56

Surrogate: extw-5524ex041120
Surrogate Vol. (mL): 1.0

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 19-2577>19-2577

Sodium Sulfate ID: extr-5439
Balance ID: Balance #13-1016

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ89962-001	MB		1	8015C	30.00		0.0	5.0			Witness:N/A
UQ89962-002	LCS		1	8015C	30.00	extw-5505ex04102	1.0	5.0			sand:19-2349
UL20021-001	Sample	MRGI-SF-Soil-09-121719	1	8015C	30.30		0.0	5.0	12/31/2019 23:59	12/26/2019	glasswool:19-668
UL20021-001MS	MS		1	8015C	30.40	extw-5505ex04102	1.0	5.0			
UL20021-001MD	MSD		1	8015C	30.00	extw-5505ex04102	1.0	5.0			
UL20021-002	Sample	MRGI-SF-Soil-10A-121719	1	8015C	30.00		0.0	5.0	12/31/2019 23:59	12/26/2019	
UL20021-003	Sample	MRGI-SF-Soil-10B-121719	1	8015C	30.70		0.0	5.0	12/31/2019 23:59	12/26/2019	
UL20021-004	Sample	MRGI-SF-Soil-10C-121719	1	8015C	30.30		0.0	5.0	12/31/2019 23:59	12/26/2019	
UL20021-005	Sample	MRGI-SF-Soil-11A-121919	1	8015C	30.90		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-006	Sample	MRGI-SF-Soil-11B-121919	1	8015C	30.90		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-007	Sample	MRGI-SF-Soil-11C-121919	1	8015C	30.30		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-008	Sample	MRGI-SF-Soil-12A-121919	1	8015C	30.10		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-009	Sample	MRGI-SF-Soil-12B-121819	1	8015C	30.90		0.0	5.0	01/01/2020 23:59	12/26/2019	
UL20021-010	Sample	MRGI-SF-Soil-12C-121919	1	8015C	30.10		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-011	Sample	MRGI-SF-Soil-13A-121719	1	8015C	30.20		0.0	5.0	12/31/2019 23:59	12/26/2019	
UL20021-012	Sample	MRGI-SF-Soil-13B-121719	1	8015C	30.30		0.0	5.0	12/31/2019 23:59	12/26/2019	
UL20021-013	Sample	MRGI-SF-Soil-14A-121919	1	8015C	30.90		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-014	Sample	MRGI-SF-Soil-14A-121919-D	1	8015C	30.80		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-015	Sample	MRGI-SF-Soil-14B-121919	1	8015C	30.70		0.0	5.0	01/02/2020 23:59	12/26/2019	
UL20021-016	Sample	MRGI-SF-Soil-14C-121919	1	8015C	30.00		0.0	5.0	01/02/2020 23:59	12/26/2019	

(end of report) **Total Samples: 16**

Analyst: GLT **Level 2 Analyst:** SMA

Status: Level 2 review released

Matrix: Solid

Prep Batch: 40054
3550C DRO - Ultrasonic Extraction

Printed: 01/09/20 09:12

Start Date: 12/25/2019 1907
End Date: 12/25/2019 2012

Conc Analyst: GLT
Conc Start Date: 12/25/2019 1928
Conc End Date: 12/25/2019 2142

Surrogate: extw-5525ex041120
Surrogate Vol. (mL): 1.0

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 19-2614>19-2614

Sodium Sulfate ID: extr-5439
Balance ID: Balance #13-1016

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ40054-001	MB		1	8015C	30.00		0.0	5.0			Witness:N/A
UQ40054-002	LCS		1	8015C	30.00	extw-5505ex04102	1.0	5.0			sand:19-2349
UL20020-001	Sample	Pre	1	8015C	30.60		0.0	5.0	01/01/2020 2359	12/26/2019	glasswool:19-668
UL20020-002	Sample	Background	1	8015C	30.40		0.0	5.0	01/01/2020 2359	12/26/2019	
UL20021-001	Sample	MPGI-SF-Soil-09-121719	2	8015C	30.60		0.0	5.0	12/31/2019 2359	12/26/2019	
UL20021-001MS	MS		2	8015C	30.40	extw-5505ex04102	1.0	5.0			
UL20021-001MD	MSD		2	8015C	30.50	extw-5505ex04102	1.0	5.0			
UL20021-002	Sample	MPGI-SF-Soil-10A-121719	2	8015C	30.30		0.0	5.0	12/31/2019 2359	12/26/2019	
UL20021-004	Sample	MPGI-SF-Soil-10C-121719	2	8015C	30.20		0.0	5.0	12/31/2019 2359	12/26/2019	
UL20021-006	Sample	MPGI-SF-Soil-11B-121919	2	8015C	30.10		0.0	5.0	01/02/2020 2359	12/26/2019	
UL20021-007	Sample	MPGI-SF-Soil-11C-121919	2	8015C	30.10		0.0	5.0	01/02/2020 2359	12/26/2019	
UL20021-010	Sample	MPGI-SF-Soil-12C-121919	2	8015C	30.00		0.0	5.0	01/02/2020 2359	12/26/2019	
UL20021-011	Sample	MPGI-SF-Soil-13A-121719	2	8015C	30.00		0.0	5.0	12/31/2019 2359	12/26/2019	
UL20021-012	Sample	MPGI-SF-Soil-13B-121719	2	8015C	30.80		0.0	5.0	12/31/2019 2359	12/26/2019	
UL20081-001	Sample	SB-228 (6-8)	1	8015C	30.50		0.0	5.0	01/01/2020 2359	12/26/2019	
UL20081-002	Sample	SB-231 (5-7)	1	8015C	30.50		0.0	15.0	01/01/2020 2359	12/26/2019	NCM29785
UL20081-003	Sample	SB13N-35 (7-10)	1	8015C	30.20		0.0	5.0	12/30/2019 2359	12/26/2019	
UL20081-004	Sample	SB13N-35 (12-13.5)	1	8015C	30.80		0.0	5.0	12/30/2019 2359	12/26/2019	

(end of report) **Total Samples: 14**

Analyst: GLT **Level 2 Analyst:** SMA

Status: Level 2 review released

Matrix: Aqueous

Printed: 01/09/20 09:12

Prep Batch: 40144

3520C RVE DRO - Continuous Liquid-Liquid Extraction

Start Date: 12/26/2019 1928
End Date: 12/26/2019 2024

Conc Analyst: GLT
Conc Start Date: 12/26/2019 2214
Conc End Date: 12/26/2019 2310

Surrogate: extw-5547ex062620
Surrogate Vol. (mL): 0.2

Ext Solvent: CH2Cl2 > CH2Cl2
Reagents Vol. (mL): 300
Chem ID: 19-2614>19-2614

Sodium Sulfate ID: extr-5439
Balance ID: Balance #13-1016

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Init. pH (SU)	Adj. pH (SU)	Comments
UQ40144-001	MB		1	8015C	250		0.0	5.0	8	<2	Witness:NEM1
UQ40144-002	LCS		1	8015C	250	extw-5505ex04102	0.2	5.0	8	<2	glasswool:19-668
UL20021-017	Sample	MPG1-RB-121719	1	8015C	250		0.0	5.0	7	<2	NOM29818 NOM29819
UL20021-017MS	MS		1	8015C	250	extw-5505ex04102	0.2	5.0	7	<2	NOM29818
UL20021-017MD	MSD		1	8015C	250	extw-5505ex04102	0.2	5.0	7	<2	NOM29818

(end of report) **Total Samples: 1**

Metals

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-001**
Description: **MPGI-SF-Soil-09-121719**
Matrix: **Solid**
Date Sampled: **12/17/2019 0940**
% Solids: **76.0** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0658	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1842	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0823	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**21000**		**24**	**9.1**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**14**		**0.91**	**0.30**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**220**		**1.6**	**0.40**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.98**		**0.30**	**0.077**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.47**		**0.30**	**0.077**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**16000**		**300**	**38**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**27**		**0.61**	**0.15**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**15**		**1.6**	**0.40**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**26**		**0.61**	**0.27**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**26000**		**6.1**	**2.8**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**27**		**0.61**	**0.27**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**11000**		**300**	**38**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**1700**		**1.8**	**0.72**	**mg/kg**	**2**
Mercury	**7439-97-6**	**7471B**	**0.028**	**J**	**0.097**	**0.023**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**34**		**2.4**	**0.64**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**3200**		**300**	**38**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		2.4	0.99	mg/kg	2
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**130**	**J**	**300**	**38**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		3.0	0.76	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**46**		**3.0**	**0.76**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**99**		**3.0**	**0.76**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-002**
Description: **MPGI-SF-Soil-10A-121719**
Matrix: **Solid**
Date Sampled: **12/17/2019 1140**
% Solids: **80.7** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0738	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1849	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0902	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**18000**		**24**	**9.1**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**20**		**1.8**	**0.61**	**mg/kg**	**2**
Barium	**7440-39-3**	**6010D**	**180**		**1.6**	**0.39**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**1.0**		**0.30**	**0.076**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.52**	**J**	**0.61**	**0.15**	**mg/kg**	**2**
Calcium	**7440-70-2**	**6010D**	**3300**		**300**	**38**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**25**		**0.61**	**0.15**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**18**		**1.6**	**0.39**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**29**		**0.61**	**0.27**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**37000**		**12**	**5.5**	**mg/kg**	**2**
Lead	**7439-92-1**	**6010D**	**28**		**1.2**	**0.55**	**mg/kg**	**2**
Magnesium	**7439-95-4**	**6010D**	**4200**		**300**	**38**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**1900**		**1.8**	**0.72**	**mg/kg**	**2**
Mercury	7439-97-6	7471B	ND		0.10	0.025	mg/kg	1
Nickel	**7440-02-0**	**6010D**	**43**		**4.9**	**1.3**	**mg/kg**	**2**
Potassium	**7440-09-7**	**6010D**	**3000**		**300**	**38**	**mg/kg**	**1**
Selenium	**7782-49-2**	**6010D**	**0.99**	**J**	**2.4**	**0.99**	**mg/kg**	**2**
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**140**	**J**	**300**	**38**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		6.1	1.5	mg/kg	2
Vanadium	**7440-62-2**	**6010D**	**46**		**6.1**	**1.5**	**mg/kg**	**2**
Zinc	**7440-66-6**	**6010D**	**86**		**3.0**	**0.76**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-003**
Description: **MPGI-SF-Soil-10B-121719**
Matrix: **Solid**
Date Sampled: **12/17/2019 1144**
% Solids: **81.4** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0744	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1851	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**15000**		**21**	**8.0**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.27	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**13**		**0.80**	**0.27**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**110**		**1.4**	**0.35**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.78**		**0.27**	**0.067**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.21**	**J**	**0.27**	**0.067**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**13000**		**270**	**33**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**21**		**0.53**	**0.13**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**14**		**1.4**	**0.35**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**21**		**0.53**	**0.24**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**24000**		**5.3**	**2.4**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**22**		**0.53**	**0.24**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**9400**		**270**	**33**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**940**		**0.80**	**0.32**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.027**	**J**	**0.098**	**0.024**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**27**		**2.1**	**0.56**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2700**		**270**	**33**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		1.1	0.43	mg/kg	1
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**130**	**J**	**270**	**33**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.7	0.67	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**36**		**2.7**	**0.67**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**83**		**2.7**	**0.67**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-004**
Description: **MPGI-SF-Soil-10C-121719**
Matrix: **Solid**
Date Sampled: **12/17/2019 1146**
% Solids: **81.5** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0749	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1854	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0907	LLL	12/30/2019 0956	40381
3	3050B	6010D	4	12/31/2019 0913	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**18000**		**22**	**8.2**	**mg/kg**	**1**
Antimony	**7440-36-0**	**6010D**	**0.28**	**J**	**1.1**	**0.28**	**mg/kg**	**1**
Arsenic	**7440-38-2**	**6010D**	**20**		**1.6**	**0.55**	**mg/kg**	**2**
Barium	**7440-39-3**	**6010D**	**330**		**1.4**	**0.36**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**1.0**		**0.27**	**0.069**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.49**	**J**	**0.55**	**0.14**	**mg/kg**	**2**
Calcium	**7440-70-2**	**6010D**	**8500**		**270**	**34**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**26**		**0.55**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**21**		**1.4**	**0.36**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**28**		**0.55**	**0.25**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**35000**		**11**	**5.0**	**mg/kg**	**2**
Lead	**7439-92-1**	**6010D**	**35**		**1.1**	**0.49**	**mg/kg**	**2**
Magnesium	**7439-95-4**	**6010D**	**6400**		**270**	**34**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**2800**		**3.3**	**1.3**	**mg/kg**	**3**
Mercury	**7439-97-6**	**7471B**	**0.025**	**J**	**0.093**	**0.022**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**38**		**4.4**	**1.2**	**mg/kg**	**2**
Potassium	**7440-09-7**	**6010D**	**3500**		**270**	**34**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		4.4	1.8	mg/kg	3
Silver	**7440-22-4**	**6010D**	**0.17**	**J**	**0.55**	**0.14**	**mg/kg**	**1**
Sodium	**7440-23-5**	**6010D**	**280**		**270**	**34**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		5.5	1.4	mg/kg	2
Vanadium	**7440-62-2**	**6010D**	**47**		**5.5**	**1.4**	**mg/kg**	**2**
Zinc	**7440-66-6**	**6010D**	**130**		**2.7**	**0.69**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-005**
Description: **MPGI-SF-Soil-11A-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1240**
% Solids: **79.2** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0755	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1856	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**20000**		**23**	**8.5**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**15**		**0.85**	**0.28**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**120**		**1.5**	**0.37**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.91**		**0.28**	**0.071**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.20**	**J**	**0.28**	**0.071**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**6000**		**280**	**35**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**25**		**0.57**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**6.6**		**1.5**	**0.37**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**20**		**0.57**	**0.25**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**24000**		**5.7**	**2.6**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**23**		**0.57**	**0.25**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**4300**		**280**	**35**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**470**		**0.85**	**0.33**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.035**	**J**	**0.093**	**0.022**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**18**		**2.3**	**0.59**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2700**		**280**	**35**	**mg/kg**	**1**
Selenium	**7782-49-2**	**6010D**	**0.60**	**J**	**1.1**	**0.46**	**mg/kg**	**1**
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**210**	**J**	**280**	**35**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.8	0.71	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**44**		**2.8**	**0.71**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**76**		**2.8**	**0.71**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-006**
Description: **MPGI-SF-Soil-11B-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1242**
% Solids: **80.2** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0801	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1903	JMH	12/30/2019 1349	40382
2	3050B	6010D	3	12/31/2019 0957	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**19000**		**22**	**8.4**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**17**		**0.84**	**0.28**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**270**		**1.5**	**0.36**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.90**		**0.28**	**0.071**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.52**		**0.28**	**0.071**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**5400**		**280**	**35**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**24**		**0.56**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**17**		**1.5**	**0.36**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**21**		**0.56**	**0.25**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**26000**		**5.6**	**2.6**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**27**		**0.56**	**0.25**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**4100**		**280**	**35**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**2200**		**2.5**	**1.0**	**mg/kg**	**2**
Mercury	**7439-97-6**	**7471B**	**0.033**	**J**	**0.095**	**0.023**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**25**		**2.2**	**0.59**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2400**		**280**	**35**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		3.4	1.4	mg/kg	2
Silver	7440-22-4	6010D	ND		0.56	0.14	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**170**	**J**	**280**	**35**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.8	0.70	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**46**		**2.8**	**0.70**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**80**		**2.8**	**0.70**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-007**
Description: **MPGI-SF-Soil-11C-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1244**
% Solids: **79.2** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0806	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1905	JMH	12/30/2019 1349	40382
2	3050B	6010D	3	12/31/2019 0924	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**19000**		**25**	**9.5**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.3	0.32	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**22**		**2.8**	**0.95**	**mg/kg**	**2**
Barium	**7440-39-3**	**6010D**	**320**		**1.6**	**0.41**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.95**		**0.32**	**0.079**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.47**	**J**	**0.95**	**0.24**	**mg/kg**	**2**
Calcium	**7440-70-2**	**6010D**	**7300**		**320**	**39**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**25**		**0.63**	**0.16**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**16**		**1.6**	**0.41**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**24**		**0.63**	**0.28**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**35000**		**19**	**8.6**	**mg/kg**	**2**
Lead	**7439-92-1**	**6010D**	**30**		**1.9**	**0.85**	**mg/kg**	**2**
Magnesium	**7439-95-4**	**6010D**	**5100**		**320**	**39**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**1900**		**2.8**	**1.1**	**mg/kg**	**2**
Mercury	**7439-97-6**	**7471B**	**0.032**	**J**	**0.10**	**0.025**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**25**		**7.6**	**2.0**	**mg/kg**	**2**
Potassium	**7440-09-7**	**6010D**	**2800**		**320**	**39**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		3.8	1.5	mg/kg	2
Silver	7440-22-4	6010D	ND		0.63	0.16	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**130**	**J**	**320**	**39**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		9.5	2.4	mg/kg	2
Vanadium	**7440-62-2**	**6010D**	**49**		**9.5**	**2.4**	**mg/kg**	**2**
Zinc	**7440-66-6**	**6010D**	**110**		**3.2**	**0.79**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-008**
Description: **MPGI-SF-Soil-12A-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1310**
% Solids: **74.3** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0812	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1908	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**19000**		**26**	**9.8**	**mg/kg**	**1**
Antimony	**7440-36-0**	**6010D**	**0.33**	**J**	**1.3**	**0.33**	**mg/kg**	**1**
Arsenic	**7440-38-2**	**6010D**	**13**		**0.98**	**0.33**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**140**		**1.7**	**0.43**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.91**		**0.33**	**0.083**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.30**	**J**	**0.33**	**0.083**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**8700**		**330**	**41**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**25**		**0.66**	**0.16**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**9.7**		**1.7**	**0.43**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**25**		**0.66**	**0.30**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**23000**		**6.6**	**3.0**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**26**		**0.66**	**0.30**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**6000**		**330**	**41**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**700**		**0.98**	**0.39**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.030**	**J**	**0.10**	**0.025**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**21**		**2.6**	**0.69**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**3200**		**330**	**41**	**mg/kg**	**1**
Selenium	**7782-49-2**	**6010D**	**0.62**	**J**	**1.3**	**0.53**	**mg/kg**	**1**
Silver	7440-22-4	6010D	ND		0.66	0.16	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**120**	**J**	**330**	**41**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		3.3	0.82	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**43**		**3.3**	**0.82**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**120**		**3.3**	**0.82**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-009**
Description: **MPGI-SF-Soil-12B-121819**
Matrix: **Solid**
Date Sampled: **12/18/2019 1001**
% Solids: **73.3** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0817	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1910	JMH	12/30/2019 1349	40382
2	3050B	6010D	5	12/31/2019 0946	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**17000**		**25**	**9.2**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**17**		**0.92**	**0.31**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**440**		**1.6**	**0.40**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.89**		**0.31**	**0.077**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.73**		**0.31**	**0.077**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**11000**		**310**	**38**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**23**		**0.61**	**0.15**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**42**		**1.6**	**0.40**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**23**		**0.61**	**0.28**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**28000**		**6.1**	**2.8**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**31**		**0.61**	**0.28**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**7300**		**310**	**38**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**3900**		**4.6**	**1.8**	**mg/kg**	**2**
Mercury	7439-97-6	7471B	ND		0.11	0.026	mg/kg	1
Nickel	**7440-02-0**	**6010D**	**33**		**2.5**	**0.64**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2800**		**310**	**38**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		6.1	2.5	mg/kg	2
Silver	**7440-22-4**	**6010D**	**0.35**	**J**	**0.61**	**0.15**	**mg/kg**	**1**
Sodium	**7440-23-5**	**6010D**	**150**	**J**	**310**	**38**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		3.1	0.77	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**47**		**3.1**	**0.77**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**110**		**3.1**	**0.77**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-010**
Description: **MPGI-SF-Soil-12C-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1312**
% Solids: **80.0** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0655	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0933	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**14000**		**21**	**8.0**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.27	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**10**		**0.80**	**0.27**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**110**		**1.4**	**0.35**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.68**		**0.27**	**0.067**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.19**	**J**	**0.27**	**0.067**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**12000**		**270**	**33**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**19**		**0.53**	**0.13**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**7.1**		**1.4**	**0.35**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**19**		**0.53**	**0.24**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**18000**		**5.3**	**2.4**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**20**		**0.53**	**0.24**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**7100**		**270**	**33**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**580**		**0.80**	**0.31**	**mg/kg**	**1**
Mercury	7439-97-6	7471B	ND		0.095	0.023	mg/kg	1
Nickel	**7440-02-0**	**6010D**	**16**		**2.1**	**0.56**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2400**		**270**	**33**	**mg/kg**	**1**
Selenium	**7782-49-2**	**6010D**	**0.44**	**J**	**1.1**	**0.43**	**mg/kg**	**1**
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**84**	**J**	**270**	**33**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.7	0.66	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**33**		**2.7**	**0.66**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**87**		**2.7**	**0.66**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-011**
Description: **MPGI-SF-Soil-13A-121719**
Matrix: **Solid**
Date Sampled: **12/17/2019 1410**
% Solids: **74.5** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0701	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0936	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**19000**		**26**	**9.6**	**mg/kg**	**1**
Antimony	**7440-36-0**	**6010D**	**0.41**	**J**	**1.3**	**0.32**	**mg/kg**	**1**
Arsenic	**7440-38-2**	**6010D**	**12**		**0.96**	**0.32**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**110**		**1.7**	**0.42**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.80**		**0.32**	**0.081**	**mg/kg**	**1**
Cadmium	7440-43-9	6010D	ND		0.32	0.081	mg/kg	1
Calcium	**7440-70-2**	**6010D**	**7600**		**320**	**40**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**23**		**0.64**	**0.16**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**10**		**1.7**	**0.42**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**21**		**0.64**	**0.29**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**23000**		**6.4**	**2.9**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**22**		**0.64**	**0.29**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**6300**		**320**	**40**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**550**		**0.96**	**0.38**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.036**	**J**	**0.098**	**0.024**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**22**		**2.6**	**0.67**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**3300**		**320**	**40**	**mg/kg**	**1**
Selenium	**7782-49-2**	**6010D**	**0.55**	**J**	**1.3**	**0.52**	**mg/kg**	**1**
Silver	7440-22-4	6010D	ND		0.64	0.16	mg/kg	1
Sodium	7440-23-5	6010D	ND		320	40	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.2	0.80	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**39**		**3.2**	**0.80**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**74**		**3.2**	**0.80**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-012**
Description: **MPGI-SF-Soil-13B-121719**
Matrix: **Solid**
Date Sampled: **12/17/2019 1414**
% Solids: **75.5** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0706	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0938	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**19000**		**24**	**9.1**	**mg/kg**	**1**
Antimony	**7440-36-0**	**6010D**	**0.35**	**J**	**1.2**	**0.31**	**mg/kg**	**1**
Arsenic	**7440-38-2**	**6010D**	**12**		**0.91**	**0.30**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**120**		**1.6**	**0.40**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.85**		**0.30**	**0.077**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.091**	**J**	**0.30**	**0.077**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**8200**		**300**	**38**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**26**		**0.61**	**0.15**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**9.3**		**1.6**	**0.40**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**25**		**0.61**	**0.27**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**22000**		**6.1**	**2.8**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**27**		**0.61**	**0.27**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**6000**		**300**	**38**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**500**		**0.91**	**0.36**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.052**	**J**	**0.10**	**0.025**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**21**		**2.4**	**0.64**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**3600**		**300**	**38**	**mg/kg**	**1**
Selenium	**7782-49-2**	**6010D**	**0.51**	**J**	**1.2**	**0.49**	**mg/kg**	**1**
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	ND		300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.0	0.76	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**40**		**3.0**	**0.76**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**82**		**3.0**	**0.76**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-013**
Description: **MPGI-SF-Soil-14A-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1210**
% Solids: **82.8** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0723	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0941	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**16000**		**23**	**8.6**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.29	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**7.4**		**0.86**	**0.29**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**96**		**1.5**	**0.37**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.68**		**0.29**	**0.072**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.12**	**J**	**0.29**	**0.072**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**5800**		**290**	**36**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**20**		**0.57**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**6.5**		**1.5**	**0.37**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**16**		**0.57**	**0.26**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**16000**		**5.7**	**2.6**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**17**		**0.57**	**0.26**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**4200**		**290**	**36**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**390**		**0.86**	**0.34**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.034**	**J**	**0.092**	**0.022**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**14**		**2.3**	**0.60**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2100**		**290**	**36**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		1.1	0.47	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**55**	**J**	**290**	**36**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.9	0.72	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**35**		**2.9**	**0.72**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**71**		**2.9**	**0.72**	**mg/kg**	**1**

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-014**
Description: **MPGI-SF-Soil-14A-121919-D**
Matrix: **Solid**
Date Sampled: **12/19/2019 1212**
% Solids: **84.0** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0728	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0943	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**14000**		**22**	**8.3**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**8.1**		**0.83**	**0.28**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**98**		**1.4**	**0.36**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.62**		**0.28**	**0.069**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.18**	**J**	**0.28**	**0.069**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**5200**		**280**	**34**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**17**		**0.55**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**7.8**		**1.4**	**0.36**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**15**		**0.55**	**0.25**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**16000**		**5.5**	**2.5**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**18**		**0.55**	**0.25**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**3700**		**280**	**34**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**620**		**0.83**	**0.33**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.033**	**J**	**0.095**	**0.023**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**15**		**2.2**	**0.58**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**1800**		**280**	**34**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		1.1	0.45	mg/kg	1
Silver	7440-22-4	6010D	ND		0.55	0.14	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**41**	**J**	**280**	**34**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.8	0.69	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**31**		**2.8**	**0.69**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**66**		**2.8**	**0.69**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-015**
Description: **MPGI-SF-Soil-14B-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1214**
% Solids: **85.7** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0734	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0945	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**13000**		**22**	**8.3**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**9.5**		**0.83**	**0.28**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**93**		**1.4**	**0.36**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.64**		**0.28**	**0.070**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.16**	**J**	**0.28**	**0.070**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**14000**		**280**	**35**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**17**		**0.55**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**7.9**		**1.4**	**0.36**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**18**		**0.55**	**0.25**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**18000**		**5.5**	**2.5**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**19**		**0.55**	**0.25**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**8800**		**280**	**35**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**590**		**0.83**	**0.33**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.025**	**J**	**0.096**	**0.023**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**17**		**2.2**	**0.58**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2100**		**280**	**35**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		1.1	0.45	mg/kg	1
Silver	7440-22-4	6010D	ND		0.55	0.14	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**80**	**J**	**280**	**35**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.8	0.69	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**30**		**2.8**	**0.69**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**99**		**2.8**	**0.69**	**mg/kg**	**1**

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: **Tetra Tech, Inc.**
Laboratory ID: **UL20021-016**
Description: **MPGI-SF-Soil-14C-121919**
Matrix: **Solid**
Date Sampled: **12/19/2019 1216**
% Solids: **81.5** **12/20/2019 2143**
Date Received: **12/20/2019**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0739	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0948	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	**7429-90-5**	**6010D**	**12000**		**23**	**8.5**	**mg/kg**	**1**
Antimony	7440-36-0	6010D	ND		1.1	0.29	mg/kg	1
Arsenic	**7440-38-2**	**6010D**	**10**		**0.85**	**0.28**	**mg/kg**	**1**
Barium	**7440-39-3**	**6010D**	**110**		**1.5**	**0.37**	**mg/kg**	**1**
Beryllium	**7440-41-7**	**6010D**	**0.59**		**0.28**	**0.071**	**mg/kg**	**1**
Cadmium	**7440-43-9**	**6010D**	**0.22**	**J**	**0.28**	**0.071**	**mg/kg**	**1**
Calcium	**7440-70-2**	**6010D**	**12000**		**280**	**35**	**mg/kg**	**1**
Chromium	**7440-47-3**	**6010D**	**16**		**0.57**	**0.14**	**mg/kg**	**1**
Cobalt	**7440-48-4**	**6010D**	**9.4**		**1.5**	**0.37**	**mg/kg**	**1**
Copper	**7440-50-8**	**6010D**	**17**		**0.57**	**0.25**	**mg/kg**	**1**
Iron	**7439-89-6**	**6010D**	**19000**		**5.7**	**2.6**	**mg/kg**	**1**
Lead	**7439-92-1**	**6010D**	**20**		**0.57**	**0.25**	**mg/kg**	**1**
Magnesium	**7439-95-4**	**6010D**	**6500**		**280**	**35**	**mg/kg**	**1**
Manganese	**7439-96-5**	**6010D**	**720**		**0.85**	**0.34**	**mg/kg**	**1**
Mercury	**7439-97-6**	**7471B**	**0.027**	**J**	**0.089**	**0.021**	**mg/kg**	**1**
Nickel	**7440-02-0**	**6010D**	**17**		**2.3**	**0.59**	**mg/kg**	**1**
Potassium	**7440-09-7**	**6010D**	**2000**		**280**	**35**	**mg/kg**	**1**
Selenium	7782-49-2	6010D	ND		1.1	0.46	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	**7440-23-5**	**6010D**	**39**	**J**	**280**	**35**	**mg/kg**	**1**
Thallium	7440-28-0	6010D	ND		2.8	0.71	mg/kg	1
Vanadium	**7440-62-2**	**6010D**	**29**		**2.8**	**0.71**	**mg/kg**	**1**
Zinc	**7440-66-6**	**6010D**	**81**		**2.8**	**0.71**	**mg/kg**	**1**

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-017
Description: MPGI-RB-121719
Matrix: Aqueous
Date Sampled: 12/19/2019 1330
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/26/2019 2221	JMH	12/26/2019 1256	39898
1	3005A	6010D	1	12/26/2019 1107	LLL	12/24/2019 1021	39905

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	ND		0.40	0.10	mg/L	1
Antimony	7440-36-0	6010D	ND		0.020	0.0070	mg/L	1
Arsenic	7440-38-2	6010D	0.0031	J	0.015	0.0025	mg/L	1
Barium	7440-39-3	6010D	ND		0.025	0.0031	mg/L	1
Beryllium	7440-41-7	6010D	ND		0.0050	0.00060	mg/L	1
Cadmium	7440-43-9	6010D	ND		0.0050	0.00060	mg/L	1
Calcium	7440-70-2	6010D	ND		5.0	0.63	mg/L	1
Chromium	7440-47-3	6010D	ND		0.010	0.0013	mg/L	1
Cobalt	7440-48-4	6010D	ND		0.025	0.0031	mg/L	1
Copper	7440-50-8	6010D	ND		0.010	0.0020	mg/L	1
Iron	7439-89-6	6010D	ND		0.10	0.040	mg/L	1
Lead	7439-92-1	6010D	ND		0.010	0.0047	mg/L	1
Magnesium	7439-95-4	6010D	ND		5.0	0.63	mg/L	1
Manganese	7439-96-5	6010D	ND		0.015	0.0019	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	0.000091	mg/L	1
Nickel	7440-02-0	6010D	ND		0.040	0.0050	mg/L	1
Potassium	7440-09-7	6010D	ND		5.0	0.63	mg/L	1
Selenium	7782-49-2	6010D	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010D	ND		0.010	0.0021	mg/L	1
Sodium	7440-23-5	6010D	0.71	J	5.0	0.63	mg/L	1
Thallium	7440-28-0	6010D	ND		0.050	0.0063	mg/L	1
Vanadium	7440-62-2	6010D	ND		0.050	0.0063	mg/L	1
Zinc	7440-66-6	6010D	ND		0.020	0.0025	mg/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

TAL Metals - MB

Sample ID: UQ39838-001
Batch: 39838
Analytical Method: 6010D
Matrix: Solid
Prep Method: 3050B
Prep Date: 12/24/2019 0905

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	20	7.5	mg/kg	12/26/2019 0644
Antimony	ND		1	1.0	0.25	mg/kg	12/26/2019 0644
Arsenic	ND		1	0.75	0.25	mg/kg	12/26/2019 0644
Barium	ND		1	1.3	0.33	mg/kg	12/26/2019 0644
Beryllium	ND		1	0.25	0.063	mg/kg	12/26/2019 0644
Cadmium	ND		1	0.25	0.063	mg/kg	12/26/2019 0644
Calcium	ND		1	250	31	mg/kg	12/26/2019 0644
Chromium	ND		1	0.50	0.13	mg/kg	12/26/2019 0644
Cobalt	ND		1	1.3	0.33	mg/kg	12/26/2019 0644
Copper	ND		1	0.50	0.23	mg/kg	12/26/2019 0644
Iron	ND		1	5.0	2.3	mg/kg	12/26/2019 0644
Lead	ND		1	0.50	0.23	mg/kg	12/26/2019 0644
Magnesium	ND		1	250	31	mg/kg	12/26/2019 0644
Manganese	ND		1	0.75	0.30	mg/kg	12/26/2019 0644
Nickel	ND		1	2.0	0.53	mg/kg	12/26/2019 0644
Potassium	ND		1	250	31	mg/kg	12/26/2019 0644
Selenium	ND		1	1.0	0.41	mg/kg	12/26/2019 0644
Silver	ND		1	0.50	0.13	mg/kg	12/26/2019 0644
Sodium	ND		1	250	31	mg/kg	12/26/2019 0644
Thallium	ND		1	2.5	0.63	mg/kg	12/26/2019 0644
Vanadium	ND		1	2.5	0.63	mg/kg	12/26/2019 0644
Zinc	ND		1	2.5	0.63	mg/kg	12/26/2019 0644

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39838-002
Batch: 39838
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/24/2019 0905

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	1000	960		1	96	80-120	12/26/2019 0650
Antimony	50	48		1	97	80-120	12/26/2019 0650
Arsenic	250	250		1	102	80-120	12/26/2019 0650
Barium	500	490		1	98	80-120	12/26/2019 0650
Beryllium	100	100		1	100	80-120	12/26/2019 0650
Cadmium	50	47		1	93	80-120	12/26/2019 0650
Calcium	2000	2000		1	98	80-120	12/26/2019 0650
Chromium	250	240		1	97	80-120	12/26/2019 0650
Cobalt	100	98		1	98	80-120	12/26/2019 0650
Copper	100	98		1	98	80-120	12/26/2019 0650
Iron	1000	960		1	96	80-120	12/26/2019 0650
Lead	250	250		1	98	80-120	12/26/2019 0650
Magnesium	2000	1900		1	97	80-120	12/26/2019 0650
Manganese	100	97		1	97	80-120	12/26/2019 0650
Nickel	100	98		1	98	80-120	12/26/2019 0650
Potassium	2000	2000		1	100	80-120	12/26/2019 0650
Selenium	50	49		1	97	80-120	12/26/2019 0650
Silver	50	47		1	94	80-120	12/26/2019 0650
Sodium	2000	2000		1	98	80-120	12/26/2019 0650
Thallium	40	40		1	99	80-120	12/26/2019 0650
Vanadium	100	95		1	95	80-120	12/26/2019 0650
Zinc	100	97		1	97	80-120	12/26/2019 0650

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39905-001
Batch: 39905
Analytical Method: 6010D

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 12/24/2019 1021

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	0.40	0.10	mg/L	12/26/2019 0955
Antimony	ND		1	0.020	0.0070	mg/L	12/26/2019 0955
Arsenic	ND		1	0.015	0.0025	mg/L	12/26/2019 0955
Barium	ND		1	0.025	0.0031	mg/L	12/26/2019 0955
Beryllium	ND		1	0.0050	0.00060	mg/L	12/26/2019 0955
Cadmium	**0.00060**	**J**	**1**	**0.0050**	**0.00060**	**mg/L**	**12/26/2019 0955**
Calcium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Chromium	ND		1	0.010	0.0013	mg/L	12/26/2019 0955
Cobalt	ND		1	0.025	0.0031	mg/L	12/26/2019 0955
Copper	ND		1	0.010	0.0020	mg/L	12/26/2019 0955
Iron	ND		1	0.10	0.040	mg/L	12/26/2019 0955
Lead	ND		1	0.010	0.0047	mg/L	12/26/2019 0955
Magnesium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Manganese	ND		1	0.015	0.0019	mg/L	12/26/2019 0955
Nickel	ND		1	0.040	0.0050	mg/L	12/26/2019 0955
Potassium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Selenium	ND		1	0.020	0.0085	mg/L	12/26/2019 0955
Silver	ND		1	0.010	0.0021	mg/L	12/26/2019 0955
Sodium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Thallium	ND		1	0.050	0.0063	mg/L	12/26/2019 0955
Vanadium	ND		1	0.050	0.0063	mg/L	12/26/2019 0955
Zinc	ND		1	0.020	0.0025	mg/L	12/26/2019 0955

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39905-002
Batch: 39905
Analytical Method: 6010D

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 12/24/2019 1021

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	20	21		1	103	80-120	12/26/2019 1000
Antimony	0.40	0.39		1	96	80-120	12/26/2019 1000
Arsenic	0.40	0.42		1	105	80-120	12/26/2019 1000
Barium	2.0	2.1		1	106	80-120	12/26/2019 1000
Beryllium	2.0	2.1		1	107	80-120	12/26/2019 1000
Cadmium	0.40	0.40		1	99	80-120	12/26/2019 1000
Calcium	40	41		1	103	80-120	12/26/2019 1000
Chromium	2.0	2.1		1	104	80-120	12/26/2019 1000
Cobalt	2.0	2.0		1	100	80-120	12/26/2019 1000
Copper	2.0	2.1		1	103	80-120	12/26/2019 1000
Iron	20	20		1	102	80-120	12/26/2019 1000
Lead	0.40	0.41		1	102	80-120	12/26/2019 1000
Magnesium	40	41		1	101	80-120	12/26/2019 1000
Manganese	2.0	2.1		1	104	80-120	12/26/2019 1000
Nickel	2.0	2.0		1	99	80-120	12/26/2019 1000
Potassium	40	43		1	107	80-120	12/26/2019 1000
Selenium	0.40	0.40		1	101	80-120	12/26/2019 1000
Silver	0.40	0.42		1	104	80-120	12/26/2019 1000
Sodium	40	44		1	109	80-120	12/26/2019 1000
Thallium	0.80	0.84		1	105	80-120	12/26/2019 1000
Vanadium	2.0	2.1		1	104	80-120	12/26/2019 1000
Zinc	2.0	2.0		1	99	80-120	12/26/2019 1000

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ40381-001
Batch: 40381
Analytical Method: 6010D
Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	20	7.5	mg/kg	12/31/2019 0647
Antimony	ND		1	1.0	0.25	mg/kg	12/31/2019 0647
Arsenic	ND		1	0.75	0.25	mg/kg	12/31/2019 0647
Barium	ND		1	1.3	0.33	mg/kg	12/31/2019 0647
Beryllium	ND		1	0.25	0.063	mg/kg	12/31/2019 0647
Cadmium	ND		1	0.25	0.063	mg/kg	12/31/2019 0647
Calcium	ND		1	250	31	mg/kg	12/31/2019 0647
Chromium	ND		1	0.50	0.13	mg/kg	12/31/2019 0647
Cobalt	ND		1	1.3	0.33	mg/kg	12/31/2019 0647
Copper	ND		1	0.50	0.23	mg/kg	12/31/2019 0647
Iron	ND		1	5.0	2.3	mg/kg	12/31/2019 0647
Lead	ND		1	0.50	0.23	mg/kg	12/31/2019 0647
Magnesium	ND		1	250	31	mg/kg	12/31/2019 0647
Manganese	ND		1	0.75	0.30	mg/kg	12/31/2019 0647
Nickel	ND		1	2.0	0.53	mg/kg	12/31/2019 0647
Potassium	ND		1	250	31	mg/kg	12/31/2019 0647
Selenium	ND		1	1.0	0.41	mg/kg	12/31/2019 0647
Silver	ND		1	0.50	0.13	mg/kg	12/31/2019 0647
Sodium	ND		1	250	31	mg/kg	12/31/2019 0647
Thallium	ND		1	2.5	0.63	mg/kg	12/31/2019 0647
Vanadium	ND		1	2.5	0.63	mg/kg	12/31/2019 0647
Zinc	ND		1	2.5	0.63	mg/kg	12/31/2019 0647

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ40381-002
Batch: 40381
Analytical Method: 6010D
Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	1000	1000		1	100	80-120	12/31/2019 0652
Antimony	50	48		1	96	80-120	12/31/2019 0652
Arsenic	250	260		1	103	80-120	12/31/2019 0652
Barium	500	510		1	101	80-120	12/31/2019 0652
Beryllium	100	100		1	105	80-120	12/31/2019 0652
Cadmium	50	47		1	94	80-120	12/31/2019 0652
Calcium	2000	2000		1	100	80-120	12/31/2019 0652
Chromium	250	260		1	102	80-120	12/31/2019 0652
Cobalt	100	100		1	100	80-120	12/31/2019 0652
Copper	100	100		1	102	80-120	12/31/2019 0652
Iron	1000	1000		1	100	80-120	12/31/2019 0652
Lead	250	250		1	101	80-120	12/31/2019 0652
Magnesium	2000	2000		1	100	80-120	12/31/2019 0652
Manganese	100	100		1	102	80-120	12/31/2019 0652
Nickel	100	99		1	99	80-120	12/31/2019 0652
Potassium	2000	2000		1	98	80-120	12/31/2019 0652
Selenium	50	49		1	99	80-120	12/31/2019 0652
Silver	50	49		1	98	80-120	12/31/2019 0652
Sodium	2000	2000		1	100	80-120	12/31/2019 0652
Thallium	40	41		1	102	80-120	12/31/2019 0652
Vanadium	100	100		1	102	80-120	12/31/2019 0652
Zinc	100	99		1	99	80-120	12/31/2019 0652

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-001MS
Batch: 40381
Analytical Method: 6010D
Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	21000	1300	30000	N	1	705	75-125	12/31/2019 0704
Antimony	ND	66	28	N	1	42	75-125	12/31/2019 0704
Arsenic	14	330	370		1	108	75-125	12/31/2019 0704
Barium	220	660	850		1	95	75-125	12/31/2019 0704
Beryllium	0.98	130	140		1	106	75-125	12/31/2019 0704
Cadmium	0.47	66	67		1	101	75-125	12/31/2019 0704
Calcium	16000	2600	14000	N	1	-105	75-125	12/31/2019 0704
Chromium	27	330	360		1	101	75-125	12/31/2019 0704
Cobalt	15	130	140		1	98	75-125	12/31/2019 0704
Copper	26	130	160		1	105	75-125	12/31/2019 0704
Iron	26000	1300	28000	N	1	140	75-125	12/31/2019 0704
Lead	27	330	350		1	100	75-125	12/31/2019 0704
Magnesium	11000	2600	11000	N	1	0.094	75-125	12/31/2019 0704
Manganese	1700	130	930	N	2	-566	75-125	12/31/2019 0839
Nickel	34	130	160		1	93	75-125	12/31/2019 0704
Potassium	3200	2600	7900	N	1	177	75-125	12/31/2019 0704
Selenium	ND	66	66		2	100	75-125	12/31/2019 0839
Silver	ND	66	67		1	103	75-125	12/31/2019 0704
Sodium	130	2600	2900		1	104	75-125	12/31/2019 0704
Thallium	ND	53	48		1	92	75-125	12/31/2019 0704
Vanadium	46	130	190		1	110	75-125	12/31/2019 0704
Zinc	99	130	230		1	97	75-125	12/31/2019 0704

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-001MD
Batch: 40381
Analytical Method: 6010D
Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Aluminum	21000	1300	30000	N	1	721	0.38	75-125	20	12/31/2019 0710
Antimony	ND	63	27	N	1	42	4.3	75-125	20	12/31/2019 0710
Arsenic	14	320	360		1	108	3.4	75-125	20	12/31/2019 0710
Barium	220	630	810		1	92	4.8	75-125	20	12/31/2019 0710
Beryllium	0.98	130	130		1	105	4.1	75-125	20	12/31/2019 0710
Cadmium	0.47	63	64		1	101	3.4	75-125	20	12/31/2019 0710
Calcium	16000	2500	14000	N	1	-98	1.9	75-125	20	12/31/2019 0710
Chromium	27	320	350		1	101	3.2	75-125	20	12/31/2019 0710
Cobalt	15	130	140		1	97	3.5	75-125	20	12/31/2019 0710
Copper	26	130	160		1	105	3.5	75-125	20	12/31/2019 0710
Iron	26000	1300	28000		1	105	1.8	75-125	20	12/31/2019 0710
Lead	27	320	340		1	99	4.1	75-125	20	12/31/2019 0710
Magnesium	11000	2500	11000	N	1	-1.8	0.43	75-125	20	12/31/2019 0710
Manganese	1700	130	840	N	2	-662	11	75-125	20	12/31/2019 0845
Nickel	34	130	150		1	93	2.8	75-125	20	12/31/2019 0710
Potassium	3200	2500	7900	N	1	184	0.20	75-125	20	12/31/2019 0710
Selenium	ND	63	65		2	103	1.0	75-125	20	12/31/2019 0845
Silver	ND	63	65		1	103	3.6	75-125	20	12/31/2019 0710
Sodium	130	2500	2800		1	106	1.6	75-125	20	12/31/2019 0710
Thallium	ND	51	47		1	93	2.6	75-125	20	12/31/2019 0710
Vanadium	46	130	190		1	110	2.7	75-125	20	12/31/2019 0710
Zinc	99	130	220		1	98	1.4	75-125	20	12/31/2019 0710

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39735-001
Batch: 39735
Analytical Method: 7471B
Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	12/21/2019 0929

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39735-002
Batch: 39735
Analytical Method: 7471B
Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.85		1	102	80-120	12/21/2019 0931

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-016MS
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.027	1.0	1.2		1	114	80-120	12/21/2019 0955

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-016MD
Batch: 39735
Analytical Method: 7471B
Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.027	1.0	1.2		1	111	2.1	80-120	20	12/21/2019 0957

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39898-001
Batch: 39898
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 12/26/2019 1256

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.00020	0.000091	mg/L	12/26/2019 2215

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39898-002
Batch: 39898
Analytical Method: 7470A
Matrix: Aqueous
Prep Method:
Prep Date: 12/26/2019 1256

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0020		1	100	80-120	12/26/2019 2218

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ40382-001
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	12/30/2019 1837

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ40382-002
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.83		1	99	80-120	12/30/2019 1839

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-001MS
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.028	1.1	1.3		1	117	80-120	12/30/2019 1844

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-001MD
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.028	1.0	1.2		1	115	4.6	80-120	20	12/30/2019 1847

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP Metals

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Tetra Tech, Inc.

SDG No.: UL20021 **Method Type:** ICP-AES **SOW No.:**

Contract: Joliet Chemical Fir **Lab Code:** Shealy **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
UL20021-001	MPGI-SF-Soil-09-121719	
UL20021-001S	MPGI-SF-Soil-09-121719S	Matrix Spike
UL20021-001SD	MPGI-SF-Soil-09-121719SD	Matrix Spike Duplicate
UL20021-002	MPGI-SF-Soil-10A-121719	
UL20021-003	MPGI-SF-Soil-10B-121719	
UL20021-004	MPGI-SF-Soil-10C-121719	
UL20021-005	MPGI-SF-Soil-11A-121919	
UL20021-006	MPGI-SF-Soil-11B-121919	
UL20021-007	MPGI-SF-Soil-11C-121919	
UL20021-008	MPGI-SF-Soil-12A-121919	
UL20021-009	MPGI-SF-Soil-12B-121819	
UL20021-010	MPGI-SF-Soil-12C-121919	
UL20021-011	MPGI-SF-Soil-13A-121719	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Tetra Tech, Inc.

SDG No.: UL20021 **Method Type:** ICP-AES **SOW No.:**

Contract: Joliet Chemical Fir **Lab Code:** Shealy **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
UL20021-012	MPGI-SF-Soil-13B-121719	
UL20021-013	MPGI-SF-Soil-14A-121919	
UL20021-014	MPGI-SF-Soil-14A-121919-	
UL20021-015	MPGI-SF-Soil-14B-121919	
UL20021-016	MPGI-SF-Soil-14C-121919	
UL20021-017	MPG1-RB-121719	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Aluminum	24.8780	25.0000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Antimony	0.4805	0.5000	96	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Arsenic	0.5180	0.5000	104	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Barium	2.4961	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Beryllium	2.5270	2.5000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Cadmium	0.4914	0.5000	98	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Calcium	50.0750	50.0000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Chromium	2.5043	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Cobalt	2.5050	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Copper	2.4725	2.5000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Iron	24.8700	25.0000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Lead	0.4957	0.5000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Magnesium	50.4000	50.0000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Manganese	2.5158	2.5000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Nickel	2.5026	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Potassium	50.2300	50.0000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Selenium	0.4965	0.5000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Silver	0.4999	0.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Sodium	50.5680	50.0000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Thallium	1.0157	1.0000	102	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Vanadium	2.4903	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Zinc	2.5226	2.5000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1									
	Aluminum	25.0200	25.0000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Antimony	0.4923	0.5000	98	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Arsenic	0.4915	0.5000	98	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Barium	2.5167	2.5000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Beryllium	2.5215	2.5000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Cadmium	0.4861	0.5000	97	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Calcium	50.4500	50.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Chromium	2.5094	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Cobalt	2.4876	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Copper	2.4709	2.5000	99	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Iron	25.1410	25.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Lead	0.4990	0.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Magnesium	50.4300	50.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Manganese	2.5169	2.5000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Nickel	2.4899	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Potassium	50.6040	50.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Selenium	0.4931	0.5000	99	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Silver	0.4945	0.5000	99	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Sodium	50.9930	50.0000	102	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Thallium	1.0050	1.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Vanadium	2.4947	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Zinc	2.4964	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV2									
	Aluminum	24.6440	25.0000	99	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Antimony	0.4746	0.5000	95	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Arsenic	0.4892	0.5000	98	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Barium	2.4931	2.5000	100	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Beryllium	2.5403	2.5000	102	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Cadmium	0.4824	0.5000	96	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Calcium	49.9170	50.0000	100	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Chromium	2.4521	2.5000	98	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Cobalt	2.4647	2.5000	99	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Copper	2.4512	2.5000	98	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Iron	24.8370	25.0000	99	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Lead	0.4976	0.5000	100	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Magnesium	49.2500	50.0000	99	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Manganese	2.4745	2.5000	99	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Nickel	2.4461	2.5000	98	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Potassium	50.0210	50.0000	100	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Selenium	0.4846	0.5000	97	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Silver	0.4824	0.5000	96	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Sodium	50.7060	50.0000	101	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Thallium	1.0012	1.0000	100	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Vanadium	2.4726	2.5000	99	90.0 - 110.0	P	12/26/2019	06:03	I4122619A
	Zinc	2.4422	2.5000	98	90.0 - 110.0	P	12/26/2019	06:03	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV3									
	Aluminum	24.3610	25.0000	97	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Antimony	0.4708	0.5000	94	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Arsenic	0.5052	0.5000	101	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Barium	2.4474	2.5000	98	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Beryllium	2.5053	2.5000	100	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Cadmium	0.5007	0.5000	100	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Calcium	50.9090	50.0000	102	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Chromium	2.3593	2.5000	94	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Cobalt	2.5516	2.5000	102	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Copper	2.5192	2.5000	101	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Iron	24.8980	25.0000	100	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Lead	0.5196	0.5000	104	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Magnesium	48.2900	50.0000	97	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Manganese	2.4551	2.5000	98	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Nickel	2.5185	2.5000	101	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Potassium	50.7720	50.0000	102	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Selenium	0.4958	0.5000	99	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Silver	0.4696	0.5000	94	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Sodium	51.1780	50.0000	102	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Thallium	1.0277	1.0000	103	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Vanadium	2.4221	2.5000	97	90.0 - 110.0	P	12/26/2019	07:12	I4122619A
	Zinc	2.4892	2.5000	100	90.0 - 110.0	P	12/26/2019	07:12	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV4									
	Aluminum	25.6450	25.0000	103	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Antimony	0.5032	0.5000	101	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Arsenic	0.4991	0.5000	100	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Barium	2.6602	2.5000	106	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Beryllium	2.5765	2.5000	103	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Cadmium	0.4933	0.5000	99	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Calcium	51.1480	50.0000	102	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Chromium	2.5963	2.5000	104	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Cobalt	2.5156	2.5000	101	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Copper	2.4909	2.5000	100	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Iron	25.4630	25.0000	102	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Lead	0.5044	0.5000	101	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Magnesium	51.5200	50.0000	103	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Manganese	2.5658	2.5000	103	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Nickel	2.5209	2.5000	101	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Potassium	53.5190	50.0000	107	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Selenium	0.5042	0.5000	101	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Silver	0.5086	0.5000	102	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Sodium	53.3200	50.0000	107	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Thallium	1.0269	1.0000	103	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Vanadium	2.5608	2.5000	102	90.0 - 110.0	P	12/26/2019	08:18	I4122619A
	Zinc	2.5384	2.5000	102	90.0 - 110.0	P	12/26/2019	08:18	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Aluminum	24.8780	25.0000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Antimony	0.4805	0.5000	96	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Arsenic	0.5180	0.5000	104	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Barium	2.4961	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Beryllium	2.5270	2.5000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Cadmium	0.4914	0.5000	98	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Calcium	50.0750	50.0000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Chromium	2.5043	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Cobalt	2.5050	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Copper	2.4725	2.5000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Iron	24.8700	25.0000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Lead	0.4957	0.5000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Magnesium	50.4000	50.0000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Manganese	2.5158	2.5000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Nickel	2.5026	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Potassium	50.2300	50.0000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Selenium	0.4965	0.5000	99	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Silver	0.4999	0.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Sodium	50.5680	50.0000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Thallium	1.0157	1.0000	102	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Vanadium	2.4903	2.5000	100	90.0 - 110.0	P	12/26/2019	04:37	I4122619A
	Zinc	2.5226	2.5000	101	90.0 - 110.0	P	12/26/2019	04:37	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1									
	Aluminum	25.0200	25.0000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Antimony	0.4923	0.5000	98	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Arsenic	0.4915	0.5000	98	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Barium	2.5167	2.5000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Beryllium	2.5215	2.5000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Cadmium	0.4861	0.5000	97	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Calcium	50.4500	50.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Chromium	2.5094	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Cobalt	2.4876	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Copper	2.4709	2.5000	99	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Iron	25.1410	25.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Lead	0.4990	0.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Magnesium	50.4300	50.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Manganese	2.5169	2.5000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Nickel	2.4899	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Potassium	50.6040	50.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Selenium	0.4931	0.5000	99	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Silver	0.4945	0.5000	99	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Sodium	50.9930	50.0000	102	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Thallium	1.0050	1.0000	101	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Vanadium	2.4947	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A
	Zinc	2.4964	2.5000	100	90.0 - 110.0	P	12/26/2019	04:54	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV2									
	Aluminum	25.7900	25.0000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Antimony	0.5062	0.5000	101	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Arsenic	0.5145	0.5000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Barium	2.6579	2.5000	106	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Beryllium	2.6527	2.5000	106	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Cadmium	0.5060	0.5000	101	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Calcium	52.3180	50.0000	105	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Chromium	2.6170	2.5000	105	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Cobalt	2.5856	2.5000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Copper	2.5709	2.5000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Iron	25.7030	25.0000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Lead	0.5192	0.5000	104	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Magnesium	51.8500	50.0000	104	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Manganese	2.6226	2.5000	105	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Nickel	2.5763	2.5000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Potassium	54.7400	50.0000	109	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Selenium	0.5142	0.5000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Silver	0.5135	0.5000	103	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Sodium	54.7800	50.0000	110	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Thallium	1.0619	1.0000	106	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Vanadium	2.6129	2.5000	105	90.0 - 110.0	P	12/26/2019	09:38	I4122619A
	Zinc	2.5887	2.5000	104	90.0 - 110.0	P	12/26/2019	09:38	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV3									
	Aluminum	25.3470	25.0000	101	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Antimony	0.5017	0.5000	100	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Arsenic	0.5115	0.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Barium	2.6282	2.5000	105	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Beryllium	2.6568	2.5000	106	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Cadmium	0.4996	0.5000	100	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Calcium	51.2000	50.0000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Chromium	2.5779	2.5000	103	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Cobalt	2.5621	2.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Copper	2.5585	2.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Iron	25.2120	25.0000	101	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Lead	0.5141	0.5000	103	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Magnesium	50.2500	50.0000	101	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Manganese	2.5934	2.5000	104	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Nickel	2.5551	2.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Potassium	53.4200	50.0000	107	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Selenium	0.5116	0.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Silver	0.5102	0.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Sodium	53.5570	50.0000	107	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Thallium	1.0303	1.0000	103	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Vanadium	2.5800	2.5000	103	90.0 - 110.0	P	12/26/2019	11:18	I4122619A
	Zinc	2.5557	2.5000	102	90.0 - 110.0	P	12/26/2019	11:18	I4122619A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Aluminum	25.4950	25.0000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Antimony	0.4908	0.5000	98	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Arsenic	0.5225	0.5000	105	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Barium	2.5631	2.5000	103	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Beryllium	2.5898	2.5000	104	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Cadmium	0.4964	0.5000	99	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Calcium	51.0130	50.0000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Chromium	2.5698	2.5000	103	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Cobalt	2.5271	2.5000	101	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Copper	2.5484	2.5000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Iron	25.3800	25.0000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Lead	0.5100	0.5000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Magnesium	51.1800	50.0000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Manganese	2.5819	2.5000	103	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Nickel	2.5207	2.5000	101	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Potassium	50.2470	50.0000	100	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Selenium	0.4974	0.5000	99	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Silver	0.5126	0.5000	103	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Sodium	51.2190	50.0000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Thallium	1.0245	1.0000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Vanadium	2.5558	2.5000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A
	Zinc	2.5479	2.5000	102	90.0 - 110.0	P	12/31/2019	05:55	I4123119A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1									
	Aluminum	25.1420	25.0000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Antimony	0.4937	0.5000	99	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Arsenic	0.4968	0.5000	99	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Barium	2.5261	2.5000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Beryllium	2.5632	2.5000	103	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Cadmium	0.4896	0.5000	98	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Calcium	50.4530	50.0000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Chromium	2.5379	2.5000	102	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Cobalt	2.5052	2.5000	100	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Copper	2.5086	2.5000	100	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Iron	25.1390	25.0000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Lead	0.5046	0.5000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Magnesium	50.3000	50.0000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Manganese	2.5480	2.5000	102	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Nickel	2.5054	2.5000	100	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Potassium	49.3860	50.0000	99	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Selenium	0.4969	0.5000	99	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Silver	0.4989	0.5000	100	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Sodium	50.1630	50.0000	100	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Thallium	1.0105	1.0000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Vanadium	2.5315	2.5000	101	90.0 - 110.0	P	12/31/2019	06:12	I4123119A
	Zinc	2.5081	2.5000	100	90.0 - 110.0	P	12/31/2019	06:12	I4123119A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV2									
	Aluminum	26.0490	25.0000	104	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Antimony	0.5093	0.5000	102	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Arsenic	0.5173	0.5000	103	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Barium	2.6631	2.5000	107	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Beryllium	2.6876	2.5000	108	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Cadmium	0.5097	0.5000	102	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Calcium	51.8790	50.0000	104	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Chromium	2.6422	2.5000	106	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Cobalt	2.6019	2.5000	104	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Copper	2.6214	2.5000	105	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Iron	25.8740	25.0000	103	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Lead	0.5237	0.5000	105	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Magnesium	51.0900	50.0000	102	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Manganese	2.6518	2.5000	106	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Nickel	2.5886	2.5000	104	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Potassium	51.8810	50.0000	104	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Selenium	0.5131	0.5000	103	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Silver	0.5204	0.5000	104	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Sodium	52.4710	50.0000	105	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Thallium	1.0529	1.0000	105	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Vanadium	2.6559	2.5000	106	90.0 - 110.0	P	12/31/2019	07:21	I4123119A
	Zinc	2.5849	2.5000	103	90.0 - 110.0	P	12/31/2019	07:21	I4123119A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV3									
	Aluminum	25.4020	25.0000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Antimony	0.4916	0.5000	98	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Arsenic	0.5079	0.5000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Barium	2.6299	2.5000	105	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Beryllium	2.6474	2.5000	106	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Cadmium	0.5003	0.5000	100	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Calcium	50.8310	50.0000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Chromium	2.6038	2.5000	104	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Cobalt	2.5549	2.5000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Copper	2.5827	2.5000	103	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Iron	25.3850	25.0000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Lead	0.5192	0.5000	104	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Magnesium	49.8000	50.0000	100	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Manganese	2.6124	2.5000	104	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Nickel	2.5399	2.5000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Potassium	52.1560	50.0000	104	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Selenium	0.5023	0.5000	100	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Silver	0.5104	0.5000	102	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Sodium	51.7220	50.0000	103	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Thallium	1.0352	1.0000	104	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Vanadium	2.6218	2.5000	105	90.0 - 110.0	P	12/31/2019	08:28	I4123119A
	Zinc	2.5333	2.5000	101	90.0 - 110.0	P	12/31/2019	08:28	I4123119A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV4									
	Aluminum	25.4030	25.0000	102	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Antimony	0.4917	0.5000	98	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Arsenic	0.5072	0.5000	101	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Barium	2.6443	2.5000	106	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Beryllium	2.6349	2.5000	105	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Cadmium	0.4981	0.5000	100	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Calcium	50.3260	50.0000	101	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Chromium	2.6057	2.5000	104	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Cobalt	2.5470	2.5000	102	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Copper	2.5879	2.5000	104	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Iron	25.3010	25.0000	101	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Lead	0.5145	0.5000	103	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Magnesium	49.0300	50.0000	98	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Manganese	2.6066	2.5000	104	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Nickel	2.5163	2.5000	101	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Potassium	52.3130	50.0000	105	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Selenium	0.4994	0.5000	100	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Silver	0.5094	0.5000	102	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Sodium	51.3310	50.0000	103	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Thallium	1.0275	1.0000	103	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Vanadium	2.6445	2.5000	106	90.0 - 110.0	P	12/31/2019	09:35	I4123119A
	Zinc	2.5078	2.5000	100	90.0 - 110.0	P	12/31/2019	09:35	I4123119A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV5									
	Aluminum	25.1950	25.0000	101	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Antimony	0.4931	0.5000	99	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Arsenic	0.5111	0.5000	102	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Barium	2.6305	2.5000	105	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Beryllium	2.6084	2.5000	104	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Cadmium	0.5044	0.5000	101	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Calcium	50.4000	50.0000	101	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Chromium	2.5478	2.5000	102	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Cobalt	2.5764	2.5000	103	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Copper	2.5736	2.5000	103	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Iron	25.0840	25.0000	100	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Lead	0.5213	0.5000	104	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Magnesium	48.5000	50.0000	97	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Manganese	2.5710	2.5000	103	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Nickel	2.5484	2.5000	102	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Potassium	53.0660	50.0000	106	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Selenium	0.5052	0.5000	101	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Silver	0.5017	0.5000	100	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Sodium	51.4390	50.0000	103	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Thallium	1.0334	1.0000	103	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Vanadium	2.5869	2.5000	103	90.0 - 110.0	P	12/31/2019	10:41	I4123119A
	Zinc	2.5283	2.5000	101	90.0 - 110.0	P	12/31/2019	10:41	I4123119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Aluminum	-0.0151	+/-0.2000	U	0.1000	0.2000	P	12/26/2019	04:43	I4122619A
	Antimony	0.0000	+/-0.0100	U	0.0070	0.0100	P	12/26/2019	04:43	I4122619A
	Arsenic	0.0009	+/-0.0075	U	0.0025	0.0075	P	12/26/2019	04:43	I4122619A
	Barium	-0.0009	+/-0.0125	U	0.0031	0.0125	P	12/26/2019	04:43	I4122619A
	Beryllium	0.0001	+/-0.0025	U	0.0006	0.0025	P	12/26/2019	04:43	I4122619A
	Cadmium	0.0001	+/-0.0025	U	0.0006	0.0025	P	12/26/2019	04:43	I4122619A
	Calcium	-0.5001	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Chromium	-0.0004	+/-0.0050	U	0.0013	0.0050	P	12/26/2019	04:43	I4122619A
	Cobalt	-0.0007	+/-0.0125	U	0.0031	0.0125	P	12/26/2019	04:43	I4122619A
	Copper	0.0000	+/-0.0050	U	0.0020	0.0050	P	12/26/2019	04:43	I4122619A
	Iron	0.0001	+/-0.0500	U	0.0400	0.0500	P	12/26/2019	04:43	I4122619A
	Lead	0.0005	+/-0.0050	U	0.0047	0.0050	P	12/26/2019	04:43	I4122619A
	Magnesium	-0.5376	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Manganese	-0.0010	+/-0.0075	U	0.0019	0.0075	P	12/26/2019	04:43	I4122619A
	Nickel	-0.0012	+/-0.0200	U	0.0050	0.0200	P	12/26/2019	04:43	I4122619A
	Potassium	-0.2324	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Selenium	0.0005	+/-0.0100	U	0.0085	0.0100	P	12/26/2019	04:43	I4122619A
	Silver	-0.0007	+/-0.0050	U	0.0021	0.0050	P	12/26/2019	04:43	I4122619A
	Sodium	-0.5437	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Thallium	-0.0043	+/-0.0250	U	0.0063	0.0250	P	12/26/2019	04:43	I4122619A
	Vanadium	-0.0022	+/-0.0250	U	0.0063	0.0250	P	12/26/2019	04:43	I4122619A
	Zinc	-0.0004	+/-0.0100	U	0.0025	0.0100	P	12/26/2019	04:43	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB1										
	Aluminum	-0.0250	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	04:59	I4122619A
	Antimony	-0.0001	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	04:59	I4122619A
	Arsenic	0.0006	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	04:59	I4122619A
	Barium	-0.0011	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	04:59	I4122619A
	Beryllium	0.0002	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	04:59	I4122619A
	Cadmium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	04:59	I4122619A
	Calcium	-0.4952	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Chromium	-0.0005	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	04:59	I4122619A
	Cobalt	-0.0008	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	04:59	I4122619A
	Copper	-0.0016	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	04:59	I4122619A
	Iron	0.0002	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	04:59	I4122619A
	Lead	-0.0017	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	04:59	I4122619A
	Magnesium	-0.5451	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Manganese	-0.0009	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	04:59	I4122619A
	Nickel	-0.0013	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	04:59	I4122619A
	Potassium	-0.2761	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Selenium	0.0021	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	04:59	I4122619A
	Silver	-0.0003	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	04:59	I4122619A
	Sodium	-0.4382	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Thallium	-0.0020	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	04:59	I4122619A
	Vanadium	0.0015	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	04:59	I4122619A
	Zinc	-0.0004	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	04:59	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Aluminum	-0.0321	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	06:12	I4122619A
	Antimony	0.0004	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	06:12	I4122619A
	Arsenic	0.0006	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	06:12	I4122619A
	Barium	-0.0012	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	06:12	I4122619A
	Beryllium	0.0000	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	06:12	I4122619A
	Cadmium	0.0002	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	06:12	I4122619A
	Calcium	-0.4994	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	06:12	I4122619A
	Chromium	-0.0006	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	06:12	I4122619A
	Cobalt	-0.0009	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	06:12	I4122619A
	Copper	-0.0012	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	06:12	I4122619A
	Iron	-0.0043	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	06:12	I4122619A
	Lead	-0.0009	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	06:12	I4122619A
	Magnesium	-0.5500	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	06:12	I4122619A
	Manganese	-0.0010	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	06:12	I4122619A
	Nickel	-0.0013	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	06:12	I4122619A
	Potassium	-0.3903	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	06:12	I4122619A
	Selenium	0.0007	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	06:12	I4122619A
	Silver	0.0000	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	06:12	I4122619A
	Sodium	-0.5919	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	06:12	I4122619A
	Thallium	-0.0053	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	06:12	I4122619A
	Vanadium	-0.0016	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	06:12	I4122619A
	Zinc	-0.0006	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	06:12	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB3										
	Aluminum	-0.0384	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	07:17	I4122619A
	Antimony	0.0001	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	07:17	I4122619A
	Arsenic	-0.0005	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	07:17	I4122619A
	Barium	-0.0010	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	07:17	I4122619A
	Beryllium	-0.0001	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	07:17	I4122619A
	Cadmium	0.0004	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	07:17	I4122619A
	Calcium	-0.4971	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	07:17	I4122619A
	Chromium	-0.0005	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	07:17	I4122619A
	Cobalt	-0.0008	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	07:17	I4122619A
	Copper	0.0001	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	07:17	I4122619A
	Iron	-0.0072	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	07:17	I4122619A
	Lead	-0.0009	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	07:17	I4122619A
	Magnesium	-0.5335	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	07:17	I4122619A
	Manganese	-0.0009	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	07:17	I4122619A
	Nickel	-0.0011	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	07:17	I4122619A
	Potassium	-0.2453	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	07:17	I4122619A
	Selenium	0.0006	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	07:17	I4122619A
	Silver	-0.0003	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	07:17	I4122619A
	Sodium	-0.6470	+/-5.0000	J	0.6250	5.0000	P	12/26/2019	07:17	I4122619A
	Thallium	-0.0046	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	07:17	I4122619A
	Vanadium	-0.0025	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	07:17	I4122619A
	Zinc	-0.0006	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	07:17	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB4										
	Aluminum	-0.0231	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	08:23	I4122619A
	Antimony	-0.0006	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	08:23	I4122619A
	Arsenic	-0.0002	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	08:23	I4122619A
	Barium	-0.0007	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	08:23	I4122619A
	Beryllium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	08:23	I4122619A
	Cadmium	0.0003	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	08:23	I4122619A
	Calcium	-0.4954	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	08:23	I4122619A
	Chromium	-0.0003	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	08:23	I4122619A
	Cobalt	-0.0008	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	08:23	I4122619A
	Copper	0.0002	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	08:23	I4122619A
	Iron	-0.0020	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	08:23	I4122619A
	Lead	-0.0008	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	08:23	I4122619A
	Magnesium	-0.5449	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	08:23	I4122619A
	Manganese	-0.0009	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	08:23	I4122619A
	Nickel	-0.0012	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	08:23	I4122619A
	Potassium	-0.3424	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	08:23	I4122619A
	Selenium	0.0024	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	08:23	I4122619A
	Silver	-0.0001	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	08:23	I4122619A
	Sodium	-0.5534	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	08:23	I4122619A
	Thallium	-0.0048	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	08:23	I4122619A
	Vanadium	-0.0011	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	08:23	I4122619A
	Zinc	-0.0005	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	08:23	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Aluminum	-0.0151	+/-0.2000	U	0.1000	0.2000	P	12/26/2019	04:43	I4122619A
	Antimony	0.0000	+/-0.0100	U	0.0070	0.0100	P	12/26/2019	04:43	I4122619A
	Arsenic	0.0009	+/-0.0075	U	0.0025	0.0075	P	12/26/2019	04:43	I4122619A
	Barium	-0.0009	+/-0.0125	U	0.0031	0.0125	P	12/26/2019	04:43	I4122619A
	Beryllium	0.0001	+/-0.0025	U	0.0006	0.0025	P	12/26/2019	04:43	I4122619A
	Cadmium	0.0001	+/-0.0025	U	0.0006	0.0025	P	12/26/2019	04:43	I4122619A
	Calcium	-0.5001	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Chromium	-0.0004	+/-0.0050	U	0.0013	0.0050	P	12/26/2019	04:43	I4122619A
	Cobalt	-0.0007	+/-0.0125	U	0.0031	0.0125	P	12/26/2019	04:43	I4122619A
	Copper	0.0000	+/-0.0050	U	0.0020	0.0050	P	12/26/2019	04:43	I4122619A
	Iron	0.0001	+/-0.0500	U	0.0400	0.0500	P	12/26/2019	04:43	I4122619A
	Lead	0.0005	+/-0.0050	U	0.0047	0.0050	P	12/26/2019	04:43	I4122619A
	Magnesium	-0.5376	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Manganese	-0.0010	+/-0.0075	U	0.0019	0.0075	P	12/26/2019	04:43	I4122619A
	Nickel	-0.0012	+/-0.0200	U	0.0050	0.0200	P	12/26/2019	04:43	I4122619A
	Potassium	-0.2324	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Selenium	0.0005	+/-0.0100	U	0.0085	0.0100	P	12/26/2019	04:43	I4122619A
	Silver	-0.0007	+/-0.0050	U	0.0021	0.0050	P	12/26/2019	04:43	I4122619A
	Sodium	-0.5437	+/-2.5000	U	0.6250	2.5000	P	12/26/2019	04:43	I4122619A
	Thallium	-0.0043	+/-0.0250	U	0.0063	0.0250	P	12/26/2019	04:43	I4122619A
	Vanadium	-0.0022	+/-0.0250	U	0.0063	0.0250	P	12/26/2019	04:43	I4122619A
	Zinc	-0.0004	+/-0.0100	U	0.0025	0.0100	P	12/26/2019	04:43	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB1										
	Aluminum	-0.0250	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	04:59	I4122619A
	Antimony	-0.0001	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	04:59	I4122619A
	Arsenic	0.0006	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	04:59	I4122619A
	Barium	-0.0011	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	04:59	I4122619A
	Beryllium	0.0002	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	04:59	I4122619A
	Cadmium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	04:59	I4122619A
	Calcium	-0.4952	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Chromium	-0.0005	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	04:59	I4122619A
	Cobalt	-0.0008	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	04:59	I4122619A
	Copper	-0.0016	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	04:59	I4122619A
	Iron	0.0002	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	04:59	I4122619A
	Lead	-0.0017	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	04:59	I4122619A
	Magnesium	-0.5451	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Manganese	-0.0009	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	04:59	I4122619A
	Nickel	-0.0013	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	04:59	I4122619A
	Potassium	-0.2761	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Selenium	0.0021	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	04:59	I4122619A
	Silver	-0.0003	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	04:59	I4122619A
	Sodium	-0.4382	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	04:59	I4122619A
	Thallium	-0.0020	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	04:59	I4122619A
	Vanadium	0.0015	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	04:59	I4122619A
	Zinc	-0.0004	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	04:59	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Aluminum	-0.0189	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	09:43	I4122619A
	Antimony	-0.0003	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	09:43	I4122619A
	Arsenic	0.0017	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	09:43	I4122619A
	Barium	-0.0006	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	09:43	I4122619A
	Beryllium	0.0000	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	09:43	I4122619A
	Cadmium	0.0002	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	09:43	I4122619A
	Calcium	-0.5031	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	09:43	I4122619A
	Chromium	-0.0007	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	09:43	I4122619A
	Cobalt	-0.0010	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	09:43	I4122619A
	Copper	-0.0008	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	09:43	I4122619A
	Iron	-0.0081	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	09:43	I4122619A
	Lead	-0.0016	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	09:43	I4122619A
	Magnesium	-0.5476	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	09:43	I4122619A
	Manganese	-0.0011	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	09:43	I4122619A
	Nickel	-0.0016	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	09:43	I4122619A
	Potassium	0.0021	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	09:43	I4122619A
	Selenium	0.0014	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	09:43	I4122619A
	Silver	-0.0008	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	09:43	I4122619A
	Sodium	-0.0037	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	09:43	I4122619A
	Thallium	-0.0035	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	09:43	I4122619A
	Vanadium	0.0044	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	09:43	I4122619A
	Zinc	-0.0008	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	09:43	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB3										
	Aluminum	-0.0271	+/-0.4000	U	0.1000	0.4000	P	12/26/2019	11:23	I4122619A
	Antimony	0.0001	+/-0.0200	U	0.0070	0.0200	P	12/26/2019	11:23	I4122619A
	Arsenic	0.0011	+/-0.0150	U	0.0025	0.0150	P	12/26/2019	11:23	I4122619A
	Barium	-0.0007	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	11:23	I4122619A
	Beryllium	0.0002	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	11:23	I4122619A
	Cadmium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/26/2019	11:23	I4122619A
	Calcium	-0.4962	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	11:23	I4122619A
	Chromium	-0.0004	+/-0.0100	U	0.0013	0.0100	P	12/26/2019	11:23	I4122619A
	Cobalt	-0.0005	+/-0.0250	U	0.0031	0.0250	P	12/26/2019	11:23	I4122619A
	Copper	0.0005	+/-0.0100	U	0.0020	0.0100	P	12/26/2019	11:23	I4122619A
	Iron	-0.0027	+/-0.1000	U	0.0400	0.1000	P	12/26/2019	11:23	I4122619A
	Lead	-0.0006	+/-0.0100	U	0.0047	0.0100	P	12/26/2019	11:23	I4122619A
	Magnesium	-0.5323	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	11:23	I4122619A
	Manganese	-0.0008	+/-0.0150	U	0.0019	0.0150	P	12/26/2019	11:23	I4122619A
	Nickel	-0.0013	+/-0.0400	U	0.0050	0.0400	P	12/26/2019	11:23	I4122619A
	Potassium	-0.2360	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	11:23	I4122619A
	Selenium	0.0023	+/-0.0200	U	0.0085	0.0200	P	12/26/2019	11:23	I4122619A
	Silver	-0.0003	+/-0.0100	U	0.0021	0.0100	P	12/26/2019	11:23	I4122619A
	Sodium	-0.4390	+/-5.0000	U	0.6250	5.0000	P	12/26/2019	11:23	I4122619A
	Thallium	-0.0046	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	11:23	I4122619A
	Vanadium	-0.0011	+/-0.0500	U	0.0063	0.0500	P	12/26/2019	11:23	I4122619A
	Zinc	-0.0005	+/-0.0200	U	0.0025	0.0200	P	12/26/2019	11:23	I4122619A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Aluminum	0.0026	+/-0.2000	U	0.1000	0.2000	P	12/31/2019	06:00	I4123119A
	Antimony	0.0012	+/-0.0100	U	0.0070	0.0100	P	12/31/2019	06:00	I4123119A
	Arsenic	0.0007	+/-0.0075	U	0.0025	0.0075	P	12/31/2019	06:00	I4123119A
	Barium	0.0002	+/-0.0125	U	0.0031	0.0125	P	12/31/2019	06:00	I4123119A
	Beryllium	0.0001	+/-0.0025	U	0.0006	0.0025	P	12/31/2019	06:00	I4123119A
	Cadmium	0.0003	+/-0.0025	U	0.0006	0.0025	P	12/31/2019	06:00	I4123119A
	Calcium	-0.1297	+/-2.5000	U	0.6250	2.5000	P	12/31/2019	06:00	I4123119A
	Chromium	-0.0003	+/-0.0050	U	0.0013	0.0050	P	12/31/2019	06:00	I4123119A
	Cobalt	0.0002	+/-0.0125	U	0.0031	0.0125	P	12/31/2019	06:00	I4123119A
	Copper	-0.0002	+/-0.0050	U	0.0020	0.0050	P	12/31/2019	06:00	I4123119A
	Iron	-0.0023	+/-0.0500	U	0.0400	0.0500	P	12/31/2019	06:00	I4123119A
	Lead	-0.0005	+/-0.0050	U	0.0047	0.0050	P	12/31/2019	06:00	I4123119A
	Magnesium	-0.2412	+/-2.5000	U	0.6250	2.5000	P	12/31/2019	06:00	I4123119A
	Manganese	-0.0004	+/-0.0075	U	0.0019	0.0075	P	12/31/2019	06:00	I4123119A
	Nickel	0.0000	+/-0.0200	U	0.0050	0.0200	P	12/31/2019	06:00	I4123119A
	Potassium	0.2586	+/-2.5000	U	0.6250	2.5000	P	12/31/2019	06:00	I4123119A
	Selenium	0.0023	+/-0.0100	U	0.0085	0.0100	P	12/31/2019	06:00	I4123119A
	Silver	0.0000	+/-0.0050	U	0.0021	0.0050	P	12/31/2019	06:00	I4123119A
	Sodium	-0.0323	+/-2.5000	U	0.6250	2.5000	P	12/31/2019	06:00	I4123119A
	Thallium	-0.0012	+/-0.0250	U	0.0063	0.0250	P	12/31/2019	06:00	I4123119A
	Vanadium	0.0003	+/-0.0250	U	0.0063	0.0250	P	12/31/2019	06:00	I4123119A
	Zinc	0.0003	+/-0.0100	U	0.0025	0.0100	P	12/31/2019	06:00	I4123119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB1										
	Aluminum	0.0076	+/-0.4000	U	0.1000	0.4000	P	12/31/2019	06:17	I4123119A
	Antimony	0.0030	+/-0.0200	U	0.0070	0.0200	P	12/31/2019	06:17	I4123119A
	Arsenic	0.0011	+/-0.0150	U	0.0025	0.0150	P	12/31/2019	06:17	I4123119A
	Barium	-0.0001	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	06:17	I4123119A
	Beryllium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	06:17	I4123119A
	Cadmium	0.0003	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	06:17	I4123119A
	Calcium	-0.1318	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	06:17	I4123119A
	Chromium	-0.0002	+/-0.0100	U	0.0013	0.0100	P	12/31/2019	06:17	I4123119A
	Cobalt	0.0004	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	06:17	I4123119A
	Copper	0.0006	+/-0.0100	U	0.0020	0.0100	P	12/31/2019	06:17	I4123119A
	Iron	0.0025	+/-0.1000	U	0.0400	0.1000	P	12/31/2019	06:17	I4123119A
	Lead	-0.0003	+/-0.0100	U	0.0047	0.0100	P	12/31/2019	06:17	I4123119A
	Magnesium	-0.2446	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	06:17	I4123119A
	Manganese	-0.0005	+/-0.0150	U	0.0019	0.0150	P	12/31/2019	06:17	I4123119A
	Nickel	-0.0001	+/-0.0400	U	0.0050	0.0400	P	12/31/2019	06:17	I4123119A
	Potassium	0.3317	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	06:17	I4123119A
	Selenium	0.0009	+/-0.0200	U	0.0085	0.0200	P	12/31/2019	06:17	I4123119A
	Silver	0.0000	+/-0.0100	U	0.0021	0.0100	P	12/31/2019	06:17	I4123119A
	Sodium	-0.0878	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	06:17	I4123119A
	Thallium	-0.0003	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	06:17	I4123119A
	Vanadium	-0.0005	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	06:17	I4123119A
	Zinc	0.0003	+/-0.0200	U	0.0025	0.0200	P	12/31/2019	06:17	I4123119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Aluminum	0.0100	+/-0.4000	U	0.1000	0.4000	P	12/31/2019	07:27	I4123119A
	Antimony	0.0016	+/-0.0200	U	0.0070	0.0200	P	12/31/2019	07:27	I4123119A
	Arsenic	0.0013	+/-0.0150	U	0.0025	0.0150	P	12/31/2019	07:27	I4123119A
	Barium	0.0004	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	07:27	I4123119A
	Beryllium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	07:27	I4123119A
	Cadmium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	07:27	I4123119A
	Calcium	-0.1319	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	07:27	I4123119A
	Chromium	-0.0003	+/-0.0100	U	0.0013	0.0100	P	12/31/2019	07:27	I4123119A
	Cobalt	0.0004	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	07:27	I4123119A
	Copper	-0.0003	+/-0.0100	U	0.0020	0.0100	P	12/31/2019	07:27	I4123119A
	Iron	0.0036	+/-0.1000	U	0.0400	0.1000	P	12/31/2019	07:27	I4123119A
	Lead	0.0000	+/-0.0100	U	0.0047	0.0100	P	12/31/2019	07:27	I4123119A
	Magnesium	-0.2466	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	07:27	I4123119A
	Manganese	-0.0005	+/-0.0150	U	0.0019	0.0150	P	12/31/2019	07:27	I4123119A
	Nickel	-0.0002	+/-0.0400	U	0.0050	0.0400	P	12/31/2019	07:27	I4123119A
	Potassium	0.3658	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	07:27	I4123119A
	Selenium	0.0013	+/-0.0200	U	0.0085	0.0200	P	12/31/2019	07:27	I4123119A
	Silver	-0.0001	+/-0.0100	U	0.0021	0.0100	P	12/31/2019	07:27	I4123119A
	Sodium	-0.0996	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	07:27	I4123119A
	Thallium	-0.0011	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	07:27	I4123119A
	Vanadium	0.0002	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	07:27	I4123119A
	Zinc	0.0001	+/-0.0200	U	0.0025	0.0200	P	12/31/2019	07:27	I4123119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB3										
	Aluminum	-0.0009	+/-0.4000	U	0.1000	0.4000	P	12/31/2019	08:34	I4123119A
	Antimony	0.0008	+/-0.0200	U	0.0070	0.0200	P	12/31/2019	08:34	I4123119A
	Arsenic	0.0008	+/-0.0150	U	0.0025	0.0150	P	12/31/2019	08:34	I4123119A
	Barium	0.0006	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	08:34	I4123119A
	Beryllium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	08:34	I4123119A
	Cadmium	0.0003	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	08:34	I4123119A
	Calcium	-0.1354	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	08:34	I4123119A
	Chromium	0.0001	+/-0.0100	U	0.0013	0.0100	P	12/31/2019	08:34	I4123119A
	Cobalt	0.0001	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	08:34	I4123119A
	Copper	0.0003	+/-0.0100	U	0.0020	0.0100	P	12/31/2019	08:34	I4123119A
	Iron	0.0010	+/-0.1000	U	0.0400	0.1000	P	12/31/2019	08:34	I4123119A
	Lead	-0.0003	+/-0.0100	U	0.0047	0.0100	P	12/31/2019	08:34	I4123119A
	Magnesium	-0.2539	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	08:34	I4123119A
	Manganese	-0.0004	+/-0.0150	U	0.0019	0.0150	P	12/31/2019	08:34	I4123119A
	Nickel	0.0000	+/-0.0400	U	0.0050	0.0400	P	12/31/2019	08:34	I4123119A
	Potassium	0.3835	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	08:34	I4123119A
	Selenium	0.0008	+/-0.0200	U	0.0085	0.0200	P	12/31/2019	08:34	I4123119A
	Silver	-0.0001	+/-0.0100	U	0.0021	0.0100	P	12/31/2019	08:34	I4123119A
	Sodium	-0.2911	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	08:34	I4123119A
	Thallium	-0.0012	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	08:34	I4123119A
	Vanadium	-0.0003	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	08:34	I4123119A
	Zinc	0.0002	+/-0.0200	U	0.0025	0.0200	P	12/31/2019	08:34	I4123119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB4										
	Aluminum	0.0043	+/-0.4000	U	0.1000	0.4000	P	12/31/2019	09:40	I4123119A
	Antimony	0.0029	+/-0.0200	U	0.0070	0.0200	P	12/31/2019	09:40	I4123119A
	Arsenic	-0.0001	+/-0.0150	U	0.0025	0.0150	P	12/31/2019	09:40	I4123119A
	Barium	0.0005	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	09:40	I4123119A
	Beryllium	0.0001	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	09:40	I4123119A
	Cadmium	0.0004	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	09:40	I4123119A
	Calcium	-0.1315	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	09:40	I4123119A
	Chromium	-0.0001	+/-0.0100	U	0.0013	0.0100	P	12/31/2019	09:40	I4123119A
	Cobalt	0.0001	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	09:40	I4123119A
	Copper	-0.0005	+/-0.0100	U	0.0020	0.0100	P	12/31/2019	09:40	I4123119A
	Iron	0.0032	+/-0.1000	U	0.0400	0.1000	P	12/31/2019	09:40	I4123119A
	Lead	-0.0006	+/-0.0100	U	0.0047	0.0100	P	12/31/2019	09:40	I4123119A
	Magnesium	-0.2427	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	09:40	I4123119A
	Manganese	-0.0004	+/-0.0150	U	0.0019	0.0150	P	12/31/2019	09:40	I4123119A
	Nickel	0.0004	+/-0.0400	U	0.0050	0.0400	P	12/31/2019	09:40	I4123119A
	Potassium	0.2807	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	09:40	I4123119A
	Selenium	0.0011	+/-0.0200	U	0.0085	0.0200	P	12/31/2019	09:40	I4123119A
	Silver	0.0002	+/-0.0100	U	0.0021	0.0100	P	12/31/2019	09:40	I4123119A
	Sodium	-0.4252	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	09:40	I4123119A
	Thallium	-0.0011	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	09:40	I4123119A
	Vanadium	-0.0013	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	09:40	I4123119A
	Zinc	0.0003	+/-0.0200	U	0.0025	0.0200	P	12/31/2019	09:40	I4123119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
CCB5										
	Aluminum	-0.0012	+/-0.4000	U	0.1000	0.4000	P	12/31/2019	10:46	I4123119A
	Antimony	0.0023	+/-0.0200	U	0.0070	0.0200	P	12/31/2019	10:46	I4123119A
	Arsenic	0.0006	+/-0.0150	U	0.0025	0.0150	P	12/31/2019	10:46	I4123119A
	Barium	0.0006	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	10:46	I4123119A
	Beryllium	0.0002	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	10:46	I4123119A
	Cadmium	0.0003	+/-0.0050	U	0.0006	0.0050	P	12/31/2019	10:46	I4123119A
	Calcium	-0.1301	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	10:46	I4123119A
	Chromium	0.0001	+/-0.0100	U	0.0013	0.0100	P	12/31/2019	10:46	I4123119A
	Cobalt	0.0003	+/-0.0250	U	0.0031	0.0250	P	12/31/2019	10:46	I4123119A
	Copper	0.0004	+/-0.0100	U	0.0020	0.0100	P	12/31/2019	10:46	I4123119A
	Iron	0.0052	+/-0.1000	U	0.0400	0.1000	P	12/31/2019	10:46	I4123119A
	Lead	-0.0005	+/-0.0100	U	0.0047	0.0100	P	12/31/2019	10:46	I4123119A
	Magnesium	-0.2531	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	10:46	I4123119A
	Manganese	-0.0004	+/-0.0150	U	0.0019	0.0150	P	12/31/2019	10:46	I4123119A
	Nickel	-0.0001	+/-0.0400	U	0.0050	0.0400	P	12/31/2019	10:46	I4123119A
	Potassium	0.3521	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	10:46	I4123119A
	Selenium	0.0016	+/-0.0200	U	0.0085	0.0200	P	12/31/2019	10:46	I4123119A
	Silver	0.0001	+/-0.0100	U	0.0021	0.0100	P	12/31/2019	10:46	I4123119A
	Sodium	-0.3343	+/-5.0000	U	0.6250	5.0000	P	12/31/2019	10:46	I4123119A
	Thallium	-0.0009	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	10:46	I4123119A
	Vanadium	-0.0008	+/-0.0500	U	0.0063	0.0500	P	12/31/2019	10:46	I4123119A
	Zinc	0.0003	+/-0.0200	U	0.0025	0.0200	P	12/31/2019	10:46	I4123119A

- 4 -

INTERFERENCE CHECK SAMPLE

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** ICP4

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Aluminum	496	500	99	80 - 120%	12/26/2019	04:48	I4122619A
	Antimony	-0.0096			-0.0200 to 0.0200	12/26/2019	04:48	I4122619A
	Arsenic	-0.0032			-0.0150 to 0.0150	12/26/2019	04:48	I4122619A
	Barium	-0.00083			-0.02500 to 0.0250	12/26/2019	04:48	I4122619A
	Beryllium	-0.00			-0.0050 to 0.0050	12/26/2019	04:48	I4122619A
	Cadmium	-0.00060			-0.00500 to 0.0050	12/26/2019	04:48	I4122619A
	Calcium	472	500	94	80 - 120%	12/26/2019	04:48	I4122619A
	Chromium	0.00008			-0.01000 to 0.0100	12/26/2019	04:48	I4122619A
	Cobalt	-0.0035			-0.0250 to 0.0250	12/26/2019	04:48	I4122619A
	Copper	0.0030			-0.0100 to 0.0100	12/26/2019	04:48	I4122619A
	Iron	467	500	93	80 - 120%	12/26/2019	04:48	I4122619A
	Lead	0.0085			-0.0100 to 0.0100	12/26/2019	04:48	I4122619A
	Magnesium	491	500	98	80 - 120%	12/26/2019	04:48	I4122619A
	Manganese	-0.0053			-0.0150 to 0.0150	12/26/2019	04:48	I4122619A
	Nickel	-0.0095			-0.0400 to 0.0400	12/26/2019	04:48	I4122619A
	Potassium	0.11			-5.00 to 5.00	12/26/2019	04:48	I4122619A
	Selenium	-0.0075			-0.0200 to 0.0200	12/26/2019	04:48	I4122619A
	Silver	-0.0018			-0.0100 to 0.0100	12/26/2019	04:48	I4122619A
	Sodium	-1.1			-5.0 to 5.0	12/26/2019	04:48	I4122619A
	Thallium	0.0061			-0.0500 to 0.0500	12/26/2019	04:48	I4122619A
	Vanadium	0.0085			-0.0500 to 0.0500	12/26/2019	04:48	I4122619A
	Zinc	-0.0062			-0.0200 to 0.0200	12/26/2019	04:48	I4122619A

- 4 -

INTERFERENCE CHECK SAMPLE

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** ICP4

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Aluminum	516	500	103	80 - 120%	12/31/2019	06:06	I4123119A
	Antimony	-0.0068			-0.0200 to 0.0200	12/31/2019	06:06	I4123119A
	Arsenic	-0.0018			-0.0150 to 0.0150	12/31/2019	06:06	I4123119A
	Barium	0.0005			-0.0250 to 0.0250	12/31/2019	06:06	I4123119A
	Beryllium	-0.00016			-0.00500 to 0.0050	12/31/2019	06:06	I4123119A
	Cadmium	-0.00070			-0.00500 to 0.0050	12/31/2019	06:06	I4123119A
	Calcium	485	500	97	80 - 120%	12/31/2019	06:06	I4123119A
	Chromium	0.0003			-0.0100 to 0.0100	12/31/2019	06:06	I4123119A
	Cobalt	-0.0024			-0.0250 to 0.0250	12/31/2019	06:06	I4123119A
	Copper	0.0004			-0.0100 to 0.0100	12/31/2019	06:06	I4123119A
	Iron	481	500	96	80 - 120%	12/31/2019	06:06	I4123119A
	Lead	0.0048			-0.0100 to 0.0100	12/31/2019	06:06	I4123119A
	Magnesium	502	500	100	80 - 120%	12/31/2019	06:06	I4123119A
	Manganese	-0.0051			-0.0150 to 0.0150	12/31/2019	06:06	I4123119A
	Nickel	-0.0094			-0.0400 to 0.0400	12/31/2019	06:06	I4123119A
	Potassium	0.29			-5.00 to 5.00	12/31/2019	06:06	I4123119A
	Selenium	-0.00087			-0.02000 to 0.0200	12/31/2019	06:06	I4123119A
	Silver	-0.0021			-0.0100 to 0.0100	12/31/2019	06:06	I4123119A
	Sodium	-0.67			-5.00 to 5.00	12/31/2019	06:06	I4123119A
	Thallium	0.0098			-0.0500 to 0.0500	12/31/2019	06:06	I4123119A
	Vanadium	0.018			-0.050 to 0.050	12/31/2019	06:06	I4123119A
	Zinc	-0.0064			-0.0200 to 0.0200	12/31/2019	06:06	I4123119A

- 5b -

POST DIGEST SPIKE SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Matrix: SOIL **Level:** **Client ID:** MPGI-SF-Soil-09-121719A

Sample ID: UL20021-001 **Spiked ID:** UL20021-001A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	85 - 115	21240.4000		20838.2000		1216.94	33		P
Antimony	mg/Kg	85 - 115	23.4929		0.3067	U	24.34	97		P
Calcium	mg/Kg	85 - 115	17809.2500		16305.7200		2433.87	62		P
Iron	mg/Kg	85 - 115	26412.3700		26239.5700		1216.94	14		P
Magnesium	mg/Kg	85 - 115	12461.4200		10855.0700		2433.87	66		P
Manganese	mg/Kg	85 - 115	1782.2020	D	1673.8950	D	121.69	89		P
Potassium	mg/Kg	85 - 115	5641.1060		3229.3830		2433.87	99		P

- 9 -

SERIAL DILUTION SAMPLE SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Matrix: SOIL **Level:** **Client ID:** MPGI-SF-Soil-09-121719L

Sample ID: **UL20021-001** **Serial Dilution ID:** **UL20021-001L**

Batch Number: 40381

Analyte	Initial Result mg/Kg	C	Serial Result mg/Kg	C	% Difference	Qual	Acceptance Limits	M
Aluminum	20838.200		21528.810		3.3		10.00 %	P
Antimony	0.307	U	1.533	U			10.00 %	P
Arsenic	13.616		14.375		5.6		10.00 %	P
Barium	224.744		231.181		2.9		10.00 %	P
Beryllium	0.978		0.977	J	0.2		10.00 %	P
Cadmium	0.469		0.608	J	29.9		10.00 %	P
Calcium	16305.720		17954.970		10.1	E	10.00 %	P
Chromium	27.214		29.109		7.0		10.00 %	P
Cobalt	14.635		15.190		3.8		10.00 %	P
Copper	26.269		26.809		2.1		10.00 %	P
Iron	26239.570		28799.090		9.8		10.00 %	P
Lead	27.044		28.698		6.1		10.00 %	P
Magnesium	10855.070		11566.970		6.6		10.00 %	P
Manganese	1673.895	D	1947.462	D	16.3	E	10.00 %	P
Nickel	33.586		34.856		3.8		10.00 %	P
Potassium	3229.383		3395.859		5.2		10.00 %	P
Selenium	0.988	UD	4.941	UD	17.1		10.00 %	P
Silver	0.152	U	0.761	U			10.00 %	P
Sodium	132.975	J	190.146	U	100.0		10.00 %	P
Thallium	0.761	U	3.803	U			10.00 %	P
Vanadium	46.182		48.735		5.5		10.00 %	P
Zinc	98.791		104.364		5.6		10.00 %	P

9-IN

METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Shealy Environmental Services, I Contract: Joliet Chemical Fire PRP Clean UP

Lab Code: Shealy Case No.: Mod. Ref. No.: SDG No.: UL20021

Instrument Type: P Instrument ID: ICP4

Preparation Method: 3050B

Concentration Units (ug/L, mg/kg, or ug): MG/KG

Analyte	Wavelength/Mass	MDL
Aluminum	308.22	7.50
Antimony	206.83	0.25
Arsenic	189.04	0.2500
Barium	455.40	0.3250
Beryllium	313.04	0.06
Cadmium	228.80	0.0625
Calcium	217.93	31.25
Chromium	267.72	0.1250
Cobalt	228.62	0.33
Copper	327.40	0.23
Iron	261.19	2.28
Lead	220.35	0.2250
Magnesium	279.00	31.25
Manganese	257.61	0.30
Nickel	231.60	0.53
Potassium	766.49	31.25
Selenium	196.09	0.4060
Silver	328.07	0.1250
Sodium	589.59	31.25
Thallium	190.86	0.63
Vanadium	292.40	0.63
Zinc	206.20	0.63

Comments:

9-IN

METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Shealy Environmental Services, I Contract: Joliet Chemical Fire PRP Clean UP

Lab Code: Shealy Case No.: Mod. Ref. No.: SDG No.: UL20021

Instrument Type: P Instrument ID: ICP4

Preparation Method: 3005A

Concentration Units (ug/L, mg/kg, or ug): MG/L

Analyte	Wavelength/Mass	MDL
Aluminum	308.22	0.100
Antimony	206.83	0.007
Arsenic	189.04	0.0025
Barium	455.40	0.0031
Beryllium	313.04	0.0006
Cadmium	228.80	0.0006
Calcium	217.93	0.625
Chromium	267.72	0.0013
Cobalt	228.62	0.003
Copper	327.40	0.002
Iron	261.19	0.040
Lead	220.35	0.0047
Magnesium	279.00	0.625
Manganese	257.61	0.002
Nickel	231.60	0.005
Potassium	766.49	0.625
Selenium	196.09	0.0085
Silver	328.07	0.0021
Sodium	589.59	0.625
Thallium	190.86	0.006
Vanadium	292.40	0.006
Zinc	206.20	0.003

Comments:

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clea **Lab Code:** Shealy **Case No.:** _____ **SAS No.:** _____

Instrument ID: ICP4 **Date:** 7/2/2019

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	Ag
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.00	0.0000000	0.0000000	-0.0000150	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.60	0.0000000	0.0000000	-0.0006540	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	-0.0000100	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000230	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000790	0.0000000	0.0000340	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000380	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Silicon	212.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	337.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Uranium	385.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000270	0.0000000	0.0000000
W	239.709	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clea **Lab Code:** Shealy **Case No.:** _____ **SAS No.:** _____

Instrument ID: ICP4 **Date:** 7/2/2019

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: As	B	Ba	Be	Cd
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0135940	0.0000000	-0.0002000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	212.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	337.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Uranium	385.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
W	239.709	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clea **Lab Code:** Shealy **Case No.:** _____ **SAS No.:** _____

Instrument ID: ICP4 **Date:** 7/2/2019

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Co	Cr	Cu	K	Mn
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0071990	0.0000000	0.0000000	0.0000000
Arsenic	189.00	0.0000000	-0.0027390	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.60	0.0027810	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0002990	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0001630	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0006100
Silicon	212.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0033260	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	337.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Uranium	385.4	0.0000000	-0.0200660	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
W	239.709	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clea **Lab Code:** Shealy **Case No.:** _____ **SAS No.:** _____

Instrument ID: ICP4 **Date:** 7/2/2019

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Mo	Na	Ni	Pb	Sb
Aluminum	308.215	0.0245710	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	-0.0040070	0.0000000	-0.0008000	0.0000000	0.0000000
Arsenic	189.00	0.0014420	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.60	-0.0034100	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0009240	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	212.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	337.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Uranium	385.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
W	239.709	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clea **Lab Code:** Shealy **Case No.:** _____ **SAS No.:** _____

Instrument ID: ICP4 **Date:** 7/2/2019

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Se	Si	Sn	Sr	Ti
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	-0.0039320	0.0000000	0.0000000
Arsenic	189.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0021530
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	212.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	337.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Uranium	385.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
W	239.709	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

- 11 -

ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clea **Lab Code:** Shealy **Case No.:** _____ **SAS No.:** _____

Instrument ID: ICP4 **Date:** 7/2/2019

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Tl	U	V	Zn	W
Aluminum	308.215	0.0000000	0.0000000	0.0149390	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	-0.0111410
Arsenic	189.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0013770
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0004600	0.0000000	0.0000000
Boron	249.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	-0.0024720
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	0.0000000	0.0000000	0.0000000	0.0000000	0.0111030
Silicon	212.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	330.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.7	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	337.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Uranium	385.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
W	239.709	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

- 12 -
LINEAR RANGES

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Instrument ID: ICP4 **Date:** Analyzed Daily

Analyte	Integration Time (sec)	LDR ug/L
Aluminum	15.00	500000
Antimony	15.00	5000
Arsenic	15.00	10000
Barium	15.00	20000
Beryllium	15.00	5000
Cadmium	15.00	10000
Calcium	15.00	500000
Chromium	15.00	20000
Cobalt	15.00	20000
Copper	15.00	50000
Iron	15.00	500000
Lead	15.00	5000
Magnesium	15.00	500000
Manganese	15.00	20000
Nickel	15.00	20000
Potassium	15.00	250000
Selenium	15.00	5000
Silver	15.00	2500
Sodium	15.00	250000
Thallium	15.00	10000
Vanadium	15.00	10000
Zinc	15.00	30000

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1.00	0410		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CAL1 MW 12154	1.00	0416		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CAL2 MW12155	1.00	0421		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CAL3 MW12174	1.00	0426		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CAL4 MW12156	1.00	0432		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICV1	1.00	0437		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICB1	1.00	0443		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSA	1.00	0448		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCV1	1.00	0454		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB1	1.00	0459		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	0505																									
ZZZZZZ	1.00	0511																									
ZZZZZZ	1.00	0516																									
ZZZZZZ	1.00	0522																									
ZZZZZZ	1.00	0530																									
ZZZZZZ	1.00	0536																									
ZZZZZZ	1.00	0541																									
ZZZZZZ	1.00	0547																									
ZZZZZZ	5.00	0552																									
ZZZZZZ	5.00	0558																									
CCV2	1.00	0603		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB2	1.00	0612		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	10.00	0617																									
ZZZZZZ	10.00	0622																									
ZZZZZZ	10.00	0628																									
ZZZZZZ	50.00	0633																									
ZZZZZZ	10.00	0639																									
UO39838-001	1.00	0644		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UO39838-002	1.00	0650		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UL20021-010	1.00	0655		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UL20021-011	1.00	0701		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UL20021-012	1.00	0706		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCV3	1.00	0712		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB3	1.00	0717		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UL20021-013	1.00	0723		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UL20021-014	1.00	0728		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
UL20021-015	1.00	0734		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UL20021-016	1.00	0739		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	0745																										
ZZZZZZ	1.00	0750																										
ZZZZZZ	1.00	0756																										
ZZZZZZ	1.00	0801																										
ZZZZZZ	1.00	0807																										
ZZZZZZ	1.00	0812																										
CCV4	1.00	0818		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB4	1.00	0823		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	0829																										
ZZZZZZ	1.00	0834																										
ZZZZZZ	1.00	0840																										
ZZZZZZ	1.00	0845																										
ZZZZZZ	1.00	0851																										
ZZZZZZ	1.00	0856																										
ZZZZZZ	1.00	0902																										
ZZZZZZ	1.00	0907																										
ZZZZZZ	1.00	0914																										
ZZZZZZ	1.00	0920																										
ZZZZZZ	1.00	0926																										
ZZZZZZ	1.00	0931																										
ZZZZZZ	1.00	0938																										
ZZZZZZ	1.00	0943																										
ZZZZZZ	1.00	0949																										
ZZZZZZ	1.00	0955																										
ZZZZZZ	1.00	1000																										
ZZZZZZ	1.00	1006																										
ZZZZZZ	1.00	1055																										
ZZZZZZ	1.00	1101																										
ZZZZZZ	1.00	1107																										
ZZZZZZ	1.00	1112																										
ZZZZZZ	1.00	1118																										
ZZZZZZ	1.00	1123																										
ZZZZZZ	1.00	1128																										
ZZZZZZ	1.00	1134																										

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1139																								
ZZZZZZ	1.00	1145																								
ZZZZZZ	5.00	1151																								
ZZZZZZ	1.00	1156																								
ZZZZZZ	1.00	1201																								
ZZZZZZ	1.00	1207																								
ZZZZZZ	1.00	1213																								
ZZZZZZ	1.00	1218																								
ZZZZZZ	1.00	1224																								
ZZZZZZ	1.00	1229																								
ZZZZZZ	1.00	1235																								
ZZZZZZ	5.00	1240																								
ZZZZZZ	1.00	1246																								
ZZZZZZ	1.00	1251																								
ZZZZZZ	5.00	1257																								
ZZZZZZ	10.00	1302																								
ZZZZZZ	1.00	1308																								
ZZZZZZ	1.00	1313																								
ZZZZZZ	1.00	1319																								
ZZZZZZ	1.00	1324																								
ZZZZZZ	1.00	1330																								
ZZZZZZ	1.00	1335																								
ZZZZZZ	1.00	1341																								
ZZZZZZ	1.00	1346																								
ZZZZZZ	1.00	1352																								
ZZZZZZ	1.00	1400																								
ZZZZZZ	5.00	1405																								
ZZZZZZ	1.00	1411																								
ZZZZZZ	5.00	1416																								
ZZZZZZ	10.00	1422																								
ZZZZZZ	1.00	1428																								
ZZZZZZ	1.00	1433																								
ZZZZZZ	1.00	1439																								
ZZZZZZ	1.00	1444																								
ZZZZZZ	1.00	1450																								
ZZZZZZ	1.00	1455																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1500																								
ZZZZZZ	100.00	1506																								
ZZZZZZ	100.00	1512																								
ZZZZZZ	1.00	1517																								
ZZZZZZ	1.00	1523																								
ZZZZZZ	1.00	1528																								
ZZZZZZ	1.00	1533																								
ZZZZZZ	1.00	1539																								
ZZZZZZ	1.00	1544																								
ZZZZZZ	1.00	1550																								
ZZZZZZ	5.00	1555																								
ZZZZZZ	1.00	1601																								
ZZZZZZ	1.00	1606																								
ZZZZZZ	1.00	1612																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Blank	1.00	0410		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CAL1 MW 12154	1.00	0416		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CAL2 MW12155	1.00	0421		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CAL3 MW12174	1.00	0426		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CAL4 MW12156	1.00	0432		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICV1	1.00	0437		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICB1	1.00	0443		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ICSA	1.00	0448		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCV1	1.00	0454		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCB1	1.00	0459		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ZZZZZZ	1.00	0505																												
ZZZZZZ	1.00	0511																												
ZZZZZZ	1.00	0516																												
ZZZZZZ	1.00	0522																												
ZZZZZZ	1.00	0530																												
ZZZZZZ	1.00	0536																												
ZZZZZZ	1.00	0541																												
ZZZZZZ	1.00	0547																												
ZZZZZZ	5.00	0552																												
ZZZZZZ	5.00	0558																												
ZZZZZZ	1.00	0603																												
ZZZZZZ	1.00	0612																												
ZZZZZZ	10.00	0617																												
ZZZZZZ	10.00	0622																												
ZZZZZZ	10.00	0628																												
ZZZZZZ	50.00	0633																												
ZZZZZZ	10.00	0639																												
ZZZZZZ	1.00	0644																												
ZZZZZZ	1.00	0650																												
ZZZZZZ	1.00	0655																												
ZZZZZZ	1.00	0701																												
ZZZZZZ	1.00	0706																												
ZZZZZZ	1.00	0712																												
ZZZZZZ	1.00	0717																												
ZZZZZZ	1.00	0723																												
ZZZZZZ	1.00	0728																												

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0734																										
ZZZZZZ	1.00	0739																										
ZZZZZZ	1.00	0745																										
ZZZZZZ	1.00	0750																										
ZZZZZZ	1.00	0756																										
ZZZZZZ	1.00	0801																										
ZZZZZZ	1.00	0807																										
ZZZZZZ	1.00	0812																										
ZZZZZZ	1.00	0818																										
ZZZZZZ	1.00	0823																										
ZZZZZZ	1.00	0829																										
ZZZZZZ	1.00	0834																										
ZZZZZZ	1.00	0840																										
ZZZZZZ	1.00	0845																										
ZZZZZZ	1.00	0851																										
ZZZZZZ	1.00	0856																										
ZZZZZZ	1.00	0902																										
ZZZZZZ	1.00	0907																										
ZZZZZZ	1.00	0914																										
ZZZZZZ	1.00	0920																										
ZZZZZZ	1.00	0926																										
ZZZZZZ	1.00	0931																										
CCV2	1.00	0938		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB2	1.00	0943		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	0949																										
UO39905-001	1.00	0955		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
UO39905-002	1.00	1000		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	1006																										
ZZZZZZ	1.00	1055																										
ZZZZZZ	1.00	1101																										
UL20021-017	1.00	1107		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	1112																										
CCV3	1.00	1118		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB3	1.00	1123		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1.00	1128																										
ZZZZZZ	1.00	1134																										

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1139																								
ZZZZZZ	1.00	1145																								
ZZZZZZ	5.00	1151																								
ZZZZZZ	1.00	1156																								
ZZZZZZ	1.00	1201																								
ZZZZZZ	1.00	1207																								
ZZZZZZ	1.00	1213																								
ZZZZZZ	1.00	1218																								
ZZZZZZ	1.00	1224																								
ZZZZZZ	1.00	1229																								
ZZZZZZ	1.00	1235																								
ZZZZZZ	5.00	1240																								
ZZZZZZ	1.00	1246																								
ZZZZZZ	1.00	1251																								
ZZZZZZ	5.00	1257																								
ZZZZZZ	10.00	1302																								
ZZZZZZ	1.00	1308																								
ZZZZZZ	1.00	1313																								
ZZZZZZ	1.00	1319																								
ZZZZZZ	1.00	1324																								
ZZZZZZ	1.00	1330																								
ZZZZZZ	1.00	1335																								
ZZZZZZ	1.00	1341																								
ZZZZZZ	1.00	1346																								
ZZZZZZ	1.00	1352																								
ZZZZZZ	1.00	1400																								
ZZZZZZ	5.00	1405																								
ZZZZZZ	1.00	1411																								
ZZZZZZ	5.00	1416																								
ZZZZZZ	10.00	1422																								
ZZZZZZ	1.00	1428																								
ZZZZZZ	1.00	1433																								
ZZZZZZ	1.00	1439																								
ZZZZZZ	1.00	1444																								
ZZZZZZ	1.00	1450																								
ZZZZZZ	1.00	1455																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4122619A

Start Date: 12/26/2019 End Date: 12/26/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1500																								
ZZZZZZ	100.00	1506																								
ZZZZZZ	100.00	1512																								
ZZZZZZ	1.00	1517																								
ZZZZZZ	1.00	1523																								
ZZZZZZ	1.00	1528																								
ZZZZZZ	1.00	1533																								
ZZZZZZ	1.00	1539																								
ZZZZZZ	1.00	1544																								
ZZZZZZ	1.00	1550																								
ZZZZZZ	5.00	1555																								
ZZZZZZ	1.00	1601																								
ZZZZZZ	1.00	1606																								
ZZZZZZ	1.00	1612																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4123119A

Start Date: 12/31/2019 End Date: 12/31/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1.00	0527		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CAL1 MW 12154	1.00	0533		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CAL2 MW12155	1.00	0538		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CAL3 MW12174	1.00	0544		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CAL4 MW12156	1.00	0549		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
ICV1	1.00	0555		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
ICB1	1.00	0600		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
ICSA	1.00	0606		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CCV1	1.00	0612		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CCB1	1.00	0617		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
ZZZZZZ	1.00	0623																										
ZZZZZZ	1.00	0629																										
ZZZZZZ	1.00	0636																										
ZZZZZZ	1.00	0641																										
UO40381-001	1.00	0647		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UO40381-002	1.00	0652		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UL20021-001	1.00	0658		X	X	X	X	X	X	X	X	x	x	x	X	X			X	X		X	X	X	x	X	
UL20021-001S	1.00	0704		X	X	X	X	X	X	X	X	x	x	x	X	X			X	X		X	X	X	x	X	
UL20021-001SD	1.00	0710		X	X	X	X	X	X	X	X	x	x	x	X	X			X	X		X	X	X	x	X	
UL20021-001L	5.00	0716		X	X	X	X	X	X	X	X	x	x	x	X	X			X	X		X	X	X	x	X	
CCV2	1.00	0721		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CCB2	1.00	0727		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UL20021-001A	1.00	0732		X	X					X				X		X				X								
UL20021-002	1.00	0738		X	X		X	X		X	X	x	x			X				X		X	X			X		
UL20021-003	1.00	0744		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UL20021-004	1.00	0749		X	X		X	X		X	X	x	x			X				X		X	X			X		
UL20021-005	1.00	0755		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UL20021-006	1.00	0801		X	X	X	X	X	X	X	X	x	x	x	X	X			X	X		X	X	X	x	X	
UL20021-007	1.00	0806		X	X		X	X		X	X	x	x			X				X		X	X			X		
UL20021-008	1.00	0812		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UL20021-009	1.00	0817		X	X	X	X	X	X	X	X	x	x	x	X	X			X	X		X	X	X	x	X	
UL20021-001	2.00	0823															X				X							
CCV3	1.00	0828		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
CCB3	1.00	0834		X	X	X	X	X	X	X	X	x	x	x	X	X	X		X	X	X	X	X	X	x	X	
UL20021-001S	2.00	0839															X				X							
UL20021-001SD	2.00	0845															X				X							

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4123119A

Start Date: 12/31/2019 End Date: 12/31/2019

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
UL20021-001L	10.00	0851															X				X									
UL20021-001A	2.00	0856															X													
UL20021-002	2.00	0902				X			X					X	X		X		X		X			X	X					
UL20021-004	2.00	0907				X			X					X	X				X					X	X					
UL20021-004	4.00	0913															X				X									
ZZZZZZ	3.00	0918																												
UL20021-007	3.00	0924				X			X					X	X		X		X		X			X	X					
ZZZZZZ	2.00	0929																												
CCV4	1.00	0935		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCB4	1.00	0940		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
UL20021-009	5.00	0946															X				X									
ZZZZZZ	3.00	0951																												
UL20021-006	3.00	0957															X				X									
ZZZZZZ	1.00	1002																												
ZZZZZZ	1.00	1008																												
ZZZZZZ	1.00	1013																												
ZZZZZZ	1.00	1019																												
ZZZZZZ	1.00	1024																												
ZZZZZZ	1.00	1030																												
ZZZZZZ	1.00	1035																												
CCV5	1.00	1041		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
CCB5	1.00	1046		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
ZZZZZZ	1.00	1052																												
ZZZZZZ	1.00	1057																												
ZZZZZZ	1.00	1102																												
ZZZZZZ	5.00	1108																												
ZZZZZZ	1.00	1113																												
ZZZZZZ	1.00	1119																												
ZZZZZZ	1.00	1124																												
ZZZZZZ	1.00	1130																												
ZZZZZZ	1.00	1135																												
ZZZZZZ	1.00	1141																												
ZZZZZZ	1.00	1146																												
ZZZZZZ	1.00	1152																												
ZZZZZZ	1.00	1157																												
ZZZZZZ	3.00	1203																												

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: ICP4 Run Number: I4123119A

Start Date: 12/31/2019 End Date: 12/31/2019

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1.00	1208																												
ZZZZZZ	1.00	1214																												
ZZZZZZ	2.00	1219																												
ZZZZZZ	10.00	1225																												
ZZZZZZ	10.00	1230																												
ZZZZZZ	10.00	1236																												
ZZZZZZ	50.00	1241																												
ZZZZZZ	10.00	1247																												
ZZZZZZ	1.00	1252																												
ZZZZZZ	1.00	1257																												
ZZZZZZ	1.00	1303																												
ZZZZZZ	1.00	1308																												
ZZZZZZ	1.00	1314																												
ZZZZZZ	1.00	1319																												
ZZZZZZ	1.00	1325																												
ZZZZZZ	1.00	1331																												
ZZZZZZ	1.00	1336																												
ZZZZZZ	1.00	1342																												
ZZZZZZ	1.00	1347																												
ZZZZZZ	1.00	1353																												
ZZZZZZ	1.00	1358																												
ZZZZZZ	1.00	1404																												
ZZZZZZ	1.00	1409																												
ZZZZZZ	5.00	1415																												
ZZZZZZ	1.00	1420																												
ZZZZZZ	1.00	1426																												
ZZZZZZ	1.00	1431																												

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Shealy Environmental Services, Inc. **Contract:** Joliet Chemical Fire PRP Clean U

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:** UL20021

Instrument ID: ICP4 **Start Date:** 12/26/2019

Analytical Method: ICP-AES **Run Batch:** I4122619A

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0.00	-17.14	0	400	398	-1	5000	5241	5
Antimony	0.00	0.90	0	20.0	19	-3	100	98	-2
Arsenic	0.00	0.76	0	15.0	14	-3	100	98	-2
Barium	0.00	-1.11	0	25.0	25	0	500	520	4
Beryllium	0.00	0	0	5.00	5.3	7	500	546	9
Cadmium	0.00	0.10	0	5.00	5.2	4	100	99	-1
Calcium	0.00	-496.78	0	5000	4856	-3	10000	10172	2
Chromium	0.00	-0.46	0	10.0	10.0	0	500	524	5
Cobalt	0.00	-0.78	0	25.0	25	-1	500	519	4
Copper	0.00	0.040	0	10.0	9.8	-3	500	512	2
Iron	0.00	-4.66	0	100	98	-2	5000	5321	6
Lead	0.00	-0.34	0	10.0	9.7	-3	100	106	6
Magnesium	0.00	-540.00	0	5000	4903	-2	10000	10230	2
Manganese	0.00	-0.92	0	15.0	15	-1	500	533	7
Nickel	0.00	-1.32	0	40.0	40	0	500	517	3
Potassium	0.00	-419.84	0	5000	4835	-3	10000	10173	2
Selenium	0.00	0.42	0	20.0	20	-1	100	99	-1
Silver	0.00	-0.40	0	10.0	10	4	100	100	0
Sodium	0.00	-608.75	0	5000	4826	-3	10000	10241	2
Thallium	0.00	-3.85	0	50.0	51	1	200	212	6
Vanadium	0.00	-2.14	0	50.0	50	0	500	520	4
Zinc	0.00	-0.46	0	20.0	20	-1	500	517	3

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Shealy Environmental Services, Inc. **Contract:** Joliet Chemical Fire PRP Clean U

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:** UL20021

Instrument ID: ICP4 **Start Date:** 12/31/2019

Analytical Method: ICP-AES **Run Batch:** I4123119A

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	0.00	-0.84	0	400	400	0	5000	5010	0
Antimony	0.00	3.0	0	20.0	17	-13	100	99	-1
Arsenic	0.00	0.97	0	15.0	15	-2	100	96	-4
Barium	0.00	-0.33	0	25.0	25	1	500	499	0
Beryllium	0.00	0	0	5.00	5.0	1	500	521	4
Cadmium	0.00	0.40	0	5.00	5.1	2	100	95	-5
Calcium	0.00	-133.18	0	5000	4973	-1	10000	10060	1
Chromium	0.00	-0.32	0	10.0	10	1	500	508	2
Cobalt	0.00	0.13	0	25.0	25	-1	500	501	0
Copper	0.00	-0.46	0	10.0	10	4	500	504	1
Iron	0.00	-5.74	0	100	103	3	5000	5118	2
Lead	0.00	-1.00	0	10.0	11	11	100	100	0
Magnesium	0.00	-247.10	0	5000	4976	0	10000	10090	1
Manganese	0.00	-0.49	0	15.0	15	-1	500	519	4
Nickel	0.00	0.14	0	40.0	40	-1	500	504	1
Potassium	0.00	318	0	5000	5225	5	10000	9857	-1
Selenium	0.00	1.1	0	20.0	20	-2	100	96	-4
Silver	0.00	0.16	0	10.0	10.0	0	100	99	-1
Sodium	0.00	-18.15	0	5000	5062	1	10000	9874	-1
Thallium	0.00	-1.77	0	50.0	51	2	200	204	2
Vanadium	0.00	-0.30	0	50.0	50	1	500	498	0
Zinc	0.00	0.20	0	20.0	20	-2	500	507	1

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Shealy Environmental Services, **Contract:** Joliet Chemical Fire PRP Clean U

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:** UL20021

Instrument ID: ICP4 **Start Date:** 12/26/2019

Analytical Method: ICP-AES **Run Batch:** I4122619A

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	25000	25277	1	50000	49485	-1			
Antimony	500	497	-1	1000	1006	1			
Arsenic	500	498	0	1000	1004	0			
Barium	2500	2528	1	5000	4952	-1			
Beryllium	2500	2576	3	5000	4878	-2			
Cadmium	500	493	-1	1000	1009	1			
Calcium	50000	50957	2	100000	99511	0			
Chromium	2500	2531	1	5000	4945	-1			
Cobalt	2500	2521	1	5000	4961	-1			
Copper	2500	2505	0	5000	4984	0			
Iron	25000	25438	2	50000	49243	-2			
Lead	500	509	2	1000	985	-1			
Magnesium	50000	50850	2	100000	99560	0			
Manganese	2500	2549	2	5000	4919	-2			
Nickel	2500	2516	1	5000	4967	-1			
Potassium	50000	50842	2	100000	99570	0			
Selenium	500	498	0	1000	1003	0			
Silver	500	499	0	1000	1000	0			
Sodium	50000	51114	2	100000	99427	-1			
Thallium	1000	1024	2	2000	1964	-2			
Vanadium	2500	2528	1	5000	4952	-1			
Zinc	2500	2517	1	5000	4966	-1			

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Shealy Environmental Services, **Contract:** Joliet Chemical Fire PRP Clean U

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:** UL20021

Instrument ID: ICP4 **Start Date:** 12/31/2019

Analytical Method: ICP-AES **Run Batch:** I4123119A

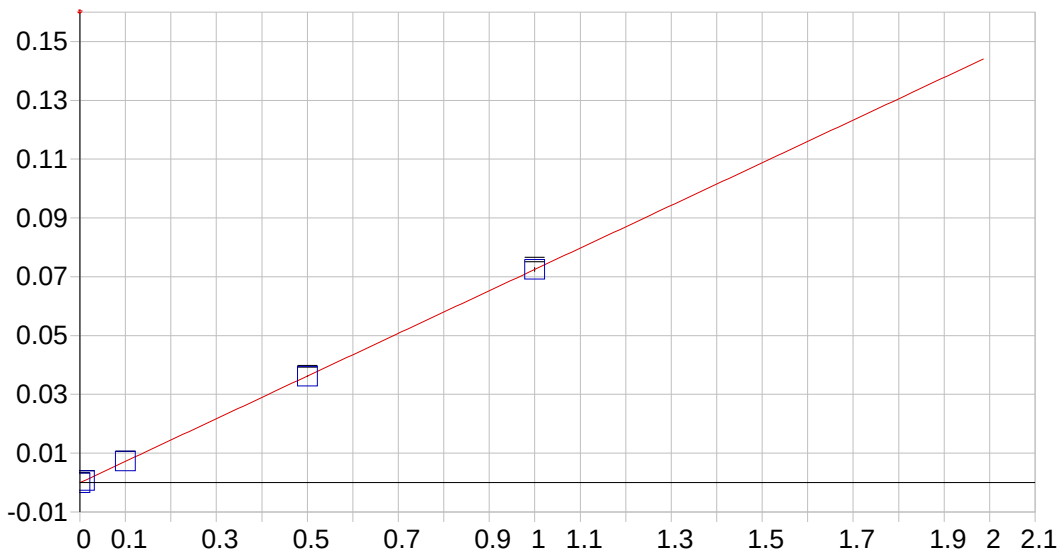
Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Aluminum	25000	25060	0	50000	49930	0			
Antimony	500	493	-1	1000	1010	1			
Arsenic	500	492	-2	1000	1013	1			
Barium	2500	2508	0	5000	4993	0			
Beryllium	2500	2549	2	5000	4930	-1			
Cadmium	500	486	-3	1000	1019	2			
Calcium	50000	50209	0	100000	99891	0			
Chromium	2500	2516	1	5000	4976	0			
Cobalt	2500	2494	0	5000	5006	0			
Copper	2500	2495	0	5000	5001	0			
Iron	25000	25201	1	50000	49678	-1			
Lead	500	500	0	1000	998	0			
Magnesium	50000	50370	1	100000	99810	0			
Manganese	2500	2533	1	5000	4948	-1			
Nickel	2500	2494	0	5000	5003	0			
Potassium	50000	49196	-2	100000	100410	0			
Selenium	500	494	-1	1000	1010	1			
Silver	500	496	-1	1000	1005	1			
Sodium	50000	50145	0	100000	99937	0			
Thallium	1000	1005	0	2000	1991	0			
Vanadium	2500	2510	0	5000	4992	0			
Zinc	2500	2497	0	5000	4996	0			

Raw Sample Data

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	None				
Al 308.215 {109}	☒	2	Mo	0.024571	0.000000	No
			V	0.014939	0.000000	No
As 189.042 {478}	☒	4	Cr	0.002793	0.000000	No
			Fe	-0.000047	0.000000	No
			Mo	0.001442	0.000000	No
			W	0.001377	0.000000	No
B 249.678 {135}	☒	3	Fe	-0.000763	0.000000	No
			Co	0.002781	0.000000	No
			Mo	-0.003410	0.000000	No
Ba 455.403 { 74}	☒	None				
Be 313.042 {108}	☒	1	V	0.000460	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 228.802 {447}	☒	3	Fe	-0.000010	0.000000	No
			As	0.013594	0.000000	No
			Ba	-0.000120	0.000000	No
Co 228.616 {447}	☒	1	Ti	0.002153	0.000000	No
Cr 267.716 {126}	☒	None				
Cu 327.396 {103}	☒	2	Ca	0.000023	0.000000	No
			Co	0.000299	0.000000	No
Fe 261.187 {129}	☒	None				
K 766.490 { 44}	☒	None				
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	None				
Mo 202.030 {467}	☒	None				
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	1	Fe	0.000038	0.000000	No
Pb 220.353 {453}	☒	5	Al	-0.000138	0.000000	No
			Fe	0.000039	0.000000	No
			Cu	0.000163	0.000000	No
			Mo	-0.000924	0.000000	No
			W	-0.008890	0.000000	No
Sb 206.833 {463}	☒	5	Cr	0.007199	0.000000	No
			Ni	-0.000800	0.000000	No
			Mo	-0.000401	0.000000	No
			Sn	-0.003745	0.000000	No
			W	-0.011141	0.000000	No
Sc 227.318 {448}*	☒	None				
Sc 361.384 { 93}*	☒	None				
Sc 361.384 { 93}2*	☒	None				
Se 196.090 {472}	☒	3	Mn	0.000610	0.000000	No
			Fe	-0.000128	0.000000	No
			W	0.011103	0.000000	No
Si 212.412 {459}	☒	None				
Sn 189.989 {477}	☒	None				
Sr 407.771 { 83}	☒	None				
Ti 337.280 {100}	☒	None				
Tl 190.856 {477}	☒	2	Co	0.003326	0.000000	No
			Fe	-0.000026	0.000000	No
U 385.466 { 87}	☒	1	Cr	-0.020066	0.000000	No
V 292.402 {115}	☒	1	Fe	0.000027	0.000000	No
W 224.875 {450}	☒	None				
W 239.709 {140}	☒	None				

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Zn 206.200 {463}	☒	None				

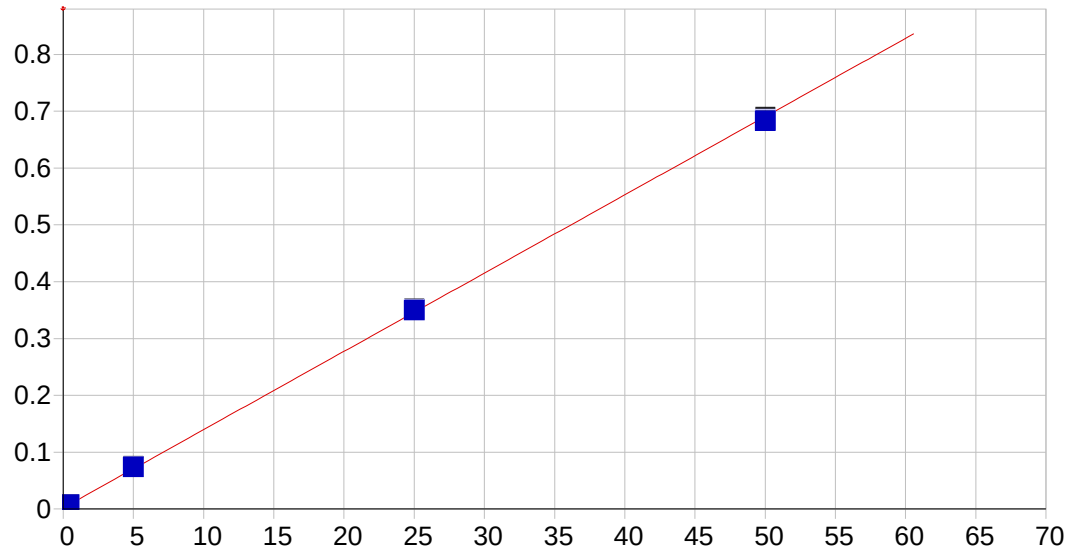


Ag 328.068 {103}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000039	Re-Slope:	1.000000
A1 (Gain):	0.072543	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.000570		
Predicted MQL:	0.001899		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00040	-.000	.000	-.00007	.000	1
CAL1 MW 12	.01000	.01037	.000	3.69	.00071	.000	1
CAL2 MW12	.10000	.10048	.000	.485	.00725	.000	1
CAL3 MW12	.50000	.49935	-.001	-.130	.03619	.000	1
CAL4 MW12	1.0000	.99980	-.000	-.020	.07249	.001	1

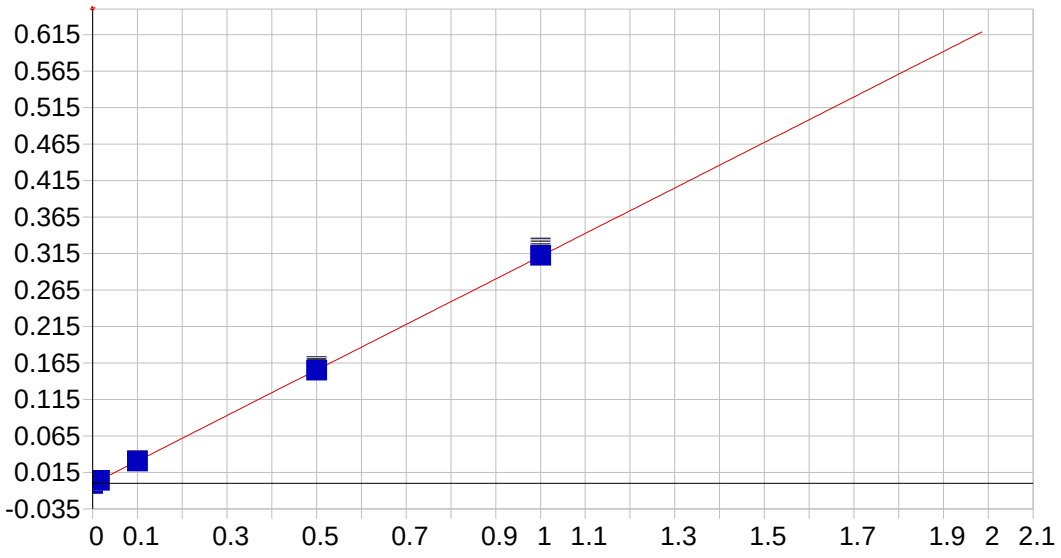


Al 308.215 {109}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001830	Re-Slope:	1.000000
A1 (Gain):	0.013777	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999867	Status:	OK.
Std Error of Est:	0.001118		
Predicted MDL:	0.019063		
Predicted MQL:	0.063543		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01716	-.017	.000	.00159	.000	1
CAL1 MW 12	.40000	.39757	-.002	-.608	.00733	.000	1
CAL2 MW12	5.0000	5.2410	.241	4.82	.07431	.001	1
CAL3 MW12	25.000	25.278	.278	1.11	.35145	.001	1
CAL4 MW12	50.000	49.484	-.516	-1.03	.68631	.004	1

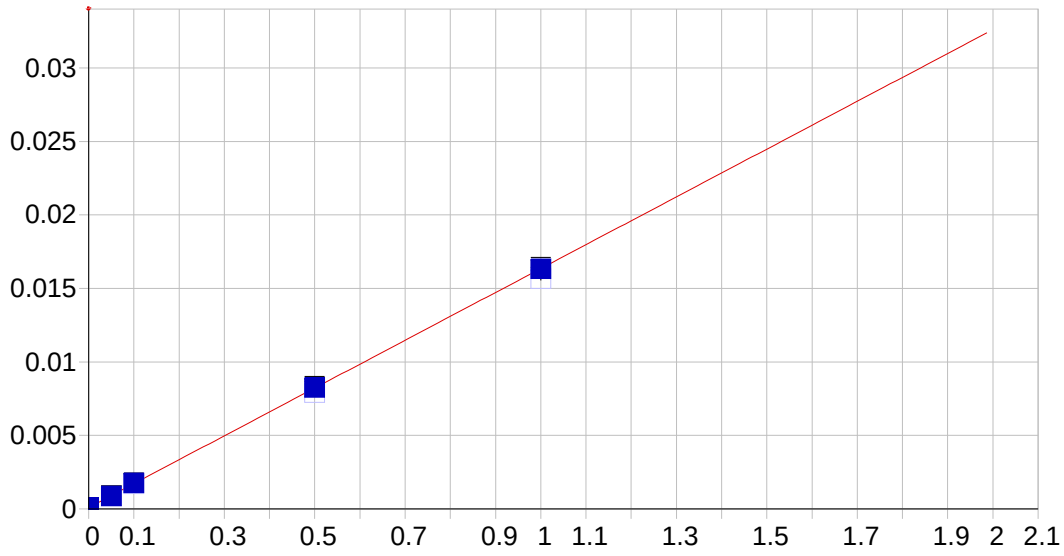


As 189.042 {478}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000521	Re-Slope:	1.000000
A1 (Gain):	0.311857	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000341		
Predicted MDL:	0.001135		
Predicted MQL:	0.003785		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00076	.001	.000	-.00028	.000	1
CAL1 MW 12	.01500	.01448	-.001	-3.44	.00402	.000	1
CAL2 MW12	.10000	.09831	-.002	-1.69	.03094	.000	1
CAL3 MW12	.50000	.49836	-.002	-.328	.15890	.001	1
CAL4 MW12	1.0000	1.0038	.004	.383	.32054	.002	1

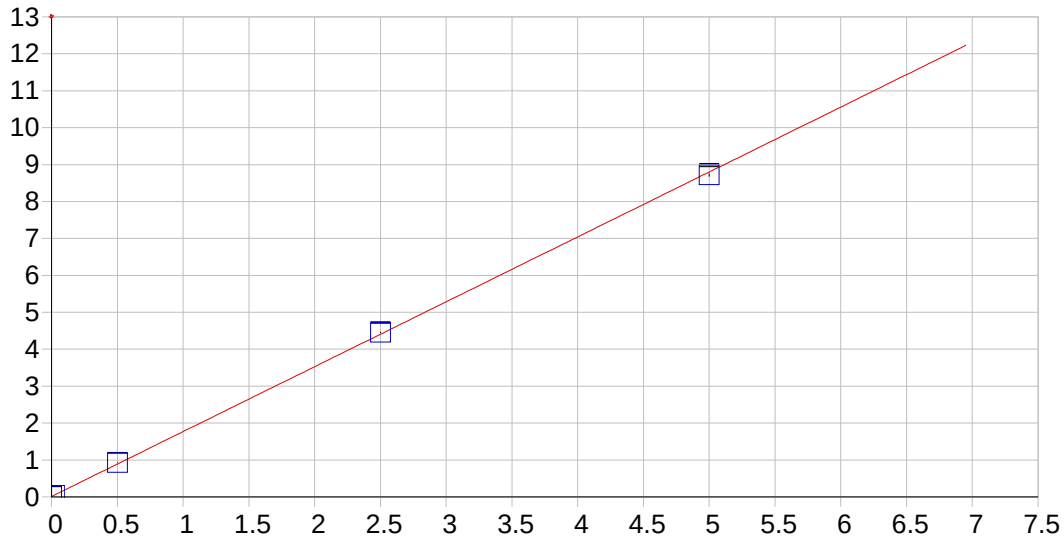


B 249.678 {135}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000095	Re-Slope:	1.000000
A1 (Gain):	0.016256	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.001222		
Predicted MQL:	0.004074		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00067	.001	.000	.00011	.000	1
CAL1 MW 12	.05000	.04822	-.002	-3.55	.00088	.000	1
CAL2 MW12	.10000	.10209	.002	2.09	.00169	.000	1
CAL3 MW12	.50000	.50148	.001	.296	.00791	.000	1
CAL4 MW12	1.0000	.99828	-.002	-.172	.01565	.000	1

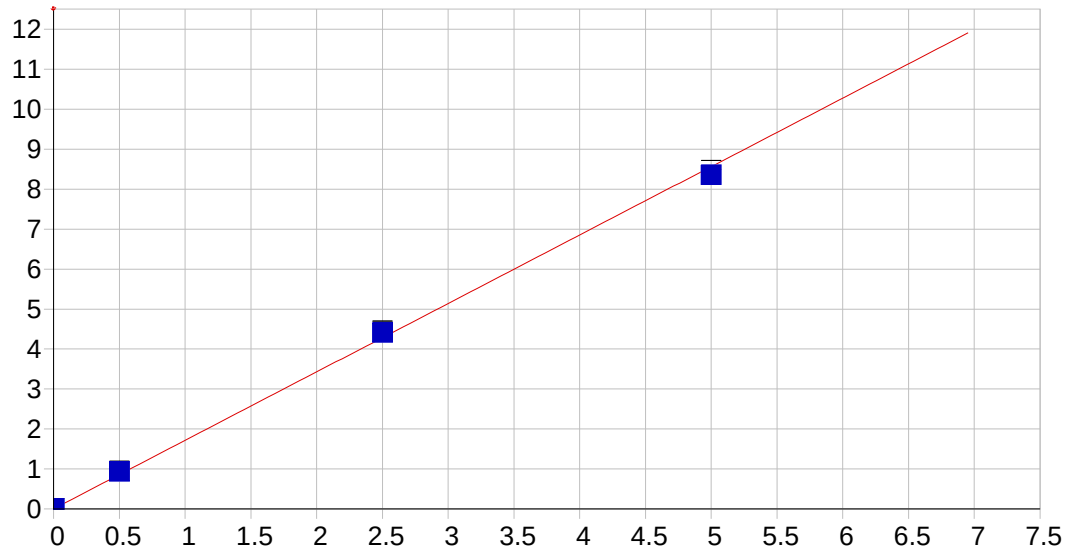


Ba 455.403 { 74}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.011211	Re-Slope:	1.000000
A1 (Gain):	1.757835	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999898	Status:	OK.
Std Error of Est:	0.009989		
Predicted MDL:	0.000356		
Predicted MQL:	0.001187		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00111	-.001	.000	.00925	.001	1
CAL1 MW 12	.02500	.02508	.000	.328	.05530	.001	1
CAL2 MW12	.50000	.51989	.020	3.98	.92510	.007	1
CAL3 MW12	2.5000	2.5276	.028	1.11	4.4544	.014	1
CAL4 MW12	5.0000	4.9524	-.048	-.952	8.7167	.045	1

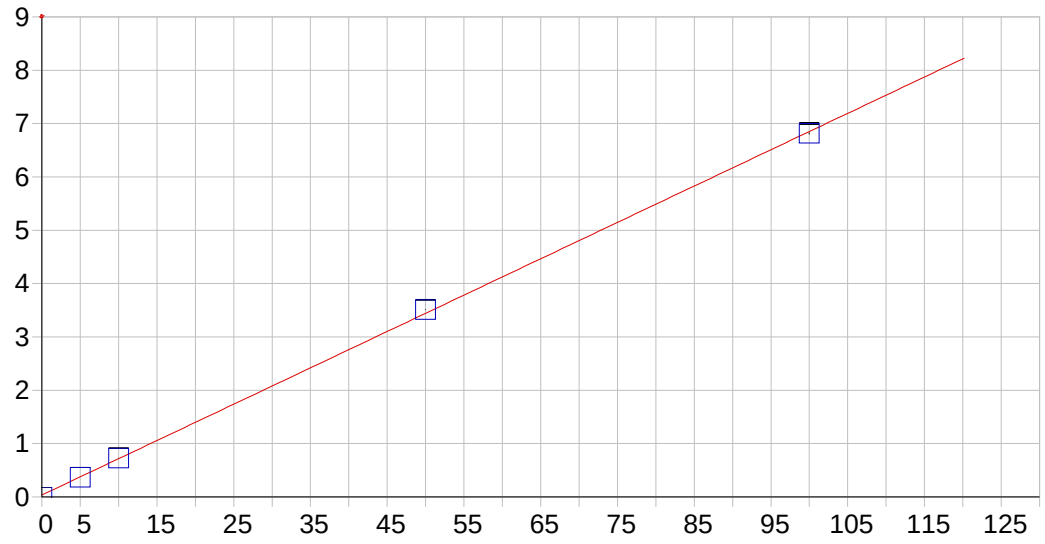


Be 313.042 {108}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002788	Re-Slope:	1.000000
A1 (Gain):	1.712568	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999407	Status:	OK.
Std Error of Est:	0.000482		
Predicted MDL:	0.000019		
Predicted MQL:	0.000064		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00000	-.000	.000	.00279	.000	1
CAL1 MW 12	.00500	.00535	.000	7.00	.01199	.000	1
CAL2 MW12	.50000	.54561	.046	9.12	.93757	.006	1
CAL3 MW12	2.5000	2.5763	.076	3.05	4.4169	.037	1
CAL4 MW12	5.0000	4.8777	-.122	-2.45	8.3601	.113	1

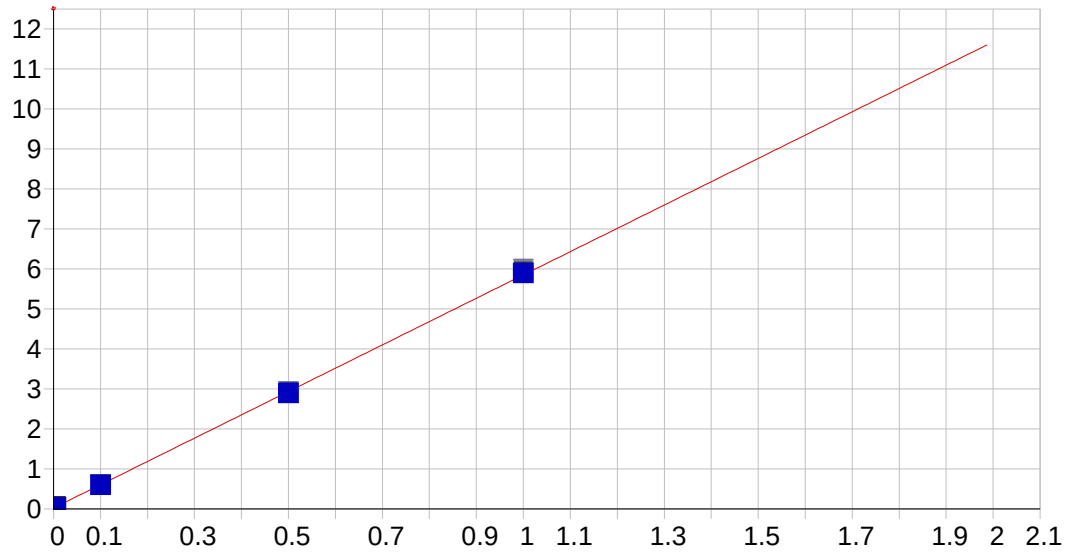


Ca 317.933 {106}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.034225	Re-Slope:	1.000000
A1 (Gain):	0.068167	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999899	Status:	OK.
Std Error of Est:	0.047426		
Predicted MDL:	0.004367		
Predicted MQL:	0.014557		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.49678	-.497	.000	.00036	.000	1
CAL1 MW 12	5.0000	4.8563	-.144	-2.87	.36526	.000	1
CAL2 MW12	10.000	10.172	.172	1.72	.72762	.003	1
CAL3 MW12	50.000	50.957	.957	1.91	3.5079	.006	1
CAL4 MW12	100.00	99.511	-.489	-.489	6.8177	.018	1

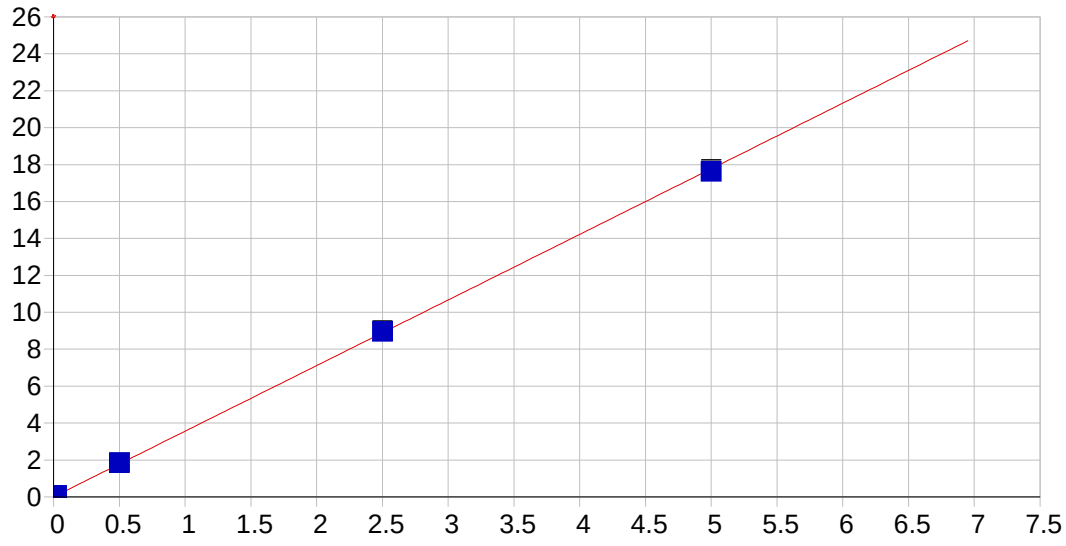


Cd 228.802 {447}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.021238	Re-Slope:	1.000000
A1 (Gain):	5.829422	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999936	Status:	OK.
Std Error of Est:	0.005300		
Predicted MDL:	0.000181		
Predicted MQL:	0.000602		

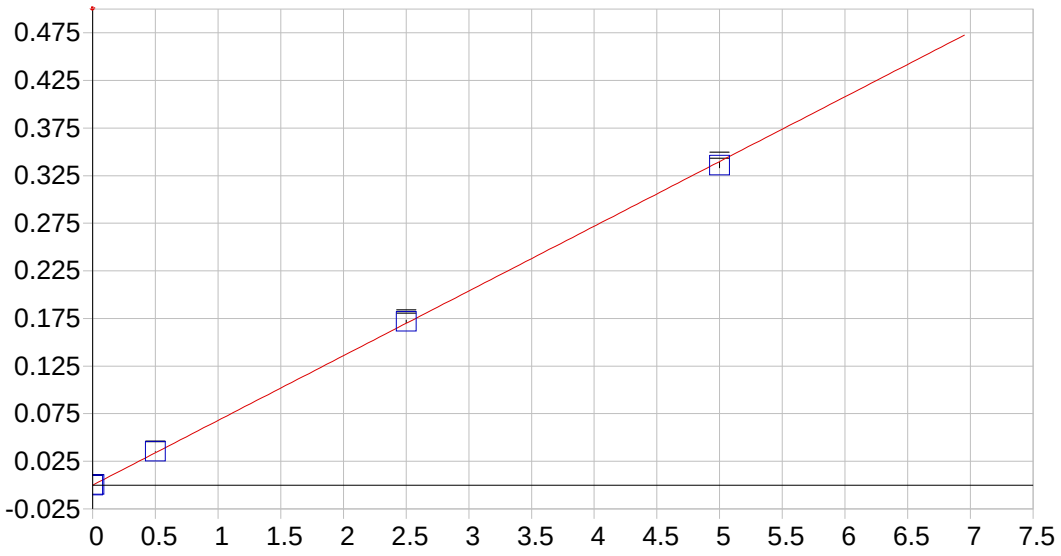
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00011	.000	.000	.02187	.001	1
CAL1 MW 12	.00500	.00499	-.000	-.230	.05148	.001	1
CAL2 MW12	.10000	.09867	-.001	-1.33	.60369	.004	1
CAL3 MW12	.50000	.49263	-.007	-1.47	2.9294	.009	1
CAL4 MW12	1.0000	1.0087	.009	.872	5.9743	.023	1



Co 228.616 {447}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.005498		Re-Slope:	1.000000		
A1 (Gain):	3.553723		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999924		Status:	OK.		
Std Error of Est:	0.017430					
Predicted MDL:	0.000219					
Predicted MQL:	0.000729					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00078	-.001	.000	.00273	.001	1
CAL1 MW 12	.02500	.02484	-.000	-.633	.09416	.002	1
CAL2 MW12	.50000	.51852	.019	3.70	1.8489	.012	1
CAL3 MW12	2.5000	2.5208	.021	.834	8.9677	.023	1
CAL4 MW12	5.0000	4.9608	-.039	-.784	17.642	.073	1

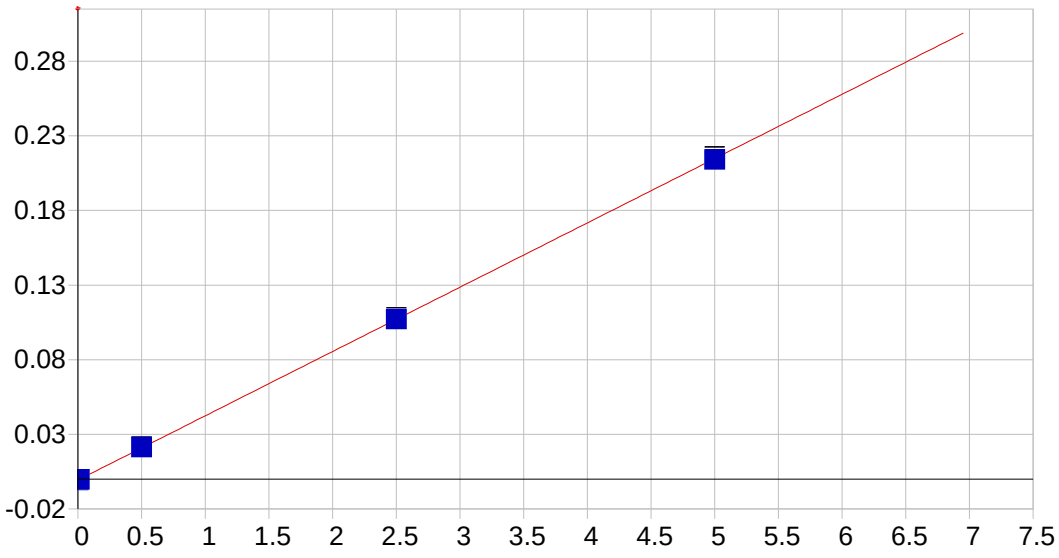


Cr 267.716 {126}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000066	Re-Slope:	1.000000
A1 (Gain):	0.067994	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999861	Status:	OK.
Std Error of Est:	0.000290		
Predicted MDL:	0.000395		
Predicted MQL:	0.001316		

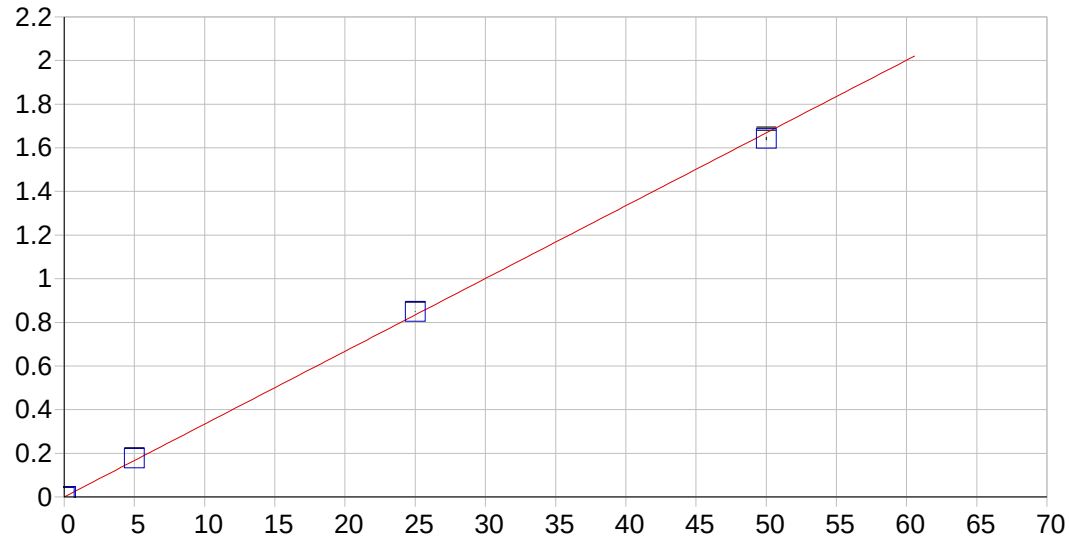
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00046	-.000	.000	-.00010	.000	1
CAL1 MW 12	.01000	.00996	-.000	-.415	.00061	.000	1
CAL2 MW12	.50000	.52436	.024	4.87	.03559	.000	1
CAL3 MW12	2.5000	2.5311	.031	1.24	.17203	.002	1
CAL4 MW12	5.0000	4.9446	-.055	-1.11	.33614	.003	1



Cu 327.396 {103}

Date of Fit:	12/26/2019 16:23:05		Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):		-0.000682		Re-Slope:	1.000000		
A1 (Gain):		0.043092		Y-int:	0.000000		
A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.999979		Status:	OK.		
Std Error of Est:		0.000072					
Predicted MDL:		0.001008					
Predicted MQL:		0.003359					

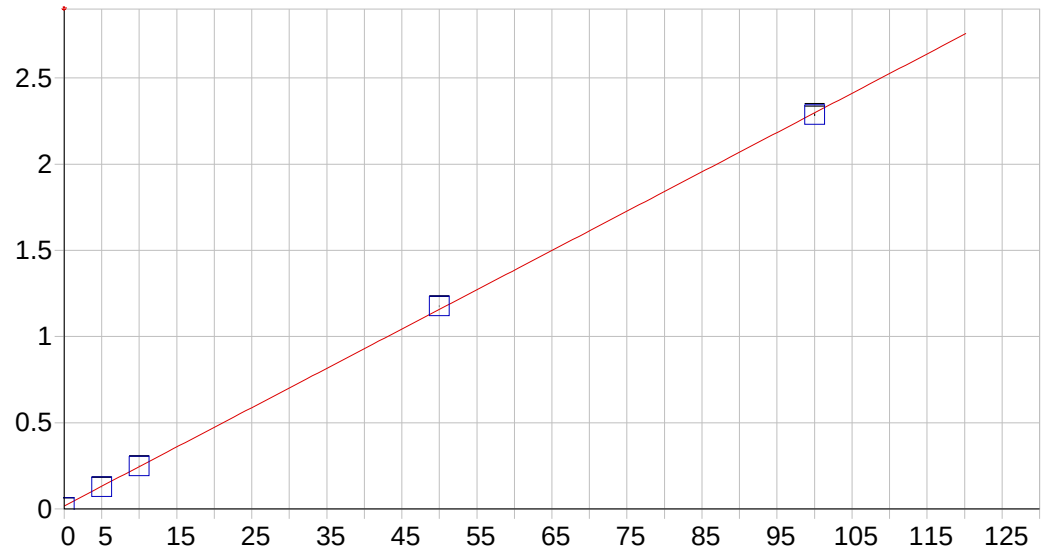
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00003	.000	.000	-.00068	.000	1
CAL1 MW 12	.01000	.00975	-.000	-2.49	-.00026	.000	1
CAL2 MW12	.50000	.51165	.012	2.33	.02138	.000	1
CAL3 MW12	2.5000	2.5045	.005	.180	.10733	.001	1
CAL4 MW12	5.0000	4.9841	-.016	-.318	.21426	.002	1



Fe 261.187 {129}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000317		Re-Slope:	1.000000		
A1 (Gain):	0.033355		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999748		Status:	OK.		
Std Error of Est:	0.001912					
Predicted MDL:	0.004776					
Predicted MQL:	0.015919					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00466	-.005	.000	.00016	.000	1
CAL1 MW 12	.10000	.09801	-.002	-1.99	.00359	.000	1
CAL2 MW12	5.0000	5.3206	.321	6.41	.17779	.001	1
CAL3 MW12	25.000	25.438	.438	1.75	.84881	.001	1
CAL4 MW12	50.000	49.243	-.757	-1.51	1.6428	.007	1

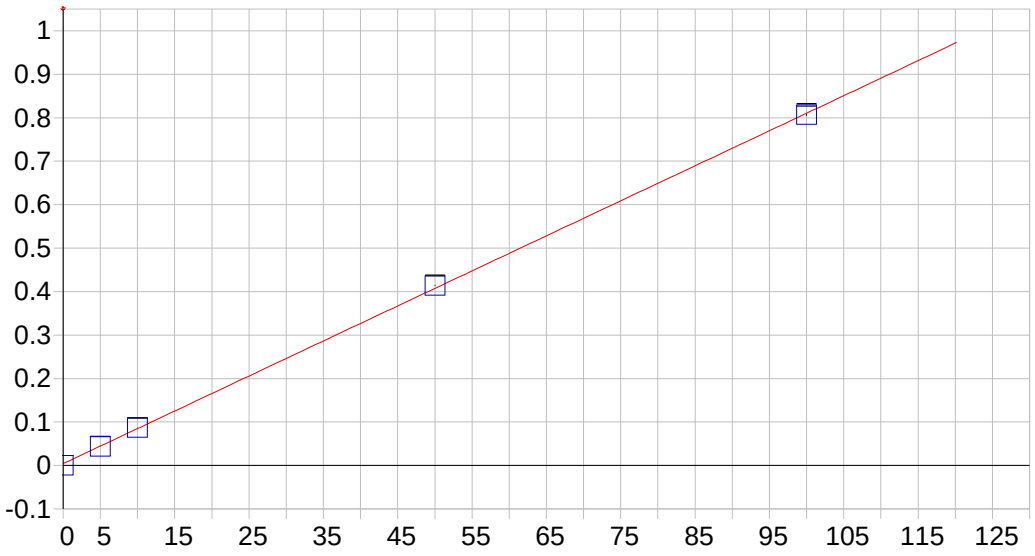


K 766.490 { 44}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear
Weighting:	None		

A0 (Offset):	0.017350	Re-Slope:	1.000000
A1 (Gain):	0.022802	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999922	Status:	OK.
Std Error of Est:	0.013977		
Predicted MDL:	0.045806		
Predicted MQL:	0.152687		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.41984	-.420	.000	.00778	.000	1
CAL1 MW 12	5.0000	4.8350	-.165	-3.30	.12760	.001	1
CAL2 MW12	10.000	10.173	.173	1.73	.24932	.001	1
CAL3 MW12	50.000	50.842	.842	1.68	1.1767	.002	1
CAL4 MW12	100.00	99.570	-.430	-.430	2.2878	.007	1

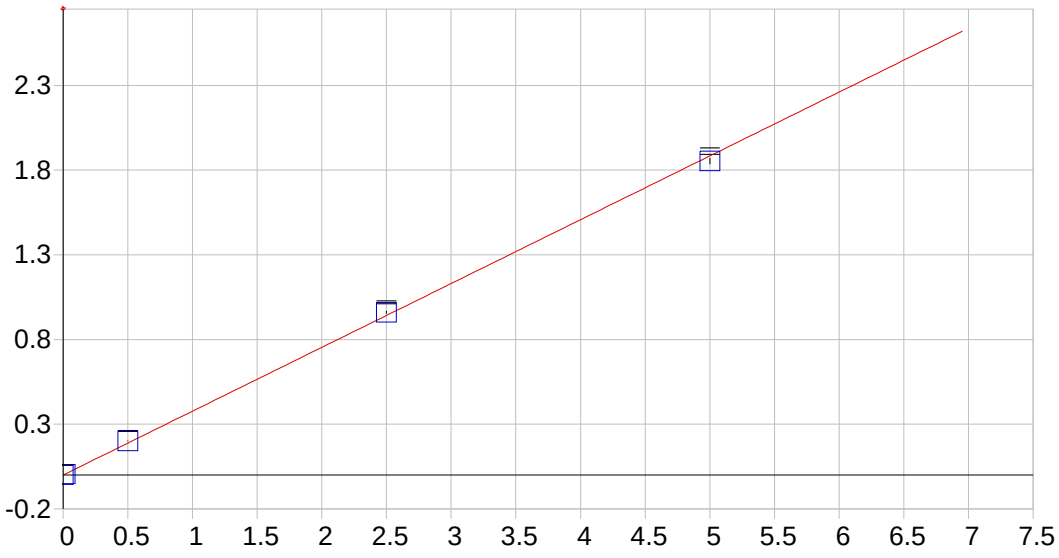


Mg 279.079 {121}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.004293	Re-Slope:	1.000000
A1 (Gain):	0.008061	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999911	Status:	OK.
Std Error of Est:	0.005252		
Predicted MDL:	0.020198		
Predicted MQL:	0.067328		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.53997	-.540	.000	-.00006	.000	1
CAL1 MW 12	5.0000	4.9032	-.097	-1.94	.04382	.000	1
CAL2 MW12	10.000	10.230	.230	2.30	.08675	.000	1
CAL3 MW12	50.000	50.850	.850	1.70	.41418	.001	1
CAL4 MW12	100.00	99.557	-.443	-.443	.80678	.003	1

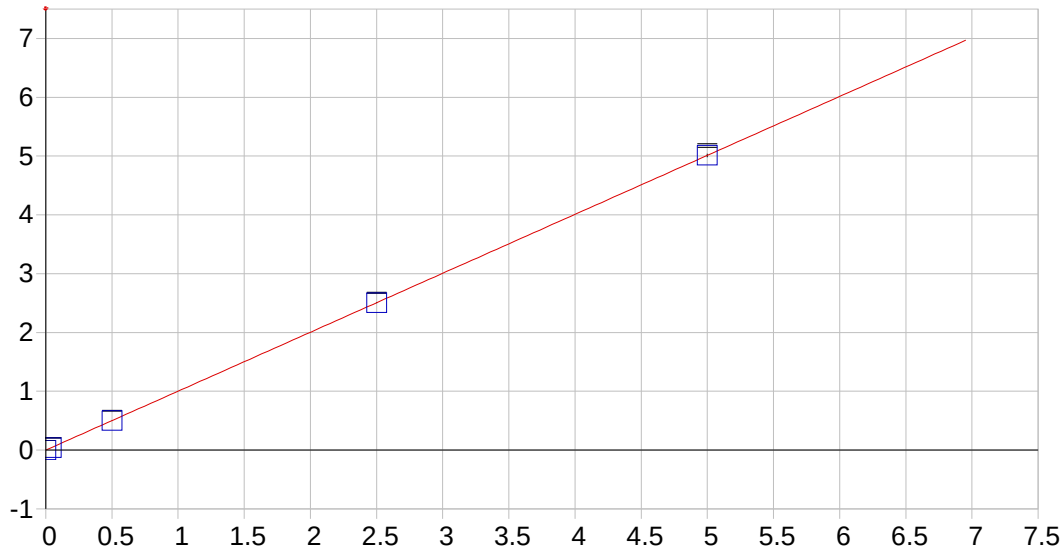


Mn 257.610 {131}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000331	Re-Slope:	1.000000
A1 (Gain):	0.376762	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999716	Status:	OK.
Std Error of Est:	0.002794		
Predicted MDL:	0.000063		
Predicted MQL:	0.000210		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00092	-.001	.000	-.00001	.000	1
CAL1 MW 12	.01500	.01488	-.000	-.771	.00594	.000	1
CAL2 MW12	.50000	.53287	.033	6.57	.20110	.002	1
CAL3 MW12	2.5000	2.5486	.049	1.94	.96053	.008	1
CAL4 MW12	5.0000	4.9187	-.081	-1.63	1.8535	.019	1

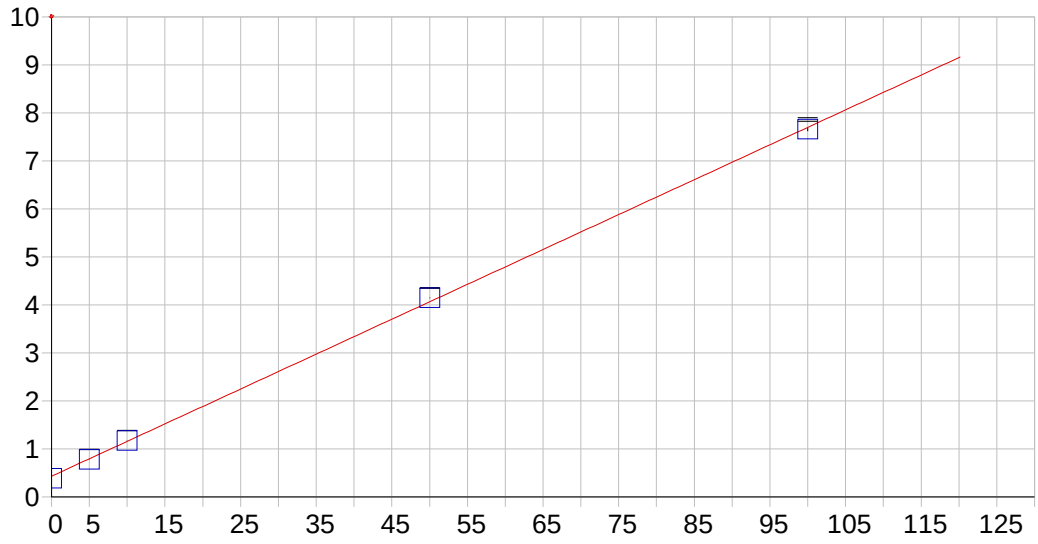


Mo 202.030 {467}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000037	Re-Slope:	1.000000
A1 (Gain):	1.002387	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	1.000000	Status:	OK.
Std Error of Est:	0.000467		
Predicted MDL:	0.000344		
Predicted MQL:	0.001145		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00027	.000	.000	.00023	.000	1
CAL1 MW 12	.04000	.03966	-.000	-.856	.03972	.000	1
CAL2 MW12	.50000	.50099	.001	.197	.50215	.003	1
CAL3 MW12	2.5000	2.5002	.000	.010	2.5062	.010	1
CAL4 MW12	5.0000	4.9991	-.001	-.018	5.0110	.028	1

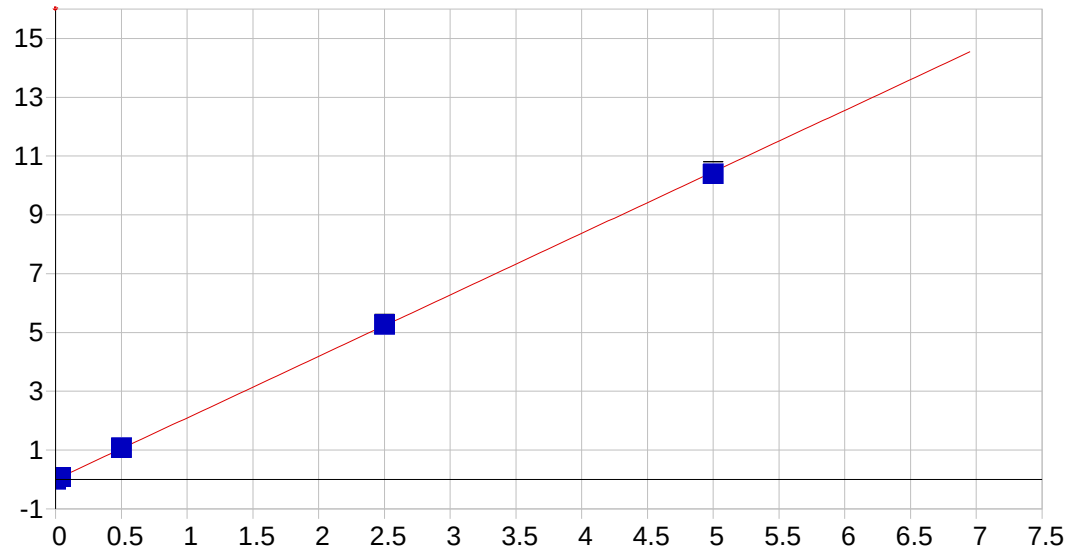


Na 589.592 { 57}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.430731	Re-Slope:	1.000000
A1 (Gain):	0.072685	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999859	Status:	OK.
Std Error of Est:	0.059766		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

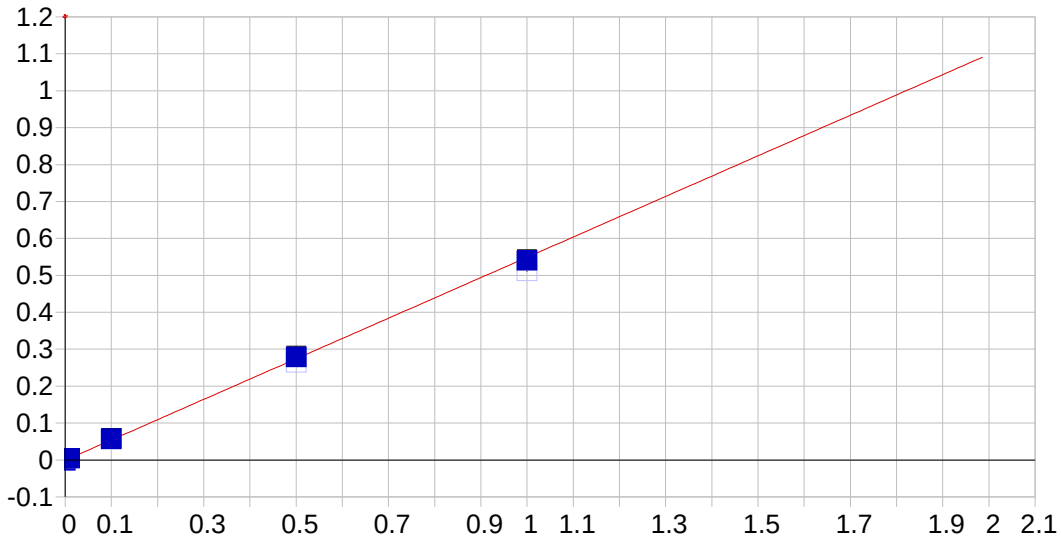
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.60875	-.609	.000	.38648	.001	1
CAL1 MW 12	5.0000	4.8259	-.174	-3.48	.78150	.002	1
CAL2 MW12	10.000	10.241	.241	2.41	1.1751	.005	1
CAL3 MW12	50.000	51.114	1.11	2.23	4.1460	.006	1
CAL4 MW12	100.00	99.427	-.573	-.573	7.6577	.037	1



Ni 231.604 {445}

Date of Fit:	12/26/2019 16:23:05		Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):		0.002082		Re-Slope:	1.000000		
A1 (Gain):		2.092311		Y-int:	0.000000		
A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.999938		Status:	OK.		
Std Error of Est:		0.011503					
Predicted MDL:		0.000308					
Predicted MQL:		0.001026					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00132	-.001	.000	-.00068	.000	1
CAL1 MW 12	.04000	.03996	-.000	-.104	.08569	.001	1
CAL2 MW12	.50000	.51708	.017	3.42	1.0844	.005	1
CAL3 MW12	2.5000	2.5162	.016	.649	5.2688	.011	1
CAL4 MW12	5.0000	4.9667	-.033	-.665	10.398	.076	1

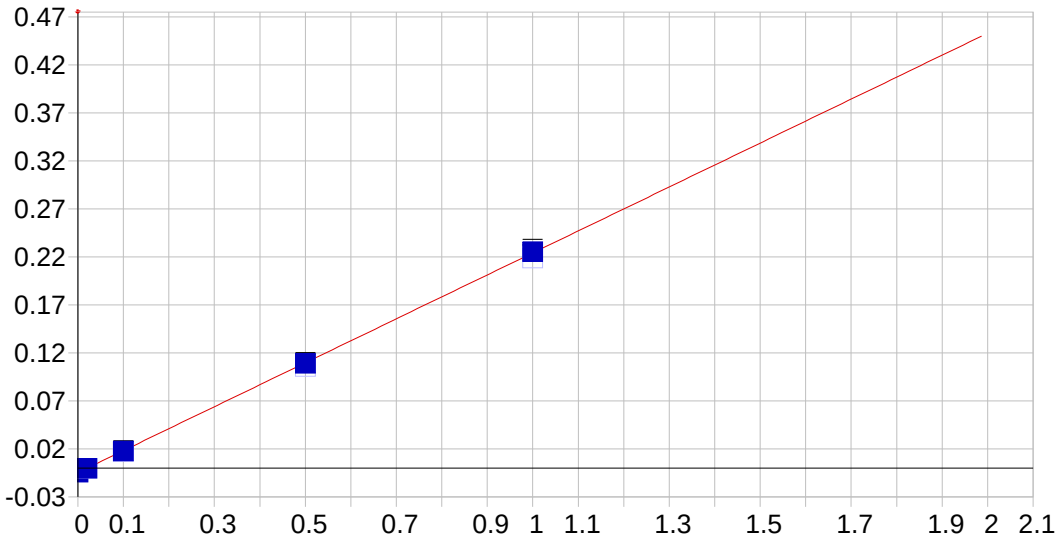


Pb 220.353 {453}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000794	Re-Slope:	1.000000
A1 (Gain):	0.549677	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999714	Status:	OK.
Std Error of Est:	0.001364		
Predicted MDL:	0.001606		
Predicted MQL:	0.005352		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00033	-.000	.000	-.00098	.001	1
CAL1 MW 12	.01000	.00967	-.000	-3.29	.00447	.001	1
CAL2 MW12	.10000	.10637	.006	6.37	.05475	.000	1
CAL3 MW12	.50000	.50856	.009	1.71	.26414	.003	1
CAL4 MW12	1.0000	.98541	-.015	-1.46	.51163	.001	1

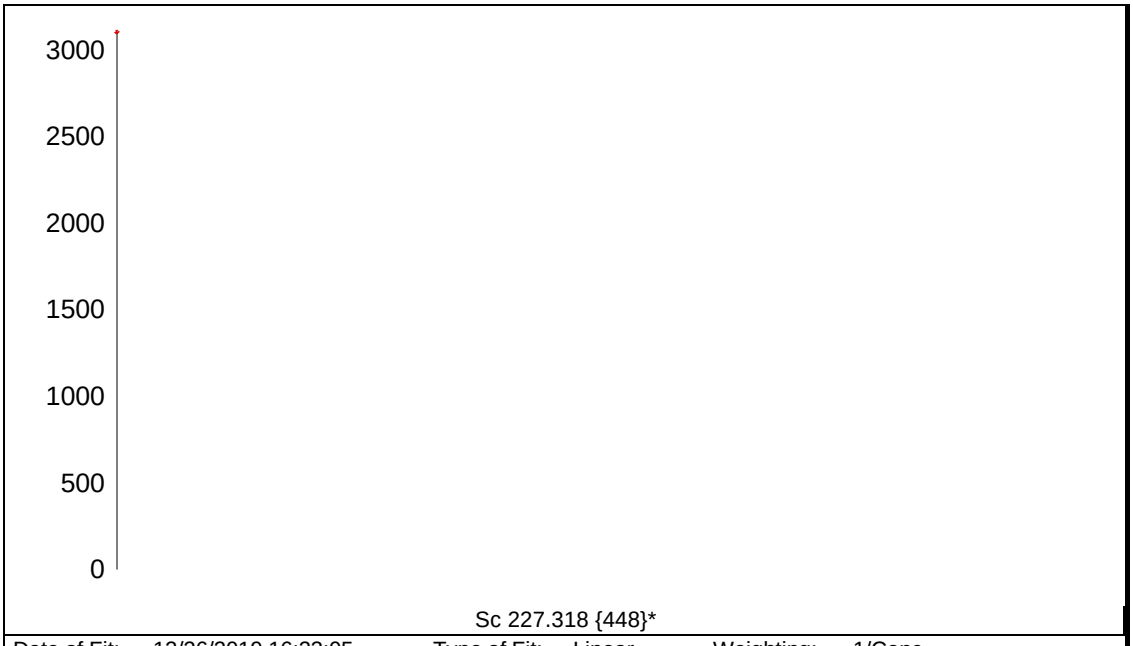


Sb 206.833 {463}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

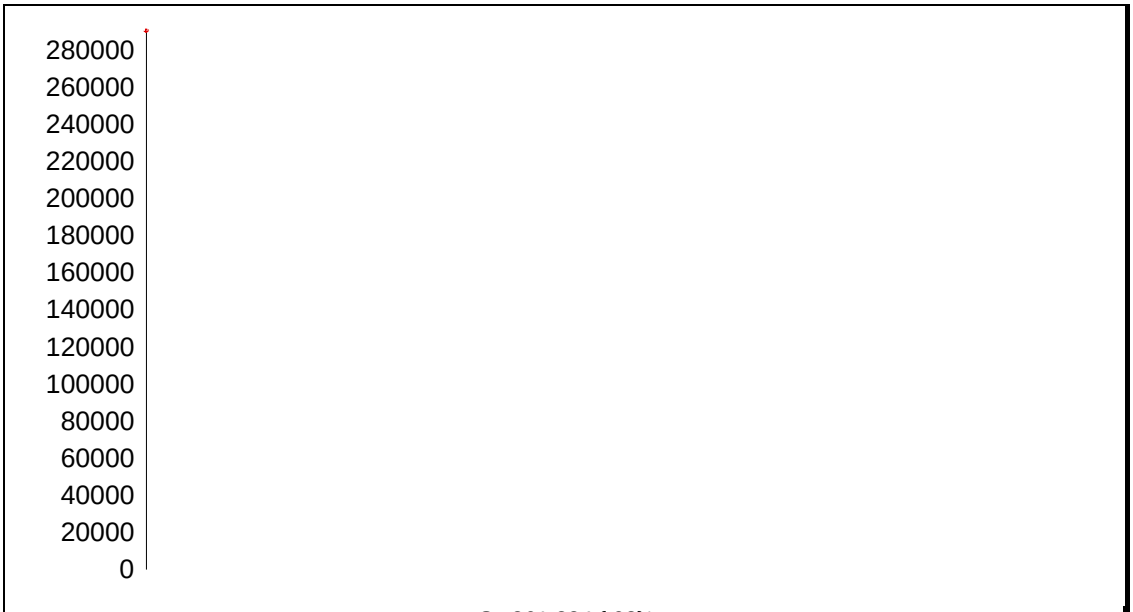
A0 (Offset):	-0.004704	Re-Slope:	1.000000
A1 (Gain):	0.228871	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000328		
Predicted MDL:	0.002158		
Predicted MQL:	0.007193		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00091	.001	.000	-.00449	.000	1
CAL1 MW 12	.02000	.01945	-.001	-2.77	-.00029	.000	1
CAL2 MW12	.10000	.09830	-.002	-1.70	.01712	.000	1
CAL3 MW12	.50000	.49668	-.003	-.663	.10560	.001	1
CAL4 MW12	1.0000	1.0056	.006	.558	.21870	.003	1



Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

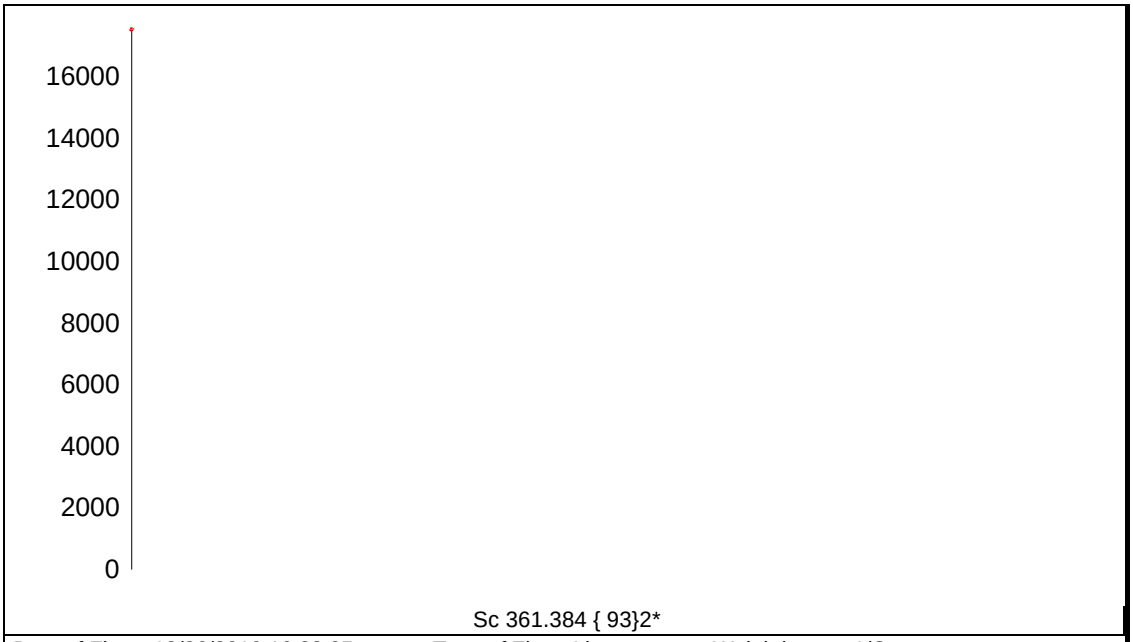
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	2905.2	14.1	1
CAL1 MW 12	.00000	.00000	.000	.000	2889.7	19.2	1
CAL2 MW12	.00000	.00000	.000	.000	2865.4	9.13	1
CAL3 MW12	.00000	.00000	.000	.000	2740.4	12.1	1
CAL4 MW12	.00000	.00000	.000	.000	2651.0	6.17	1



Sc 361.384 { 93}*

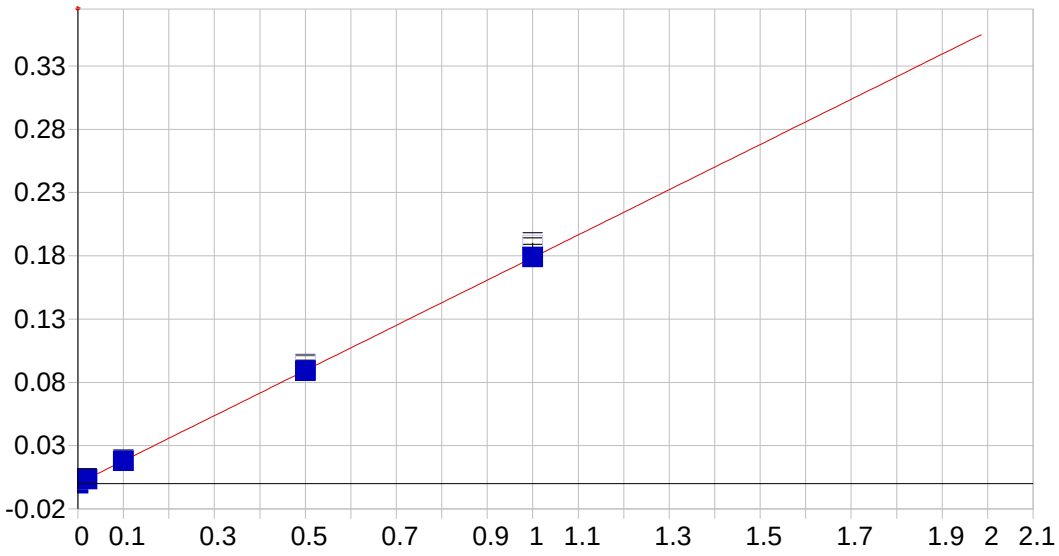
Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	265460.	3110.	1
CAL1 MW 12	.00000	.00000	.000	.000	266200.	3570.	1
CAL2 MW12	.00000	.00000	.000	.000	262520.	2690.	1
CAL3 MW12	.00000	.00000	.000	.000	260070.	1920.	1
CAL4 MW12	.00000	.00000	.000	.000	256180.	1670.	1



Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	16476.	37.6	1
CAL1 MW 12	.00000	.00000	.000	.000	16513.	47.1	1
CAL2 MW12	.00000	.00000	.000	.000	16512.	114.	1
CAL3 MW12	.00000	.00000	.000	.000	16497.	117.	1
CAL4 MW12	.00000	.00000	.000	.000	16449.	177.	1

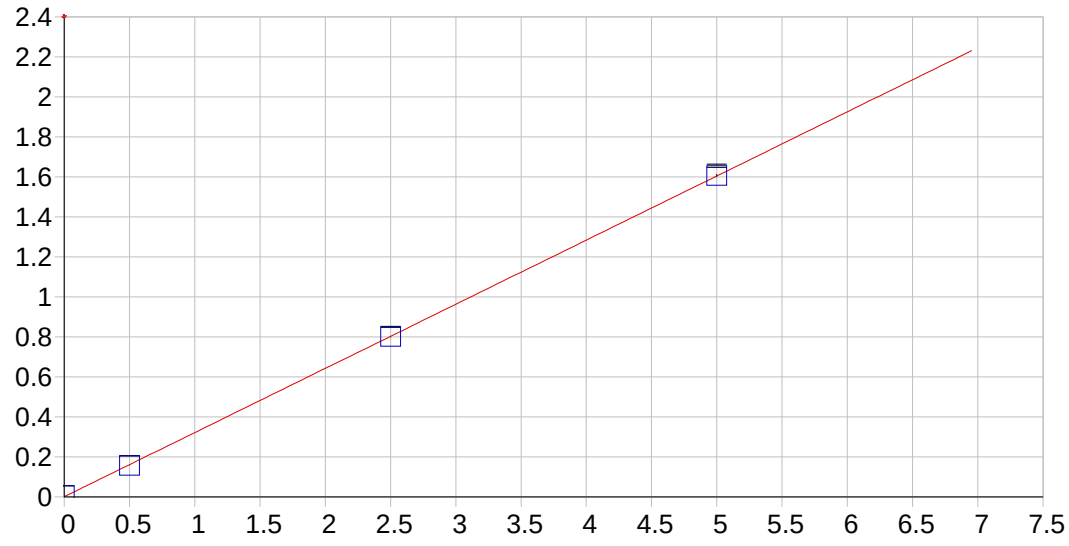


Se 196.090 {472}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000090	Re-Slope:	1.000000
A1 (Gain):	0.178585	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999992	Status:	OK.
Std Error of Est:	0.000113		
Predicted MDL:	0.002022		
Predicted MQL:	0.006740		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00042	.000	.000	.00016	.000	1
CAL1 MW 12	.02000	.01974	-.000	-1.29	.00362	.000	1
CAL2 MW12	.10000	.09925	-.001	-.749	.01875	.000	1
CAL3 MW12	.50000	.49861	-.001	-.278	.09379	.001	1
CAL4 MW12	1.0000	1.0024	.002	.238	.18842	.002	1

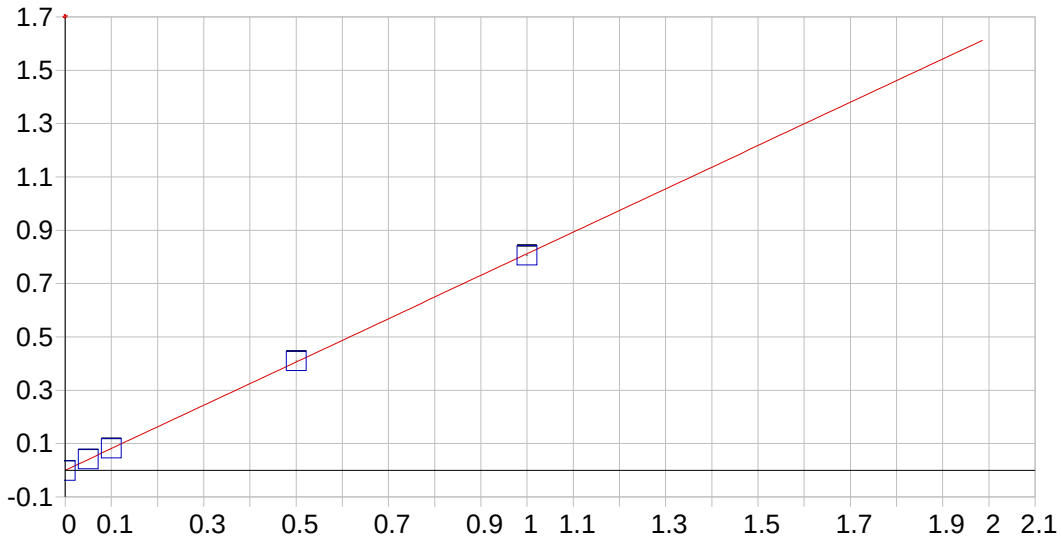


Si 212.412 {459}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.000918	Re-Slope:	1.000000
A1 (Gain):	0.320764	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.005297		
Predicted MDL:	0.001539		
Predicted MQL:	0.005129		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01637	.016	.000	.00617	.000	1
CAL1 MW 12	.50000	.48481	-.015	-3.04	.15643	.001	1
CAL3 MW12	2.5000	2.4946	-.005	-.216	.80110	.003	1
CAL4 MW12	5.0000	5.0042	.004	.084	1.6061	.008	1

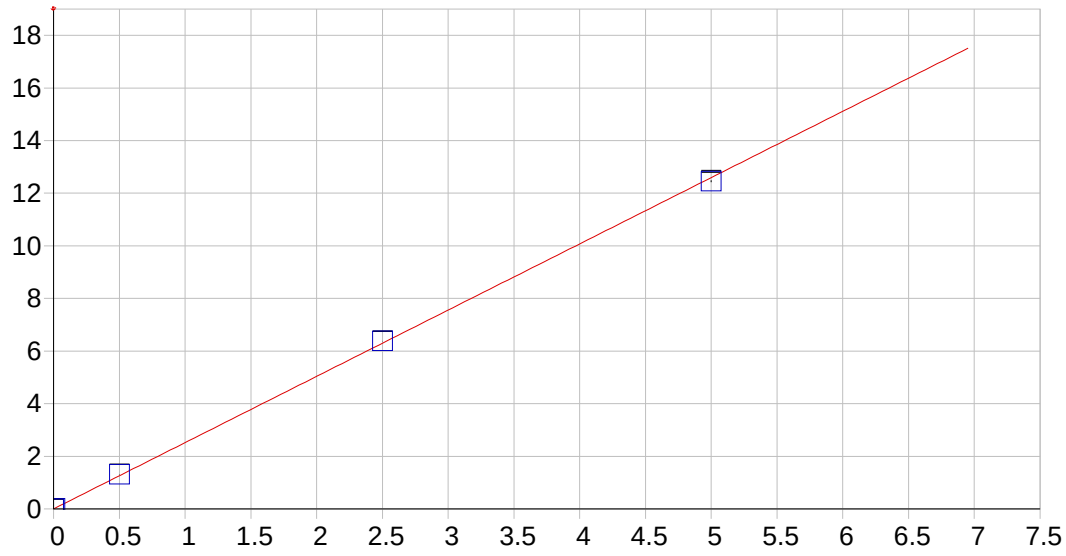


Sn 189.989 {477}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000077	Re-Slope:	1.000000
A1 (Gain):	0.811706	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999928	Status:	OK.
Std Error of Est:	0.001999		
Predicted MDL:	0.000537		
Predicted MQL:	0.001791		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00165	-.002	.000	-.00126	.000	1
CAL1 MW 12	.05000	.05055	.001	1.11	.04111	.000	1
CAL2 MW12	.10000	.10198	.002	1.98	.08285	.001	1
CAL3 MW12	.50000	.50461	.005	.921	.40967	.001	1
CAL4 MW12	1.0000	.99286	-.007	-.714	.80599	.003	1

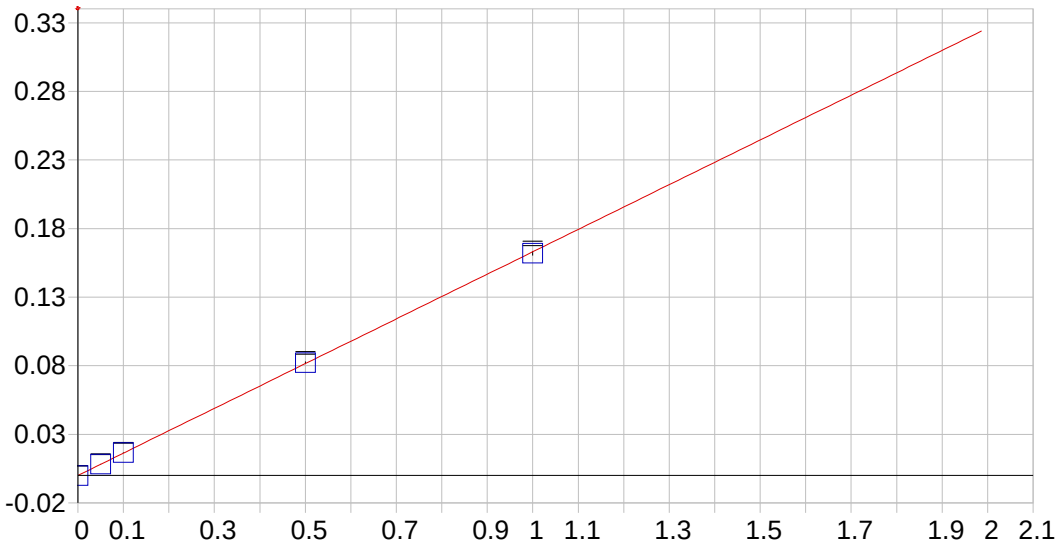


Sr 407.771 { 83}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001571	Re-Slope:	1.000000
A1 (Gain):	2.518623	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999865	Status:	OK.
Std Error of Est:	0.010576		
Predicted MDL:	0.000125		
Predicted MQL:	0.000416		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CAL1 MW 12	.01000	.00993	-.000	-.748	.02657	.001	1
CAL2 MW12	.50000	.52322	.023	4.64	1.3194	.003	1
CAL3 MW12	2.5000	2.5326	.033	1.30	6.3803	.004	1
CAL4 MW12	5.0000	4.9442	-.056	-1.12	12.454	.034	1
Blank	.00000	-.00041	-.000	.000	.00054	.000	1

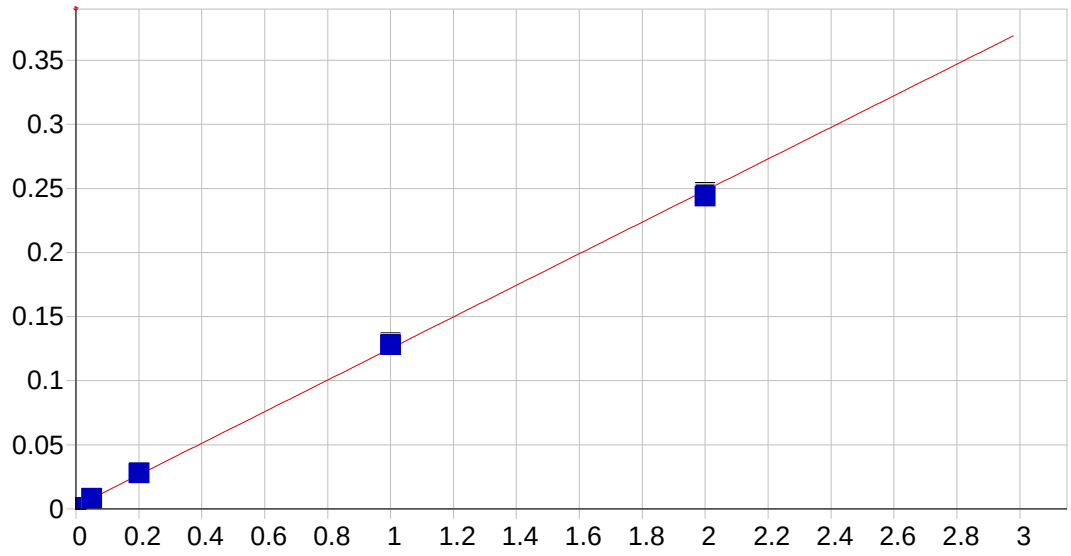


Ti 337.280 {100}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.163068	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.000393		
Predicted MDL:	0.000292		
Predicted MQL:	0.000973		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00166	-.002	.000	-.00027	.000	1
CAL1 MW 12	.05000	.05057	.001	1.13	.00824	.000	1
CAL2 MW12	.10000	.10202	.002	2.02	.01663	.000	1
CAL3 MW12	.50000	.50423	.004	.847	.08222	.001	1
CAL4 MW12	1.0000	.99318	-.007	-.682	.16195	.002	1

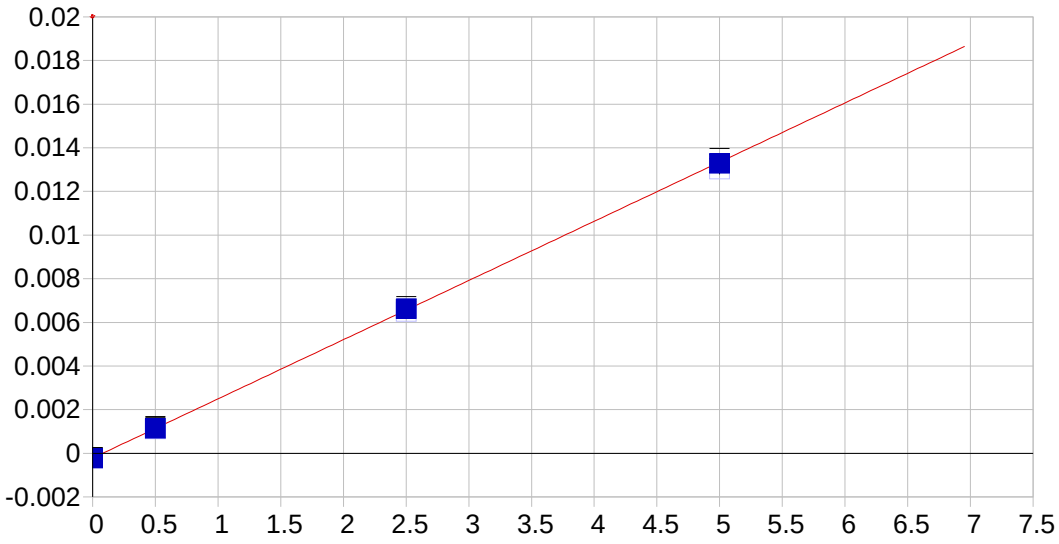


Tl 190.856 {477}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001949	Re-Slope:	1.000000
A1 (Gain):	0.123242	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999628	Status:	OK.
Std Error of Est:	0.001093		
Predicted MDL:	0.002516		
Predicted MQL:	0.008387		

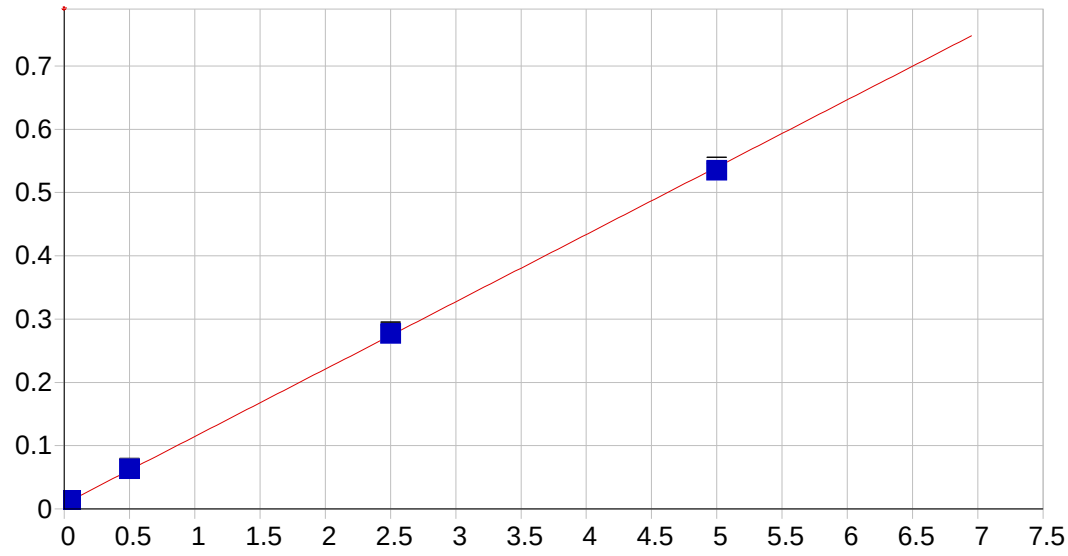
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00385	-.004	.000	.00147	.000	1
CAL1 MW 12	.05000	.05066	.001	1.32	.00820	.000	1
CAL2 MW12	.20000	.21163	.012	5.82	.02822	.000	1
CAL3 MW12	1.0000	1.0237	.024	2.37	.12906	.000	1
CAL4 MW12	2.0000	1.9640	-.036	-1.80	.24588	.001	1



U 385.466 { 87}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	-0.000219		Re-Slope:	1.000000		
A1 (Gain):	0.002713		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999975		Status:	OK.		
Std Error of Est:	0.000030					
Predicted MDL:	0.019166					
Predicted MQL:	0.063888					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00240	-.002	.000	-.00023	.000	1
CAL2 MW12	.50000	.50028	.000	.056	.00111	.000	1
CAL3 MW12	2.5000	2.5215	.021	.859	.00649	.000	1
CAL4 MW12	5.0000	4.9783	-.022	-.435	.01301	.000	1

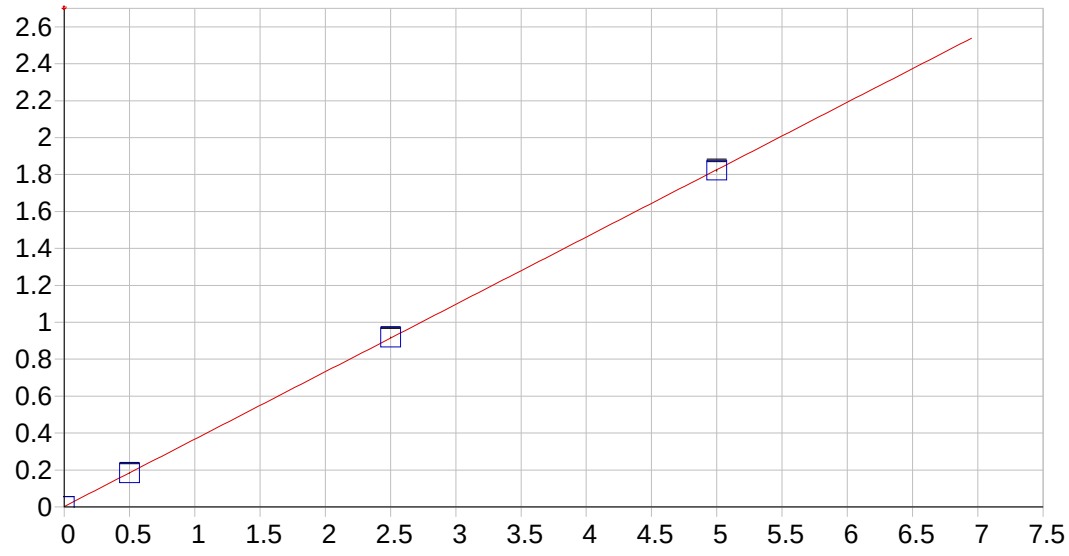


V 292.402 {115}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008077	Re-Slope:	1.000000
A1 (Gain):	0.106420	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999889	Status:	OK.
Std Error of Est:	0.000870		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00215	-.002	.000	.00785	.000	1
CAL1 MW 12	.05000	.05003	.000	.069	.01340	.000	1
CAL2 MW12	.50000	.52032	.020	4.06	.06346	.001	1
CAL3 MW12	2.5000	2.5282	.028	1.13	.27720	.002	1
CAL4 MW12	5.0000	4.9515	-.049	-.970	.53515	.005	1

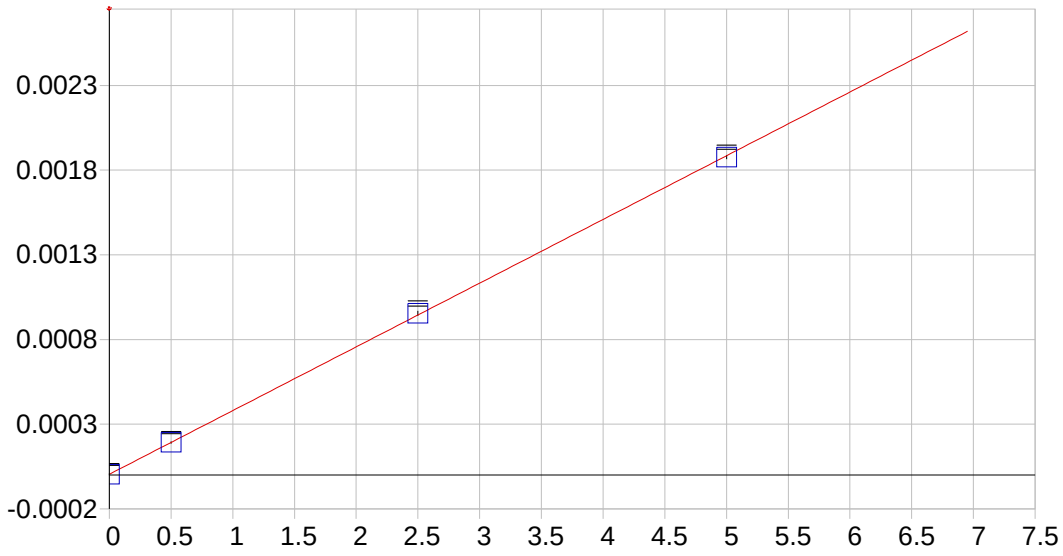


W 224.875 {450}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002084	Re-Slope:	1.000000
A1 (Gain):	0.364879	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.001879		
Predicted MDL:	0.001500		
Predicted MQL:	0.005000		

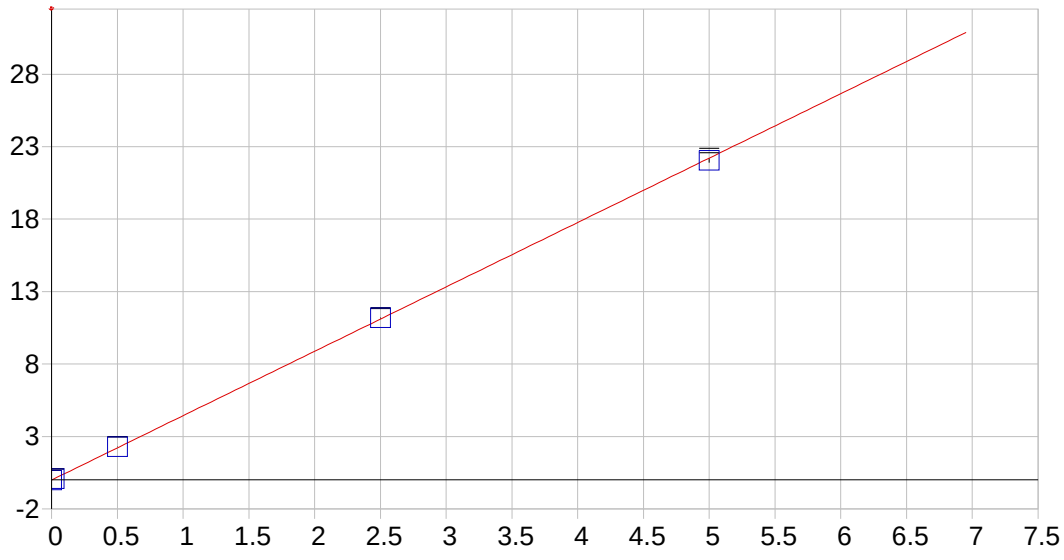
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00083	.001	.000	.00239	.000	1
CAL2 MW12	.50000	.49798	-.002	-.405	.18379	.003	1
CAL3 MW12	2.5000	2.5099	.010	.395	.91789	.005	1
CAL4 MW12	5.0000	4.9921	-.008	-.157	1.8236	.007	1



W 239.709 {140}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000004		Re-Slope:	1.000000		
A1 (Gain):	0.000376		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999972		Status:	OK.		
Std Error of Est:	0.000005					
Predicted MDL:	0.020271					
Predicted MQL:	0.067569					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00242	-.002	.000	.00000	.000	1
CAL2 MW12	.50000	.50009	.000	.018	.00019	.000	1
CAL3 MW12	2.5000	2.5234	.023	.934	.00095	.000	1
CAL4 MW12	5.0000	4.9766	-.023	-.469	.00188	.000	1



Zn 206.200 {463}

Date of Fit:	12/26/2019 16:23:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.009625	Re-Slope:	1.000000
A1 (Gain):	4.444742	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999940	Status:	OK.
Std Error of Est:	0.017424		
Predicted MDL:	0.000130		
Predicted MQL:	0.000434		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00046	-.000	.000	-.01168	.000	1
CAL1 MW 12	.02000	.01978	-.000	-1.12	.07828	.000	1
CAL2 MW12	.50000	.51710	.017	3.42	2.2888	.008	1
CAL3 MW12	2.5000	2.5171	.017	.684	11.178	.031	1
CAL4 MW12	5.0000	4.9660	-.034	-.680	22.063	.155	1

Sample Name: Blank Acquired: 12/26/2019 04:10:40 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00007	.00159	-.00028	.0001	.00925	.00279	.00036
Stddev	.00004	.00018	.00036	.0000	.00064	.00005	.00001
%RSD	65.054	11.340	127.75	9.370	6.9075	1.8159	1.9913
#1	-.00010	.00156	.00001	.0001	.00931	.00274	.00035
#2	-.00002	.00143	-.00069	.0001	.00859	.00278	.00036
#3	-.00009	.00179	-.00017	.0001	.00986	.00284	.00037

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0219	.00273	-.00010	-.00068	.00016	.00778	-.0001
Stddev	.0006	.00057	.00003	.00003	.00003	.00011	.0000
%RSD	2.930	20.870	30.591	4.7723	19.971	1.4486	69.76
#1	.0226	.00310	-.00011	-.00067	.00016	.00788	-.0000
#2	.0214	.00207	-.00012	-.00066	.00019	.00780	-.0001
#3	.0216	.00301	-.00006	-.00072	.00013	.00765	-.0001

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00001	.00023	.38648	-.00068	-.00098	-.00449	.00016
Stddev	.00001	.00033	.00148	.00047	.00066	.00019	.00031
%RSD	55.636	143.94	.38176	68.939	67.162	4.2064	185.78
#1	-.00002	.00061	.38534	-.00014	-.00169	-.00438	.00052
#2	-.00001	.00002	.38815	-.00098	-.00040	-.00471	-.00005
#3	-.00002	.00006	.38597	-.00091	-.00084	-.00439	.00003

Sample Name: Blank Acquired: 12/26/2019 04:10:40 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00617	-.00126	.0005	-.0003	.00147	-.0002	.00785
Stddev	.00020	.00038	.0001	.0000	.00006	.0000	.00012
%RSD	3.1995	29.937	22.44	2.611	4.2264	13.95	1.5735
#1	.00635	-.00086	.0006	-.0003	.00141	-.0002	.00790
#2	.00620	-.00161	.0004	-.0003	.00154	-.0002	.00794
#3	.00596	-.00131	.0006	-.0003	.00148	-.0002	.00771

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S
Avg	.0024	.0000	-.01168
Stddev	.0003	.0000	.00032
%RSD	14.22	166.4	2.7618
#1	.0028	.0000	-.01204
#2	.0023	-.0000	-.01144
#3	.0021	.0000	-.01155

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2905.2	265460.	16476.
Stddev	14.1	3109.	38.
%RSD	.48642	1.1710	.22795
#1	2920.4	263940.	16507.
#2	2892.5	263400.	16435.
#3	2902.6	269040.	16487.

Sample Name: CAL1 MW 12154 Acquired: 12/26/2019 04:16:10 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00071	.00733	.00402	.0009	.05530	.01199	.36526
Stddev	.00004	.00009	.00007	.0000	.00093	.00020	.00029
%RSD	5.6847	1.1904	1.6992	3.728	1.6818	1.6369	.07862
#1	.00068	.00724	.00394	.0009	.05522	.01186	.36493
#2	.00076	.00741	.00408	.0009	.05627	.01222	.36544
#3	.00070	.00734	.00404	.0009	.05441	.01190	.36542

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0515	.09416	.00061	-.00026	.00359	.12760	.0438
Stddev	.0008	.00157	.00003	.00002	.00006	.00121	.0003
%RSD	1.477	1.6663	5.2175	7.6366	1.7263	.94633	.6235
#1	.0507	.09483	.00058	-.00025	.00354	.12839	.0441
#2	.0522	.09237	.00064	-.00028	.00366	.12621	.0435
#3	.0515	.09529	.00062	-.00024	.00356	.12819	.0438

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00594	.03972	.78150	.08569	.00447	-.00029	.00362
Stddev	.00013	.00035	.00192	.00053	.00074	.00028	.00018
%RSD	2.1048	.89179	.24595	.62252	16.595	95.434	4.9438
#1	.00587	.03937	.78159	.08587	.00458	-.00039	.00345
#2	.00608	.03970	.78338	.08510	.00369	.00002	.00359
#3	.00586	.04008	.77954	.08612	.00516	-.00050	.00381

Sample Name: CAL1 MW 12154 Acquired: 12/26/2019 04:16:10 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.15643	.04111	.0266	.0082	.00820	.01340	.07828
Stddev	.00055	.00023	.0006	.0002	.00010	.00016	.00049
%RSD	.34870	.57084	2.133	2.251	1.1678	1.1954	.62667
#1	.15590	.04135	.0265	.0081	.00820	.01332	.07771
#2	.15640	.04088	.0272	.0085	.00811	.01359	.07856
#3	.15699	.04111	.0261	.0082	.00830	.01330	.07856

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2889.7	266200.	16513.
Stddev	19.2	3566.	47.
%RSD	.66358	1.3397	.28517
#1	2905.7	267810.	16484.
#2	2894.9	262120.	16488.
#3	2868.4	268690.	16567.

Sample Name: CAL2 MW12155 Acquired: 12/26/2019 04:21:35 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00725	.07431	.03094	.0017	.92510	.93757	.72762
Stddev	.00005	.00085	.00025	.0000	.00744	.00627	.00312
%RSD	.63819	1.1413	.80368	.4835	.80468	.66823	.42927
#1	.00728	.07348	.03066	.0017	.91837	.94216	.73047
#2	.00728	.07428	.03102	.0017	.92383	.94012	.72428
#3	.00720	.07517	.03114	.0017	.93309	.93043	.72810

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.6037	1.8489	.03559	.02138	.17779	.24932	.0868
Stddev	.0040	.0119	.00041	.00023	.00055	.00129	.0003
%RSD	.6629	.64213	1.1561	1.0988	.30906	.51619	.3058
#1	.6020	1.8423	.03569	.02149	.17766	.25050	.0868
#2	.6009	1.8419	.03593	.02155	.17731	.24795	.0870
#3	.6083	1.8626	.03513	.02111	.17839	.24951	.0865

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.20110	.50215	1.1751	1.0844	.05475	.01712	.01875
Stddev	.00229	.00346	.0048	.0046	.00039	.00018	.00019
%RSD	1.1392	.68898	.40873	.42904	.70995	1.0408	1.0219
#1	.20214	.49899	1.1745	1.0811	.05475	.01723	.01883
#2	.20268	.50160	1.1706	1.0823	.05437	.01691	.01853
#3	.19847	.50585	1.1802	1.0897	.05515	.01721	.01888

Sample Name: CAL2 MW12155 Acquired: 12/26/2019 04:21:35 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924	W_2248
IS Ref	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.08285	1.319	.0166	.02822	.0011	.06346	.1838
Stddev	.00117	.003	.0003	.00012	.0001	.00065	.0027
%RSD	1.4111	.1908	1.567	.43275	7.671	1.0242	1.486
#1	.08202	1.317	.0166	.02820	.0011	.06344	.1824
#2	.08235	1.319	.0169	.02811	.0010	.06412	.1820
#3	.08419	1.322	.0164	.02835	.0012	.06283	.1869

Elem	W_2397	Zn2062
IS Ref	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S
Avg	.0002	2.2888
Stddev	.0000	.0081
%RSD	3.275	.35476
#1	.0002	2.2875
#2	.0002	2.2813
#3	.0002	2.2974

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2865.4	262520.	16512.
Stddev	9.1	2693.	114.
%RSD	.31855	1.0258	.69198
#1	2864.8	260820.	16516.
#2	2874.8	261120.	16624.
#3	2856.6	265630.	16396.

Sample Name: CAL3 MW12174 Acquired: 12/26/2019 04:26:56 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03619	.35145	.15890	.0079	4.4544	4.4169	3.5079
Stddev	.00027	.00059	.00095	.0001	.0137	.0366	.0064
%RSD	.75126	.16889	.59803	1.224	.30791	.82955	.18211
#1	.03607	.35079	.15793	.0079	4.4558	4.3854	3.5115
#2	.03650	.35195	.15894	.0080	4.4673	4.4082	3.5116
#3	.03599	.35159	.15983	.0078	4.4400	4.4571	3.5005

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.929	8.9677	.17203	.10733	.84881	1.1767	.4142
Stddev	.009	.0226	.00162	.00089	.00124	.0019	.0010
%RSD	.3026	.25151	.94328	.83366	.14601	.16483	.2321
#1	2.924	8.9488	.17169	.10709	.84936	1.1746	.4151
#2	2.925	8.9616	.17380	.10832	.84969	1.1784	.4143
#3	2.940	8.9927	.17061	.10657	.84740	1.1770	.4132

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.96053	2.5062	4.1460	5.2688	.26414	.10560	.09379
Stddev	.00821	.0096	.0060	.0114	.00259	.00090	.00050
%RSD	.85506	.38376	.14369	.21565	.97908	.85047	.53746
#1	.95751	2.4953	4.1467	5.2560	.26486	.10456	.09343
#2	.96983	2.5096	4.1515	5.2729	.26126	.10609	.09358
#3	.95426	2.5136	4.1397	5.2776	.26628	.10615	.09437

Sample Name: CAL3 MW12174 Acquired: 12/26/2019 04:26:56 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.80110	.40967	6.380	.0822	.12906	.0065	.27720
Stddev	.00288	.00097	.004	.0009	.00041	.0001	.00242
%RSD	.35929	.23757	.0612	1.079	.31897	1.510	.87259
#1	.80075	.40886	6.383	.0823	.12863	.0064	.27761
#2	.79841	.40940	6.382	.0831	.12911	.0066	.27938
#3	.80413	.41075	6.376	.0813	.12945	.0064	.27460

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S
Avg	.9179	.0010	11.178
Stddev	.0047	.0000	.031
%RSD	.5115	1.587	.27835
#1	.9139	.0009	11.143
#2	.9166	.0010	11.202
#3	.9231	.0010	11.190

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2740.4	260070.	16497.
Stddev	12.1	1920.	117.
%RSD	.44233	.73844	.71179
#1	2751.6	262150.	16532.
#2	2742.1	258370.	16366.
#3	2727.5	259690.	16593.

Sample Name: CAL4 MW12156 Acquired: 12/26/2019 04:32:23 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.07249	.68631	.32054	.0157	8.7167	8.3601	6.8177
Stddev	.00077	.00353	.00192	.0001	.0449	.1130	.0184
%RSD	1.0653	.51472	.59846	.6699	.51512	1.3517	.26946
#1	.07163	.68962	.31915	.0155	8.7352	8.3347	6.8270
#2	.07313	.68671	.31974	.0158	8.7494	8.4837	6.8295
#3	.07271	.68259	.32273	.0157	8.6655	8.2620	6.7965

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.974	17.642	.33614	.21426	1.6428	2.2878	.8068
Stddev	.023	.073	.00330	.00180	.0073	.0071	.0029
%RSD	.3781	.41197	.98211	.83781	.44646	.30946	.3615
#1	5.962	17.593	.33321	.21219	1.6472	2.2935	.8047
#2	5.961	17.609	.33971	.21540	1.6470	2.2900	.8101
#3	6.000	17.726	.33548	.21519	1.6344	2.2799	.8056

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.8535	5.0110	7.6577	10.398	.51163	.21870	.18842
Stddev	.0190	.0282	.0366	.076	.00119	.00268	.00207
%RSD	1.0234	.56288	.47815	.73277	.23285	1.2260	1.0979
#1	1.8435	4.9902	7.6866	10.337	.51076	.21628	.18737
#2	1.8754	4.9997	7.6699	10.373	.51299	.21824	.18709
#3	1.8416	5.0431	7.6165	10.483	.51115	.22158	.19080

Sample Name: CAL4 MW12156 Acquired: 12/26/2019 04:32:23 Type: Cal
Method: 6010D 200.7 - 070219(v213) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.6061	.80599	12.45	.1620	.24588	.0130	.53515
Stddev	.0085	.00255	.03	.0016	.00099	.0002	.00511
%RSD	.52823	.31681	.2753	.9705	.40340	1.793	.95553
#1	1.6033	.80543	12.46	.1606	.24637	.0127	.53114
#2	1.5994	.80376	12.48	.1637	.24474	.0132	.54091
#3	1.6156	.80877	12.42	.1616	.24653	.0131	.53342

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S
Avg	1.824	.0019	22.063
Stddev	.007	.0000	.155
%RSD	.3667	.6551	.70280
#1	1.823	.0019	21.947
#2	1.818	.0019	22.003
#3	1.831	.0019	22.239

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2651.0	256180.	16449.
Stddev	6.2	1674.	177.
%RSD	.23257	.65356	1.0739
#1	2654.9	257080.	16271.
#2	2643.9	254250.	16451.
#3	2654.3	257220.	16625.

Sample Name: ICV MW-12201 Acquired: 12/26/2019 04:37:55 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49993	24.878	.51801	.4892	2.4961	2.5270	50.075
Stddev	.00365	.021	.00219	.0025	.0111	.0251	.160
%RSD	.73070	.08389	.42301	.5166	.44575	.99316	.31969
#1	.50320	24.900	.51816	.4896	2.5047	2.5498	50.241
#2	.49599	24.858	.51575	.4865	2.5000	2.5001	49.921
#3	.50060	24.877	.52012	.4914	2.4836	2.5310	50.064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4914	2.5050	2.5043	2.4725	24.870	50.230	50.40
Stddev	.0033	.0183	.0228	.0245	.116	.150	.06
%RSD	.6774	.73116	.91199	.99119	.46579	.29871	.1204
#1	.4894	2.4960	2.5264	2.4916	24.995	50.101	50.34
#2	.4896	2.4929	2.4808	2.4449	24.851	50.196	50.41
#3	.4952	2.5261	2.5055	2.4811	24.765	50.395	50.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICV MW-12201 Acquired: 12/26/2019 04:37:55 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5158	2.4469	50.568	2.5026	.49574	.48049	.49645
Stddev	.0219	.0198	.189	.0223	.00304	.00413	.00419
%RSD	.86968	.80735	.37344	.88991	.61296	.85868	.84431
#1	2.5316	2.4314	50.775	2.4893	.49368	.48090	.49295
#2	2.4908	2.4401	50.526	2.4903	.49431	.47618	.49531
#3	2.5251	2.4691	50.404	2.5283	.49923	.48440	.50110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5014	.49633	2.510	.4965	1.0157	2.502	2.4903
Stddev	.0151	.00335	.007	.0059	.0043	.068	.0236
%RSD	.60351	.67566	.2695	1.187	.42427	2.707	.94627
#1	2.4903	.49412	2.518	.5024	1.0120	2.577	2.5146
#2	2.4953	.49470	2.507	.4906	1.0147	2.446	2.4676
#3	2.5186	.50019	2.505	.4963	1.0204	2.483	2.4887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICV MW-12201 Acquired: 12/26/2019 04:37:55 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.516	2.479	2.5226
Stddev	.015	.013	.0188
%RSD	.5838	.5040	.74630
#1	2.507	2.490	2.5093
#2	2.509	2.466	2.5145
#3	2.533	2.482	2.5442
Check ?	None	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2746.1	264220.	16497.
Stddev	13.8	1101.	81.
%RSD	.50407	.41678	.49305
#1	2751.5	263170.	16417.
#2	2756.4	265360.	16495.
#3	2730.3	264120.	16580.

Sample Name: ICB IM-9779 Acquired: 12/26/2019 04:43:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00066	-.01511	.00086	-.0001	-.00092	.00005	-.50014
Stddev	.00043	.00908	.00127	.0009	.00014	.00012	.00110
%RSD	64.302	60.057	147.43	1206.	15.034	232.30	.21996
#1	-.00054	-.00488	.00206	.0006	-.00084	-.00001	-.50049
#2	-.00114	-.02219	.00100	-.0011	-.00108	-.00002	-.50102
#3	-.00031	-.01828	-.00047	.0003	-.00085	.00019	-.49890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00074	-.00037	-.00003	.00009	-.23241	-.5376
Stddev	.0001	.00019	.00052	.00180	.00096	.05872	.0150
%RSD	90.28	26.102	140.92	5157.2	1018.0	25.266	2.784
#1	.0001	-.00065	-.00039	.00129	.00088	-.16654	-.5357
#2	.0001	-.00060	-.00089	.00069	-.00098	-.25143	-.5533
#3	-.0000	-.00096	.00016	-.00208	.00038	-.27926	-.5236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB IM-9779 Acquired: 12/26/2019 04:43:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00095	.00406	-.54374	-.00118	.00049	.00000	.00053
Stddev	.00000	.00149	.04629	.00035	.00190	.00082	.00181
%RSD	.28270	36.649	8.5138	30.114	390.31	24554.	338.91
#1	-.00095	.00561	-.54215	-.00098	.00200	-.00092	.00244
#2	-.00095	.00394	-.49826	-.00159	.00109	.00028	-.00116
#3	-.00095	.00264	-.59080	-.00097	-.00164	.00065	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01705	-.00144	-.0004	-.0016	-.00429	-.0065	-.00216
Stddev	.00162	.00016	.0001	.0003	.00170	.0135	.00287
%RSD	9.5221	11.064	30.11	17.37	39.555	207.3	132.99
#1	.01725	-.00150	-.0005	-.0013	-.00259	-.0201	-.00401
#2	.01857	-.00157	-.0004	-.0017	-.00430	.0068	-.00361
#3	.01534	-.00126	-.0003	-.0019	-.00598	-.0062	.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB IM-9779 Acquired: 12/26/2019 04:43:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0062	.0019	-.00035
Stddev	.0008	.0097	.00008
%RSD	12.64	499.4	24.413
#1	.0070	-.0072	-.00029
#2	.0063	.0009	-.00030
#3	.0054	.0122	-.00044
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2930.4	268350.	16445.
Stddev	7.1	9567.	55.
%RSD	.24293	3.5653	.33242
#1	2937.1	275200.	16486.
#2	2931.3	272430.	16383.
#3	2922.9	257420.	16466.

Sample Name: ICSA MW-~~12413~~ Acquired: 12/26/2019 04:48:52 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00184	496.16	-.00319	W -.0261	-.00083	-.00009	471.92
Stddev	.00032	2.90	.00143	.0066	.00011	.00006	11.41
%RSD	17.625	.58432	44.824	25.16	13.517	63.861	2.4174
#1	-.00158	496.14	-.00163	-.0267	-.00094	-.00013	476.19
#2	-.00221	499.06	-.00349	-.0193	-.00083	-.00002	480.58
#3	-.00174	493.27	-.00444	-.0324	-.00071	-.00013	458.99
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit				.0250			
Low Limit				-.0250			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.00345	.00008	.00304	466.81	.11350	490.5
Stddev	.0001	.00024	.00029	.00106	4.19	.08971	.4
%RSD	14.37	7.0861	372.25	34.752	.89724	79.039	.0794
#1	-.0007	-.00322	.00009	.00292	467.38	.02118	490.9
#2	-.0005	-.00371	.00036	.00204	470.68	.11897	490.1
#3	-.0006	-.00341	-.00022	.00415	462.37	.20034	490.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

12143 njt 1-15-20

Sample Name: ICSA MW-~~12413~~ Acquired: 12/26/2019 04:48:52 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00534	-.00470	-1.0980	-.00954	W .00854	-.00955	-.00753
Stddev	.00007	.00084	.0388	.00058	.00229	.00281	.00140
%RSD	1.2353	17.947	3.5374	6.1312	26.794	29.449	18.549
#1	-.00528	-.00372	-1.1028	-.00978	.01095	-.00662	-.00775
#2	-.00532	-.00517	-1.0569	-.00996	.00827	-.00980	-.00604
#3	-.00541	-.00519	-1.1342	-.00887	.00640	-.01223	-.00881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit					.00500		
Low Limit					-.00500		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06300	-.00179	.0034	-.0032	.00610	W -.2529	.00852
Stddev	.00136	.00122	.0001	.0002	.00445	.0101	.00075
%RSD	2.1562	68.449	2.288	5.083	72.944	3.976	8.8427
#1	.06447	-.00320	.0034	-.0032	.00521	-.2444	.00788
#2	.06272	-.00118	.0035	-.0034	.01092	-.2504	.00935
#3	.06180	-.00099	.0035	-.0030	.00216	-.2640	.00834
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit						.2500	
Low Limit						-.2500	

Sample Name: ICSA MW-~~12413~~ Acquired: 12/26/2019 04:48:52 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0199	-.0230	-.00620
Stddev	.0003	.0204	.00033
%RSD	1.659	88.64	5.3240
#1	-.0199	-.0219	-.00656
#2	-.0195	-.0440	-.00590
#3	-.0202	-.0032	-.00614
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2381.1	254080.	16162.
Stddev	16.3	1989.	123.
%RSD	.68659	.78262	.75955
#1	2385.7	255710.	16155.
#2	2394.6	251860.	16044.
#3	2362.9	254660.	16289.

Sample Name: CCV MW-12174 Acquired: 12/26/2019 04:54:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49454	25.020	.49152	.4933	2.5167	2.5215	50.450
Stddev	.00829	.138	.00396	.0063	.0158	.0466	.117
%RSD	1.6756	.55166	.80580	1.273	.62918	1.8461	.23223
#1	.49735	25.074	.49025	.4954	2.5194	2.5198	50.570
#2	.50105	24.863	.48835	.4982	2.4996	2.5689	50.335
#3	.48521	25.123	.49596	.4862	2.5310	2.4758	50.446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4861	2.4876	2.5094	2.4709	25.141	50.604	50.43
Stddev	.0023	.0080	.0386	.0371	.112	.095	.21
%RSD	.4629	.32193	1.5387	1.5004	.44554	.18769	.4068
#1	.4843	2.4827	2.5215	2.4774	25.176	50.636	50.50
#2	.4853	2.4833	2.5405	2.5043	25.016	50.498	50.20
#3	.4886	2.4968	2.4662	2.4310	25.231	50.680	50.59
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 04:54:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5169	2.4723	50.993	2.4899	.49899	.49229	.49314
Stddev	.0370	.0131	.265	.0101	.00144	.00247	.00437
%RSD	1.4688	.53112	.52023	.40457	.28956	.50150	.88687
#1	2.5275	2.4612	51.140	2.4849	.49811	.48947	.49009
#2	2.5475	2.4690	50.687	2.4834	.49821	.49407	.49117
#3	2.4758	2.4868	51.152	2.5015	.50066	.49333	.49815
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4531	.49802	2.510	.4981	1.0050	2.499	2.4947
Stddev	.0117	.00258	.008	.0073	.0052	.022	.0380
%RSD	.47600	.51842	.3363	1.458	.51331	.8719	1.5243
#1	2.4437	.49539	2.517	.5002	1.0008	2.487	2.5051
#2	2.4494	.49811	2.501	.5042	1.0035	2.524	2.5264
#3	2.4662	.50056	2.513	.4901	1.0108	2.485	2.4525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 04:54:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.465	2.419	2.4964
Stddev	.016	.040	.0085
%RSD	.6384	1.667	.33978
#1	2.449	2.389	2.4954
#2	2.465	2.465	2.4885
#3	2.481	2.404	2.5054
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2769.0	263150.	16370.
Stddev	14.4	5044.	146.
%RSD	.52084	1.9168	.89164
#1	2774.4	262500.	16297.
#2	2779.8	258460.	16538.
#3	2752.6	268480.	16275.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 04:59:51 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00031	-.02497	.00059	-.0007	-.00113	.00021	-.49524
Stddev	.00068	.02268	.00048	.0003	.00053	.00015	.00356
%RSD	218.15	90.833	81.653	43.01	47.101	74.536	.71881
#1	.00026	-.00965	.00114	-.0008	-.00064	.00015	-.49131
#2	-.00014	-.05103	.00025	-.0008	-.00170	.00009	-.49825
#3	-.00107	-.01424	.00039	-.0003	-.00106	.00038	-.49617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00080	-.00050	-.00157	.00018	-.27612	-.5451
Stddev	.0001	.00015	.00045	.00434	.00132	.03749	.0034
%RSD	101.8	19.101	90.410	276.29	718.86	13.578	.6149
#1	-.0000	-.00084	-.00050	.00057	.00080	-.24676	-.5432
#2	.0002	-.00063	-.00096	.00128	.00109	-.31835	-.5490
#3	.0002	-.00093	-.00005	-.00657	-.00133	-.26324	-.5432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 04:59:51 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00092	.00378	-.43818	-.00125	-.00165	-.00007	.00211
Stddev	.00005	.00133	.03123	.00006	.00081	.00024	.00215
%RSD	5.4223	35.120	7.1265	4.7356	49.209	333.63	102.11
#1	-.00094	.00527	-.40437	-.00127	-.00132	-.00021	.00323
#2	-.00086	.00332	-.46594	-.00130	-.00106	-.00021	-.00037
#3	-.00095	.00274	-.44421	-.00118	-.00257	.00020	.00346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01634	-.00142	-.0005	-.0021	-.00201	.0111	.00152
Stddev	.00161	.00027	.0001	.0001	.00317	.0141	.00222
%RSD	9.8772	19.221	18.22	6.869	157.19	126.4	146.05
#1	.01607	-.00115	-.0004	-.0020	-.00068	.0244	.00097
#2	.01807	-.00170	-.0004	-.0022	-.00563	.0127	-.00037
#3	.01488	-.00142	-.0006	-.0022	.00027	-.0037	.00396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 04:59:51 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0044	-.0074	-.00044
Stddev	.0020	.0007	.00019
%RSD	45.80	10.05	44.317
#1	.0067	-.0082	-.00037
#2	.0039	-.0067	-.00066
#3	.0027	-.0073	-.00029
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2893.9	257700.	16061.
Stddev	4.9	7157.	77.
%RSD	.16851	2.7771	.47866
#1	2899.4	260110.	15999.
#2	2890.1	263340.	16147.
#3	2892.2	249650.	16038.

Sample Name: ZLR Acquired: 12/26/2019 05:05:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MW-10926

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00034	.00857	.00005	-.0070	-.00097	.01431	-.48806
Stddev	.00020	.01724	.00205	.0010	.00024	.00025	.00075
%RSD	59.710	201.20	4431.5	14.77	24.460	1.7416	.15322
#1	.00039	.01619	.00239	-.0074	-.00075	.01408	-.48749
#2	.00012	.02069	-.00084	-.0058	-.00122	.01457	-.48778
#3	.00052	-.01117	-.00141	-.0077	-.00095	.01427	-.48891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00381	-.00099	-.00133	-.00877	245.17	-.5423
Stddev	.0002	.00017	.00014	.00191	.00380	2.25	.0095
%RSD	55.74	4.4535	14.213	143.63	43.350	.91826	1.751
#1	.0001	-.00362	-.00085	-.00241	-.00839	247.38	-.5460
#2	.0004	-.00392	-.00099	-.00246	-.00517	245.24	-.5494
#3	.0005	-.00390	-.00113	.00088	-.01274	242.88	-.5315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZLR Acquired: 12/26/2019 05:05:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MW-10926

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00089	.00074	239.33	-.00159	F 5.0352	.00065	.00128
Stddev	.00004	.00029	2.90	.00016	.0288	.00147	.00155
%RSD	4.1824	38.779	1.2113	10.376	.57209	225.77	121.74
#1	-.00086	.00108	236.48	-.00145	5.0196	.00218	.00011
#2	-.00094	.00059	242.27	-.00154	5.0177	-.00075	.00304
#3	-.00088	.00056	239.23	-.00177	5.0685	.00052	.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02841	-.00133	-.0004	F 8.286	.00980	.0325	F 10.307
Stddev	.00119	.00069	.0001	.134	.00321	.0119	.125
%RSD	4.1779	51.807	26.56	1.612	32.710	36.46	1.2175
#1	.02974	-.00181	-.0005	8.164	.00765	.0446	10.174
#2	.02745	-.00054	-.0004	8.429	.00827	.0322	10.424
#3	.02804	-.00164	-.0003	8.265	.01349	.0209	10.322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
High Limit				8.000			10.000
Low Limit				-8.000			-10.000

Sample Name: ZLR Acquired: 12/26/2019 05:05:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MW-10926

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0097	.0026	-.00017
Stddev	.0016	.0149	.00007
%RSD	16.08	570.4	40.204
#1	-.0086	-.0069	-.00012
#2	-.0089	.0198	-.00024
#3	-.0114	-.0050	-.00014
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2735.9	255530.	16050.
Stddev	14.8	3089.	218.
%RSD	.53999	1.2090	1.3570
#1	2719.8	258720.	15970.
#2	2748.8	252560.	15884.
#3	2739.0	255310.	16296.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.172%	96.259%	97.411%
Range			

Sample Name: Fe 500 PPM Acquired: 12/26/2019 05:11:19 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-10944

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00177	-.04025	-.00025	.0084	-.00089	.00003	-.52433
Stddev	.00055	.01608	.00130	.0072	.00046	.00003	.00364
%RSD	31.033	39.947	514.25	85.80	51.634	90.059	.69509
#1	-.00116	-.02670	-.00171	.0004	-.00043	.00000	-.52467
#2	-.00196	-.05802	.00013	.0144	-.00088	.00003	-.52779
#3	-.00221	-.03604	.00081	.0102	-.00136	.00006	-.52052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.00376	.00008	-.00321	F 507.78	-.19717	-.5806
Stddev	.0002	.00017	.00035	.00036	9.42	.02982	.0142
%RSD	25.32	4.6287	430.17	11.229	1.8551	15.121	2.454
#1	-.0008	-.00395	.00047	-.00292	497.45	-.18549	-.5852
#2	-.0006	-.00363	-.00004	-.00309	510.00	-.17497	-.5646
#3	-.0005	-.00369	-.00019	-.00361	515.89	-.23106	-.5920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					500.00		
Low Limit					-500.00		

Sample Name: Fe 500 PPM Acquired: 12/26/2019 05:11:19 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-10944

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00456	-.00304	-.79807	-.01138	.00001	-.00493	.00651
Stddev	.00003	.00023	.04184	.00048	.00071	.00140	.00288
%RSD	.60188	7.6531	5.2421	4.2192	5241.5	28.377	44.192
#1	-.00457	-.00308	-.82192	-.01084	.00080	-.00334	.00321
#2	-.00459	-.00325	-.82252	-.01158	-.00059	-.00598	.00847
#3	-.00453	-.00279	-.74976	-.01173	-.00017	-.00547	.00786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02204	-.00057	-.0006	-.0002	-.01106	.0656	.00388
Stddev	.00023	.00040	.0000	.0002	.00362	.0168	.00059
%RSD	1.0284	69.377	7.952	104.2	32.750	25.65	15.151
#1	.02219	-.00074	-.0006	-.0000	-.01524	.0481	.00421
#2	.02177	-.00085	-.0006	-.0005	-.00892	.0670	.00422
#3	.02214	-.00012	-.0007	-.0002	-.00902	.0816	.00320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: Fe 500 PPM Acquired: 12/26/2019 05:11:19 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-10944

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0155	-.0204	-.00034
Stddev	.0015	.0061	.00008
%RSD	9.489	29.84	22.337
#1	-.0141	-.0265	-.00032
#2	-.0170	-.0205	-.00028
#3	-.0154	-.0143	-.00043
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2812.5	261120.	16501.
Stddev	11.6	597.	98.
%RSD	.41381	.22877	.59155
#1	2816.2	261580.	16605.
#2	2821.9	260450.	16486.
#3	2799.5	261350.	16411.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.811%	98.366%	100.15%
Range			

Sample Name: UQ39119-001 Acquired: 12/26/2019 05:16:53 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	s -.07683	k .00117	k -.0019	s -.00210	k -.00131
Stddev	.00015	.00334	.00054	.0010	.00074	.00002
%RSD	164.56	4.3429	46.499	51.78	35.168	1.5228
#1	-.00002	-.07461	.00057	-.0027	-.00257	-.00133
#2	.00027	s -.07522	k .00163	k -.0008	s -.00125	k -.00131
#3	.00003	-.08067	.00130	-.0022	-.00248	-.00129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca2179	Cd2288	Co2286	Cr2677	Cu3273	Fe2611
IS Ref	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s -.50076	k .0001	-.00121	.00005	kF .01523	s -.00853
Stddev	.00186	.0001	.00003	.00019	.00042	.00325
%RSD	.37063	98.24	2.7305	397.35	2.7445	38.173
#1	-.50264	.0002	-.00118	.00001	.01570	-.01225
#2	s -.49893	k .0000	-.00119	-.00013	k .01507	s -.00625
#3	-.50069	.0001	-.00125	.00026	.01491	-.00708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					.01000	
Low Limit					-.01000	

Sample Name: UQ39119-001 Acquired: 12/26/2019 05:16:53 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
IS Ref	(Sc3613-2)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s -.47314	s -.5332	-.00097	-.00043	s -1.6926	k -.00116
Stddev	.05768	.0065	.00002	.00002	.6408	.00013
%RSD	12.190	1.219	2.5374	5.3119	37.859	11.348
#1	-.52364	-.5358	-.00097	-.00046	-2.0071	-.00123
#2	s -.41029	s -.5258	-.00094	-.00041	s -.95527	k -.00124
#3	-.48549	-.5380	-.00099	-.00043	-2.1153	-.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Pb2203	Sb2068	Se1960	Si_2124	Sn1899	Sr4077
IS Ref	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .00097	k .00096	k -.00054	.00525	-.00059	s -.0006
Stddev	.00036	.00102	.00034	.00041	.00010	.0001
%RSD	37.570	106.73	62.824	7.8873	16.939	12.63
#1	.00062	.00108	-.00060	.00530	-.00056	-.0005
#2	k .00135	k -.00012	k -.00017	.00481	-.00071	s -.0006
#3	.00094	.00191	-.00083	.00563	-.00051	-.0006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: UQ39119-001 Acquired: 12/26/2019 05:16:53 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3372	Tl1908	U_3854	V_2924	W_2248	W_2397
IS Ref	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc2273)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	k -.00925	.0547	kW -.03142	-.0040	-.0082
Stddev	.0001	.00140	.0077	.00400	.0005	.0036
%RSD	25.75	15.166	14.17	12.729	12.47	44.45
#1	-.0005	-.01017	.0564	-.03512	-.0038	-.0055
#2	-.0004	k -.00764	.0462	k -.02717	-.0036	-.0123
#3	-.0006	-.00995	.0614	-.03197	-.0045	-.0068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	None	Chk Pass
High Limit				.02500		
Low Limit				-.02500		

Elem	Zn2062
IS Ref	(Sc2273)
Units	ppm
Avg	.00068
Stddev	.00006
%RSD	8.7634
#1	.00072
#2	.00072
#3	.00062
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: UQ39119-001 Acquired: 12/26/2019 05:16:53 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	8003.8	654250.	^ *****
Stddev	144.2	59965.	-----
%RSD	1.8017	9.1655	-----
#1	8149.0	713250.	28477.
#2	8001.9	593370.	^ -----
#3	7860.6	656130.	29392.

Sample Name: UQ39119-002 Acquired: 12/26/2019 05:22:18 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .00012	F -.08303	F .00109	F -.0028	F -.00279	F -.00135	F -.50088
Stddev	.00005	.01086	.00038	.0003	.00005	.00001	.00145
%RSD	41.061	13.082	34.791	11.35	1.6704	.47445	.29043
#1	.00007	-.08353	.00070	-.0032	-.00275	-.00135	-.50255
#2	.00012	-.09364	.00146	-.0027	-.00279	-.00136	-.50013
#3	.00017	-.07193	.00111	-.0025	-.00284	-.00135	-.49995
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1.0000	20.000	5.0000	1.000	10.000	2.0000	40.000
Range	-20.500%	-20.500%	-20.500%	-20.50%	-20.500%	-20.500%	-20.500%

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0001	F -.00127	F .00010	F .01535	F -.00990	F -.53492	F -.5441
Stddev	.0001	.00006	.00012	.00027	.00073	.01540	.0120
%RSD	44.58	4.3796	128.02	1.7284	7.3331	2.8788	2.212
#1	.0001	-.00126	.00022	.01546	-.00925	-.51742	-.5476
#2	.0001	-.00121	.00009	.01505	-.01068	-.54639	-.5307
#3	.0002	-.00132	-.00002	.01554	-.00975	-.54095	-.5540
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	1.000	2.0000	5.0000	2.0000	20.000	40.000	40.00
Range	-20.50%	-20.500%	-20.500%	-20.500%	-20.500%	-20.500%	-20.50%

Sample Name: UQ39119-002 Acquired: 12/26/2019 05:22:18 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.00098	F -.00033	F -2.3018	F -.00103	F .00122	F .00095	F -.00058
Stddev	.00001	.00010	.1062	.00008	.00032	.00124	.00040
%RSD	1.4937	28.923	4.6125	7.9767	26.260	130.94	69.315
#1	-.00100	-.00031	-2.2660	-.00104	.00125	.00215	-.00103
#2	-.00098	-.00025	-2.4212	-.00111	.00089	.00103	-.00023
#3	-.00097	-.00043	-2.2181	-.00094	.00153	-.00033	-.00049
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	2.0000	2.0000	40.000	2.0000	5.0000	1.0000	1.0000
Range	-20.500%	-20.500%	-20.500%	-20.500%	-20.500%	-20.500%	-20.500%

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .00486	F -.00073	F -.0006	F -.0005	F -.01045	.0609	F -.03808
Stddev	.00054	.00028	.0000	.0001	.00043	.0098	.00086
%RSD	11.014	38.275	3.752	16.71	4.1534	16.16	2.2637
#1	.00426	-.00064	-.0007	-.0006	-.01063	.0719	-.03806
#2	.00528	-.00050	-.0006	-.0005	-.01077	.0579	-.03896
#3	.00505	-.00104	-.0006	-.0005	-.00996	.0529	-.03723
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	None	Chk Fail
Value	4.0000	1.0000	1.000	1.000	.80000		2.0000
Range	-20.500%	-20.500%	-20.50%	-20.50%	-20.500%		-20.500%

Sample Name: UQ39119-002 Acquired: 12/26/2019 05:22:18 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0046	-.0133	F .00068
Stddev	.0001	.0056	.00006
%RSD	3.147	41.63	8.2438
#1	-.0045	-.0194	.00066
#2	-.0046	-.0121	.00075
#3	-.0047	-.0085	.00065
Check ?	None	None	Chk Fail
Value			2.0000
Range			-20.500%
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	8251.3	760120.	30851.
Stddev	203.4	15579.	919.
%RSD	2.4653	2.0495	2.9786
#1	8127.0	759900.	30517.
#2	8486.0	775810.	31890.
#3	8140.9	744650.	30145.

Sample Name: UQ39123-001 Acquired: 12/26/2019 05:30:49 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00052	-.04736	-.00067	.0005	-.00182	-.00022	-.49985
Stddev	.00009	.00453	.00082	.0005	.00023	.00006	.00142
%RSD	16.567	9.5610	122.68	90.23	12.747	28.148	.28384
#1	-.00052	-.05193	.00011	.0000	-.00192	-.00022	-.49832
#2	-.00062	-.04728	-.00153	.0010	-.00199	-.00016	-.50010
#3	-.00044	-.04287	-.00059	.0006	-.00156	-.00028	-.50112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00117	-.00016	.00145	-.00821	-.38148	-.5280
Stddev	.0001	.00013	.00016	.00083	.00396	.01996	.0090
%RSD	30.63	11.098	100.64	56.935	48.192	5.2329	1.711
#1	.0003	-.00116	-.00031	.00111	-.00398	-.35851	-.5208
#2	.0001	-.00105	.00001	.00085	-.01182	-.39467	-.5382
#3	.0002	-.00131	-.00018	.00240	-.00883	-.39125	-.5252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39123-001 Acquired: 12/26/2019 05:30:49 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00095	.00082	-1.1700	-.00122	-.00134	-.00100	.00180
Stddev	.00002	.00029	.0477	.00026	.00101	.00146	.00130
%RSD	1.6318	34.834	4.0806	21.305	75.384	146.32	72.241
#1	-.00097	.00108	-1.2228	-.00100	-.00247	-.00090	.00275
#2	-.00095	.00088	-1.1298	-.00114	-.00054	-.00250	.00032
#3	-.00094	.00051	-1.1574	-.00150	-.00100	.00041	.00234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02749	.01941	-.0006	-.0009	-.00637	.0150	-.01032
Stddev	.00036	.00063	.0001	.0002	.00143	.0051	.00047
%RSD	1.2962	3.2497	8.881	27.75	22.403	33.77	4.6038
#1	.02719	.01877	-.0005	-.0007	-.00637	.0207	-.01018
#2	.02788	.02003	-.0006	-.0008	-.00494	.0112	-.00992
#3	.02740	.01941	-.0006	-.0012	-.00779	.0131	-.01084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39123-001 Acquired: 12/26/2019 05:30:49 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0051	-.0120	-.00030
Stddev	.0013	.0151	.00010
%RSD	25.38	125.9	32.102
#1	.0063	-.0053	-.00028
#2	.0054	-.0014	-.00022
#3	.0037	-.0293	-.00040
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3107.5	296750.	18222.
Stddev	15.2	2814.	52.
%RSD	.48768	.94832	.28402
#1	3096.0	296720.	18278.
#2	3124.7	293950.	18175.
#3	3101.8	299580.	18214.

Sample Name: UQ39123-002 Acquired: 12/26/2019 05:36:20 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W .82748	17.267	4.5281	W .8391	8.7745	1.8322	35.468
Stddev	.00792	.041	.0146	.0045	.1362	.0321	.051
%RSD	.95745	.24014	.32207	.5379	1.5523	1.7538	.14364
#1	.82034	17.300	4.5185	.8343	8.6174	1.7972	35.514
#2	.82609	17.221	4.5210	.8432	8.8478	1.8390	35.477
#3	.83600	17.280	4.5449	.8398	8.8584	1.8604	35.413
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
Value	1.0000			1.000			
Range	-15.400%			-15.40%			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8551	1.7515	4.2355	1.7713	18.938	35.413	34.34
Stddev	.0028	.0063	.0364	.0147	.001	.042	.06
%RSD	.3312	.35699	.86009	.82992	.00713	.11915	.1702
#1	.8557	1.7501	4.1992	1.7564	18.937	35.433	34.41
#2	.8520	1.7461	4.2352	1.7717	18.939	35.440	34.31
#3	.8576	1.7583	4.2720	1.7857	18.937	35.364	34.30
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39123-002 Acquired: 12/26/2019 05:36:20 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.7347	1.7249	36.109	1.7270	4.5493	W .84351	.86023
Stddev	.0140	.0088	.040	.0092	.0204	.00721	.00464
%RSD	.80680	.50729	.11159	.53578	.44817	.85424	.53993
#1	1.7209	1.7242	36.067	1.7243	4.5656	.84076	.85737
#2	1.7342	1.7165	36.112	1.7194	4.5265	.83809	.85774
#3	1.7489	1.7340	36.148	1.7373	4.5560	.85169	.86559
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
Value						1.0000	
Range						-15.400%	

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.3861	.91469	.8781	.8726	.72536	1.781	1.7255
Stddev	.0119	.00244	.0002	.0060	.00382	.018	.0113
%RSD	.35233	.26660	.0250	.6823	.52657	1.031	.65551
#1	3.3818	.91673	.8779	.8677	.72615	1.764	1.7138
#2	3.3769	.91199	.8780	.8710	.72121	1.779	1.7262
#3	3.3996	.91536	.8783	.8792	.72872	1.801	1.7364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39123-002 Acquired: 12/26/2019 05:36:20 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0759	-.0139	1.7701
Stddev	.0020	.0077	.0064
%RSD	2.645	54.98	.35920
#1	-.0745	-.0066	1.7693
#2	-.0750	-.0219	1.7642
#3	-.0782	-.0134	1.7769
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2971.7	289790.	17923.
Stddev	7.0	2128.	110.
%RSD	.23712	.73427	.61464
#1	2963.6	291850.	18043.
#2	2976.2	289920.	17899.
#3	2975.3	287600.	17827.

Sample Name: UL06035-015 Acquired: 12/26/2019 05:41:53 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: MDLv ICP4 6010D SOIL - Si only

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00033	-.04197	.00219	.0012	-.00078	-.00002	-.49878
Stddev	.00050	.00468	.00136	.0002	.00015	.00001	.00260
%RSD	153.08	11.149	61.826	18.07	19.332	49.602	.52208
#1	-.00011	-.03922	.00302	.0014	-.00069	-.00001	-.50020
#2	.00003	-.03932	.00293	.0010	-.00069	-.00002	-.50036
#3	-.00090	-.04737	.00063	.0011	-.00095	-.00004	-.49577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.00102	.00009	.00046	-.00642	-.37894	-.5427
Stddev	.0003	.00004	.00053	.00159	.00168	.02997	.0048
%RSD	58.12	3.9266	599.19	346.41	26.187	7.9087	.8864
#1	.0007	-.00104	-.00014	.00135	-.00519	-.36554	-.5384
#2	.0006	-.00104	.00069	-.00138	-.00574	-.41327	-.5418
#3	.0002	-.00097	-.00029	.00140	-.00834	-.35801	-.5479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL06035-015 Acquired: 12/26/2019 05:41:53 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: MDLv ICP4 6010D SOIL - Si only

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00086	.00016	-.80732	-.00101	.00042	-.00124	.00024
Stddev	.00003	.00053	.03965	.00011	.00068	.00209	.00125
%RSD	3.7742	327.15	4.9114	10.785	159.47	169.31	524.59
#1	-.00089	.00041	-.76417	-.00112	.00031	-.00067	.00163
#2	-.00083	.00052	-.84215	-.00090	.00115	-.00356	-.00011
#3	-.00088	-.00045	-.81563	-.00101	-.00019	.00051	-.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.46371	.02027	-.0005	-.0007	-.00539	.0301	-.00557
Stddev	.00164	.00032	.0000	.0002	.00248	.0117	.00072
%RSD	.35270	1.5782	3.928	23.26	45.975	38.81	12.881
#1	.46555	.02051	-.0005	-.0009	-.00526	.0426	-.00610
#2	.46320	.01990	-.0006	-.0008	-.00297	.0195	-.00475
#3	.46240	.02039	-.0005	-.0005	-.00792	.0283	-.00585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL06035-015 Acquired: 12/26/2019 05:41:53 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: MDLv ICP4 6010D SOIL - Si only

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0035	-.0009	-.00044
Stddev	.0019	.0102	.00006
%RSD	52.75	1100.	14.186
#1	.0054	.0089	-.00051
#2	.0035	-.0115	-.00039
#3	.0017	-.0001	-.00042
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2947.2	277930.	17133.
Stddev	21.0	2586.	86.
%RSD	.71184	.93045	.49992
#1	2933.7	279430.	17045.
#2	2936.4	274940.	17216.
#3	2971.3	279410.	17138.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.45%	104.70%	103.99%
Range			

Sample Name: UL06035-018 Acquired: 12/26/2019 05:47:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: MDLv ICP5 6010D SOIL - Si only

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00021	-.02878	.00070	-.0003	-.00144	-.00020	-.50287
Stddev	.00030	.02157	.00121	.0005	.00026	.00009	.00103
%RSD	141.70	74.969	174.24	178.5	18.126	46.675	.20391
#1	.00013	-.04637	.00156	.0002	-.00173	-.00009	-.50233
#2	-.00033	-.03526	-.00069	-.0008	-.00122	-.00027	-.50223
#3	-.00044	-.00471	.00122	-.0003	-.00138	-.00022	-.50405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.00121	-.00040	.00131	-.01107	-.44336	-.5340
Stddev	.0001	.00022	.00033	.00096	.00207	.04804	.0104
%RSD	11.43	18.554	83.641	73.880	18.682	10.835	1.957
#1	.0005	-.00146	-.00041	.00033	-.01032	-.41874	-.5459
#2	.0006	-.00104	-.00006	.00226	-.01341	-.41262	-.5262
#3	.0005	-.00112	-.00073	.00133	-.00948	-.49872	-.5299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL06035-018 Acquired: 12/26/2019 05:47:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: MDLv ICP5 6010D SOIL - Si only

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00098	-.00022	-.83928	-.00129	-.00133	-.00156	.00066
Stddev	.00002	.00036	.01520	.00010	.00098	.00185	.00054
%RSD	1.8582	163.17	1.8114	7.7405	73.372	118.81	81.183
#1	-.00097	-.00053	-.83966	-.00131	-.00035	-.00077	.00085
#2	-.00100	.00017	-.85429	-.00118	-.00134	-.00023	.00005
#3	-.00097	-.00030	-.82390	-.00137	-.00230	-.00367	.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.44925	.01954	-.0006	-.0009	-.00340	.0019	-.00736
Stddev	.00208	.00036	.0001	.0002	.00221	.0128	.00235
%RSD	.46360	1.8438	10.25	17.54	64.914	686.2	31.989
#1	.44799	.01993	-.0006	-.0011	-.00089	.0147	-.00478
#2	.45166	.01923	-.0006	-.0007	-.00429	-.0110	-.00939
#3	.44811	.01944	-.0005	-.0009	-.00503	.0020	-.00791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL06035-018 Acquired: 12/26/2019 05:47:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: MDLv ICP5 6010D SOIL - Si only

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0041	-.0084	-.00063
Stddev	.0011	.0197	.00003
%RSD	25.44	234.8	4.6373
#1	.0034	.0141	-.00066
#2	.0036	-.0168	-.00060
#3	.0054	-.0224	-.00062
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2969.9	285100.	17149.
Stddev	5.1	9671.	83.
%RSD	.17080	3.3922	.48373
#1	2973.3	274610.	17071.
#2	2972.2	293670.	17236.
#3	2964.1	287030.	17141.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.23%	107.40%	104.08%
Range			

Sample Name: UL12004-001(5) Acquired: 12/26/2019 05:52:57 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: 19-Oct

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00541	18.895	.01712	.1250	.71184	.00089	49.116
Stddev	.00060	.119	.00079	.0011	.00506	.00008	.171
%RSD	10.992	.62845	4.5963	.8674	.71137	8.7646	.34812
#1	.00497	18.978	.01798	.1262	.71645	.00097	49.187
#2	.00518	18.949	.01694	.1244	.71266	.00084	49.241
#3	.00609	18.759	.01644	.1242	.70642	.00085	48.921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.00465	.06079	.71474	46.723	10.975	8.942
Stddev	.0002	.00014	.00122	.00491	.204	.045	.075
%RSD	7.270	2.9069	2.0126	.68760	.43691	.40756	.8358
#1	.0021	.00450	.06220	.71903	46.815	10.931	9.003
#2	.0024	.00473	.06013	.70938	46.865	10.973	8.963
#3	.0022	.00473	.06004	.71582	46.489	11.020	8.859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001(5) Acquired: 12/26/2019 05:52:57 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: 19-Oct

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.70788	.02449	1.5123	.04164	.02915	.00179	.01054
Stddev	.01050	.00032	.0675	.00047	.00139	.00058	.00159
%RSD	1.4832	1.3136	4.4626	1.1406	4.7835	32.423	15.080
#1	.71948	.02466	1.5269	.04149	.02817	.00242	.01028
#2	.69903	.02412	1.5713	.04126	.02854	.00129	.01225
#3	.70513	.02470	1.4387	.04218	.03075	.00166	.00910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.4675	.07959	.2693	.1136	-.00623	-.0386	.01461
Stddev	.2262	.00077	.0002	.0020	.00244	.0195	.00303
%RSD	3.4975	.96271	.0798	1.775	39.174	50.44	20.745
#1	6.2374	.07918	.2692	.1157	-.00700	-.0573	.01807
#2	6.4755	.07911	.2691	.1116	-.00349	-.0401	.01244
#3	6.6896	.08047	.2695	.1135	-.00819	-.0184	.01332
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL12004-001(5) Acquired: 12/26/2019 05:52:57 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: 19-Oct

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0015	-.0062	3.4925
Stddev	.0008	.0071	.0136
%RSD	53.65	113.9	.39063
#1	-.0007	-.0015	3.4848
#2	-.0023	-.0144	3.4845
#3	-.0015	-.0028	3.5083
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2969.2	278590.	17644.
Stddev	16.6	6952.	127.
%RSD	.55857	2.4956	.71847
#1	2981.9	270700.	17563.
#2	2975.4	283800.	17579.
#3	2950.5	281270.	17790.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.20%	104.95%	107.08%
Range			

Sample Name: UL12004-001S(5) Acquired: 12/26/2019 05:58:21 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: 19-OctS

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.18303	26.421	.99414	.3054	2.6666	.39413	60.223
Stddev	.00410	.329	.00621	.0078	.0296	.01016	.669
%RSD	2.2419	1.2453	.62434	2.550	1.1099	2.5785	1.1107
#1	.18708	26.687	.99965	.3143	2.6960	.40499	60.908
#2	.18312	26.524	.98742	.3025	2.6668	.39256	60.190
#3	.17888	26.053	.99537	.2995	2.6368	.38485	59.571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1804	.39115	.99559	1.1071	51.643	19.194	16.27
Stddev	.0005	.00169	.02167	.0255	.548	.163	.10
%RSD	.2768	.43154	2.1768	2.3002	1.0609	.84814	.6299
#1	.1809	.39288	1.0170	1.1323	52.223	19.350	16.39
#2	.1799	.38951	.99611	1.1078	51.574	19.207	16.23
#3	.1803	.39104	.97366	1.0814	51.133	19.025	16.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001S(5) Acquired: 12/26/2019 05:58:21 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: 19-OctS

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0845	.38503	9.6830	.42436	1.0015	.16932	.19925
Stddev	.0232	.00085	.1544	.00158	.0069	.00245	.00053
%RSD	2.1403	.22181	1.5946	.37204	.68769	1.4481	.26454
#1	1.1078	.38463	9.8295	.42599	1.0090	.16717	.19873
#2	1.0844	.38445	9.6977	.42284	.99539	.16881	.19979
#3	1.0614	.38601	9.5217	.42424	1.0003	.17199	.19923
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 7.9836	.24672	.4716	.2829	.14624	.3701	.38927
Stddev	.0292	.00062	.0056	.0062	.00448	.0042	.01170
%RSD	.36525	.24978	1.185	2.204	3.0651	1.130	3.0048
#1	8.0010	.24651	.4775	.2888	.14330	.3701	.40164
#2	7.9500	.24624	.4708	.2836	.14401	.3658	.38778
#3	7.9999	.24741	.4664	.2764	.15139	.3742	.37839
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL12004-001S(5) Acquired: 12/26/2019 05:58:21 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B Si/601 Custom ID2: Custom ID3:
Comment: 19-OctS

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0197	-.0013	3.9039
Stddev	.0008	.0160	.0121
%RSD	3.826	1265.	.31067
#1	-.0199	-.0019	3.9144
#2	-.0203	.0150	3.8906
#3	-.0189	-.0170	3.9066
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2931.5	287750.	17704.
Stddev	2.7	6548.	133.
%RSD	.09263	2.2754	.75063
#1	2928.5	280550.	17575.
#2	2933.9	289370.	17696.
#3	2932.1	293340.	17840.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.91%	108.40%	107.45%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 06:03:40 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48240	24.644	.48923	.4913	2.4931	2.5403	49.917
Stddev	.00410	.041	.00083	.0067	.0094	.0224	.100
%RSD	.84915	.16790	.16886	1.357	.37712	.88125	.20041
#1	.47821	24.684	.48957	.4836	2.5011	2.5173	49.848
#2	.48640	24.602	.48829	.4958	2.4828	2.5417	49.870
#3	.48259	24.647	.48984	.4945	2.4955	2.5620	50.032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4824	2.4647	2.4521	2.4512	24.837	50.021	49.25
Stddev	.0027	.0141	.0083	.0148	.047	.266	.05
%RSD	.5519	.57320	.33877	.60539	.19011	.53254	.1075
#1	.4808	2.4563	2.4427	2.4353	24.872	49.781	49.31
#2	.4809	2.4568	2.4582	2.4538	24.783	50.308	49.21
#3	.4855	2.4810	2.4555	2.4646	24.856	49.976	49.23
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 06:03:40 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4745	2.4356	50.706	2.4461	.49764	.47464	.48458
Stddev	.0112	.0151	.058	.0136	.00336	.00565	.00160
%RSD	.45313	.62117	.11355	.55640	.67618	1.1906	.33121
#1	2.4618	2.4236	50.687	2.4397	.49392	.47282	.48282
#2	2.4829	2.4307	50.660	2.4368	.49855	.47013	.48493
#3	2.4788	2.4526	50.770	2.4617	.50046	.48098	.48597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5180	.49957	2.490	.4912	1.0012	2.413	2.4726
Stddev	.0094	.00239	.006	.0019	.0036	.026	.0129
%RSD	.37212	.47818	.2387	.3793	.35517	1.099	.52273
#1	2.5159	.49766	2.484	.4901	1.0009	2.439	2.4649
#2	2.5099	.49881	2.489	.4902	.99771	2.414	2.4654
#3	2.5283	.50225	2.496	.4934	1.0048	2.386	2.4876
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 06:03:40 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.449	2.374	2.4422
Stddev	.018	.029	.0073
%RSD	.7412	1.226	.30087
#1	2.437	2.347	2.4383
#2	2.442	2.371	2.4377
#3	2.470	2.405	2.4507
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2813.7	265600.	16516.
Stddev	8.5	3454.	44.
%RSD	.30317	1.3003	.26339
#1	2819.5	269590.	16477.
#2	2817.6	263630.	16508.
#3	2803.9	263590.	16563.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 06:12:02 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00002	-.03210	.00063	-.0005	-.00123	.00004	-.49944
Stddev	.00061	.02131	.00084	.0009	.00016	.00004	.00285
%RSD	4017.3	66.381	133.77	187.7	13.078	95.830	.57006
#1	-.00054	-.03446	.00144	-.0001	-.00141	-.00000	-.49977
#2	-.00009	-.00971	-.00025	.0002	-.00112	.00006	-.49644
#3	.00067	-.05213	.00070	-.0014	-.00114	.00005	-.50210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00092	-.00055	-.00115	-.00428	-.39027	-.5500
Stddev	.0001	.00004	.00014	.00068	.00335	.00923	.0176
%RSD	42.47	4.0226	24.765	58.868	78.389	2.3648	3.205
#1	.0001	-.00088	-.00069	-.00098	-.00712	-.38428	-.5466
#2	.0003	-.00094	-.00041	-.00057	-.00058	-.40090	-.5344
#3	.0002	-.00094	-.00056	-.00189	-.00513	-.38563	-.5691
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 06:12:02 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00097	.00139	-.59185	-.00127	-.00091	.00038	.00065
Stddev	.00002	.00031	.05459	.00019	.00151	.00156	.00115
%RSD	2.4806	22.039	9.2242	15.323	165.56	414.30	175.25
#1	-.00097	.00161	-.52881	-.00105	.00042	.00204	.00163
#2	-.00100	.00152	-.62313	-.00136	-.00060	.00015	-.00061
#3	-.00095	.00104	-.62361	-.00140	-.00255	-.00106	.00095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03552	-.00141	-.0004	-.0017	-.00526	-.0127	-.00161
Stddev	.00264	.00040	.0001	.0002	.00059	.0151	.00059
%RSD	7.4196	28.665	24.47	12.38	11.276	119.6	36.685
#1	.03856	-.00140	-.0005	-.0016	-.00459	-.0214	-.00101
#2	.03413	-.00101	-.0003	-.0017	-.00547	.0048	-.00163
#3	.03387	-.00182	-.0003	-.0020	-.00572	-.0214	-.00220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 06:12:02 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0006	-.0096	-.00055
Stddev	.0014	.0188	.00006
%RSD	215.6	196.5	10.824
#1	.0017	-.0274	-.00061
#2	.0010	-.0113	-.00054
#3	-.0009	.0100	-.00049
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2976.7	268300.	16558.
Stddev	13.8	2222.	143.
%RSD	.46311	.82803	.86653
#1	2962.4	267230.	16403.
#2	2977.8	266810.	16685.
#3	2989.9	270850.	16587.

Sample Name: UL12004-001(10) Acquired: 12/26/2019 06:17:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00259	9.7340	.00913	.0621	.36803	.00036	24.785
Stddev	.00023	.0541	.00085	.0007	.00029	.00005	.185
%RSD	8.9929	.55594	9.3000	1.092	.07750	13.356	.74765
#1	.00255	9.7769	.00956	.0613	.36800	.00041	24.964
#2	.00238	9.7519	.00968	.0624	.36776	.00037	24.796
#3	.00284	9.6732	.00815	.0626	.36833	.00031	24.594
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.00177	.03111	.35843	23.983	5.4258	4.346
Stddev	.0001	.00009	.00046	.00204	.117	.0909	.016
%RSD	5.197	5.1427	1.4690	.56851	.48731	1.6751	.3764
#1	.0013	.00185	.03074	.36073	24.114	5.5075	4.365
#2	.0013	.00179	.03097	.35683	23.944	5.4420	4.341
#3	.0014	.00167	.03162	.35774	23.890	5.3279	4.334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001(10) Acquired: 12/26/2019 06:17:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.36119	.01277	.29545	.02027	.01503	-.00053	.00433
Stddev	.00254	.00023	.02027	.00033	.00097	.00216	.00096
%RSD	.70452	1.8329	6.8617	1.6371	6.4450	404.00	22.164
#1	.36329	.01301	.30830	.02008	.01590	.00189	.00541
#2	.36191	.01276	.30598	.02008	.01399	-.00123	.00358
#3	.35836	.01254	.27208	.02066	.01520	-.00226	.00400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.3575	.03921	.1381	.0579	-.00480	-.0147	.00469
Stddev	.0492	.00033	.0012	.0003	.00087	.0085	.00016
%RSD	1.4647	.83658	.8337	.4691	18.159	58.22	3.4036
#1	3.3114	.03958	.1391	.0582	-.00559	-.0243	.00460
#2	3.3519	.03913	.1384	.0579	-.00495	-.0118	.00487
#3	3.4092	.03894	.1369	.0577	-.00387	-.0080	.00459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001(10) Acquired: 12/26/2019 06:17:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0000	-.0221	1.7614
Stddev	.0007	.0068	.0047
%RSD	2071.	30.81	.26549
#1	.0007	-.0273	1.7663
#2	-.0004	-.0144	1.7570
#3	-.0004	-.0248	1.7608
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3031.1	279860.	17487.
Stddev	13.1	1027.	64.
%RSD	.43134	.36694	.36510
#1	3037.4	278950.	17470.
#2	3039.9	279660.	17433.
#3	3016.1	280970.	17557.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	104.34%	105.42%	106.13%
Range			

Sample Name: UL12004-001S(10) Acquired: 12/26/2019 06:22:59 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09529	13.613	.49581	.1574	1.3749	.20686	30.728
Stddev	.00057	.254	.00672	.0024	.0209	.00243	.739
%RSD	.60170	1.8680	1.3562	1.549	1.5197	1.1747	2.4035
#1	.09553	13.906	.50294	.1602	1.3990	.20944	31.553
#2	.09463	13.485	.48957	.1563	1.3629	.20461	30.501
#3	.09570	13.448	.49493	.1558	1.3627	.20653	30.129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0898	.19602	.52814	.56493	26.661	9.6968	8.146
Stddev	.0008	.00252	.00281	.00706	.535	.1807	.148
%RSD	.8721	1.2871	.53124	1.2501	2.0056	1.8634	1.819
#1	.0907	.19891	.53080	.57199	27.269	9.8993	8.317
#2	.0892	.19427	.52521	.56494	26.452	9.6389	8.057
#3	.0895	.19488	.52842	.55787	26.263	9.5522	8.064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001S(10) Acquired: 12/26/2019 06:22:59 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56943	.19117	4.6297	.21357	.51109	.08440	.09801
Stddev	.00388	.00176	.0396	.00187	.00561	.00160	.00122
%RSD	.68197	.92182	.85471	.87730	1.0983	1.8945	1.2446
#1	.57390	.19308	4.6734	.21567	.51757	.08623	.09889
#2	.56691	.18961	4.5963	.21207	.50789	.08329	.09662
#3	.56748	.19082	4.6194	.21297	.50781	.08367	.09854
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.9738	.12373	.2418	.1468	.07625	.1888	.20420
Stddev	.0262	.00138	.0054	.0013	.00307	.0115	.00076
%RSD	.65825	1.1140	2.240	.8606	4.0254	6.116	.37075
#1	4.0015	.12530	.2480	.1480	.07944	.1898	.20506
#2	3.9496	.12322	.2396	.1468	.07599	.1767	.20365
#3	3.9702	.12269	.2379	.1455	.07332	.1997	.20388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001S(10) Acquired: 12/26/2019 06:22:59 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0096	-.0109	1.9756
Stddev	.0013	.0040	.0157
%RSD	13.71	36.16	.79532
#1	-.0090	-.0135	1.9916
#2	-.0087	-.0130	1.9601
#3	-.0111	-.0064	1.9751
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3021.4	274680.	17317.
Stddev	11.6	3652.	211.
%RSD	.38375	1.3295	1.2164
#1	3016.6	275880.	17529.
#2	3034.6	277580.	17312.
#3	3012.9	270580.	17108.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	104.00%	103.47%	105.10%
Range			

Sample Name: UL12004-001SD(10) Acquired: 12/26/2019 06:28:19 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09675	14.748	.48709	.1542	1.4288	.20379	32.606
Stddev	.00125	.162	.00528	.0012	.0138	.00101	.303
%RSD	1.2962	1.0959	1.0849	.7554	.96420	.49394	.92886
#1	.09789	14.865	.49301	.1555	1.4369	.20462	32.835
#2	.09541	14.814	.48285	.1532	1.4367	.20267	32.720
#3	.09693	14.563	.48539	.1538	1.4129	.20407	32.262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0884	.19223	.54120	.58277	28.284	9.8627	8.409
Stddev	.0005	.00181	.00615	.00952	.267	.1032	.081
%RSD	.5652	.94403	1.1369	1.6327	.94489	1.0469	.9599
#1	.0889	.19432	.54637	.59201	28.491	9.9597	8.453
#2	.0880	.19109	.53439	.57300	28.378	9.8742	8.458
#3	.0881	.19127	.54283	.58329	27.982	9.7541	8.316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001SD(10) Acquired: 12/26/2019 06:28:19 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.60108	.18858	4.8022	.21021	.49799	.08360	.09889
Stddev	.00753	.00212	.0571	.00290	.00276	.00223	.00108
%RSD	1.2523	1.1258	1.1899	1.3784	.55415	2.6660	1.0873
#1	.60834	.19101	4.8002	.21351	.49865	.08373	.09998
#2	.59331	.18709	4.8603	.20903	.50035	.08576	.09783
#3	.60159	.18764	4.7460	.20808	.49495	.08131	.09887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.9700	.12081	.2433	.1502	.07376	.1692	.21054
Stddev	.0283	.00042	.0027	.0023	.00189	.0032	.00281
%RSD	.71233	.35098	1.109	1.510	2.5603	1.862	1.3328
#1	4.0019	.12084	.2459	.1513	.07546	.1726	.21058
#2	3.9480	.12122	.2436	.1476	.07410	.1684	.20771
#3	3.9600	.12037	.2405	.1518	.07172	.1665	.21332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001SD(10) Acquired: 12/26/2019 06:28:19 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0099	-.0103	2.0225
Stddev	.0009	.0228	.0256
%RSD	8.873	222.5	1.2639
#1	-.0105	-.0079	2.0515
#2	-.0089	-.0342	2.0126
#3	-.0102	.0113	2.0034
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3001.5	267490.	16650.
Stddev	19.2	3136.	125.
%RSD	.64116	1.1723	.75183
#1	2996.2	270910.	16778.
#2	3022.9	266800.	16528.
#3	2985.6	264750.	16643.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	103.32%	100.76%	101.05%
Range			

Sample Name: UL12004-001L(50) Acquired: 12/26/2019 06:33:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00093	2.0628	.00169	.0109	.07947	-.00001	4.7240
Stddev	.00044	.0104	.00067	.0019	.00079	.00002	.0488
%RSD	47.281	.50621	39.451	17.15	.99039	166.91	1.0337
#1	.00058	2.0656	.00133	.0103	.08007	.00001	4.7734
#2	.00142	2.0716	.00246	.0131	.07976	-.00002	4.7230
#3	.00078	2.0513	.00127	.0095	.07858	-.00002	4.6758
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.00052	.00629	.07428	5.0637	.84098	.5149
Stddev	.0001	.00008	.00037	.00113	.0554	.03519	.0193
%RSD	30.25	15.556	5.8391	1.5188	1.0934	4.1847	3.750
#1	.0002	-.00059	.00630	.07556	5.1101	.87802	.5294
#2	.0004	-.00043	.00664	.07344	5.0785	.83694	.4930
#3	.0004	-.00054	.00591	.07383	5.0024	.80798	.5223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001L(50) Acquired: 12/26/2019 06:33:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07581	.00230	-.35820	.00319	.00258	.00047	.00243
Stddev	.00071	.00013	.03317	.00027	.00104	.00188	.00014
%RSD	.94151	5.6389	9.2611	8.3541	40.462	402.06	5.5973
#1	.07650	.00238	-.36578	.00288	.00161	-.00063	.00236
#2	.07585	.00238	-.38693	.00336	.00368	.00264	.00235
#3	.07507	.00215	-.32190	.00331	.00244	-.00061	.00259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.72264	.00658	.0284	.0105	-.00272	-.0080	.00118
Stddev	.00465	.00036	.0002	.0001	.00311	.0062	.00068
%RSD	.64388	5.4340	.7189	.8324	114.41	77.28	57.289
#1	.72714	.00621	.0285	.0106	-.00163	-.0051	.00041
#2	.71785	.00658	.0285	.0105	-.00623	-.0150	.00147
#3	.72294	.00693	.0282	.0104	-.00030	-.0038	.00167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001L(50) Acquired: 12/26/2019 06:33:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0011	-.0175	.35665
Stddev	.0017	.0132	.00290
%RSD	152.1	75.41	.81212
#1	-.0029	-.0244	.35976
#2	-.0011	-.0023	.35402
#3	.0006	-.0257	.35618
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3059.5	267330.	16304.
Stddev	13.7	1965.	51.
%RSD	.44797	.73516	.31577
#1	3065.2	269360.	16312.
#2	3069.4	265440.	16351.
#3	3043.9	267180.	16249.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	105.31%	100.70%	98.954%
Range			

Sample Name: UL12004-001A(10) Acquired: 12/26/2019 06:39:09 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04292	11.835	.04861	.0976	.58853	.21066	28.581
Stddev	.00082	.294	.00093	.0025	.01663	.00247	.691
%RSD	1.9213	2.4825	1.9058	2.520	2.8253	1.1705	2.4175
#1	.04339	12.095	.04902	.0963	.60193	.21073	29.264
#2	.04340	11.893	.04925	.1004	.59375	.21309	28.596
#3	.04197	11.516	.04755	.0961	.56992	.20816	27.882
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0390	.19949	.23881	.54996	26.024	9.5614	8.503
Stddev	.0009	.00387	.00280	.01247	.646	.2345	.233
%RSD	2.229	1.9388	1.1743	2.2668	2.4807	2.4522	2.737
#1	.0399	.20390	.24112	.56313	26.633	9.7919	8.739
#2	.0386	.19791	.23961	.54841	26.091	9.5691	8.496
#3	.0383	.19666	.23569	.53834	25.347	9.3232	8.274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001A(10) Acquired: 12/26/2019 06:39:09 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.56396	.19867	4.6784	.21630	.05491	.03616	.04470
Stddev	.00753	.00342	.1433	.00359	.00144	.00156	.00069
%RSD	1.3356	1.7200	3.0630	1.6604	2.6261	4.3238	1.5329
#1	.56987	.20253	4.8212	.22014	.05654	.03792	.04475
#2	.56652	.19745	4.6795	.21574	.05378	.03492	.04537
#3	.55548	.19602	4.5346	.21302	.05443	.03566	.04400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.6559	.07704	.2381	.0988	.07870	-.0137	.21036
Stddev	.0416	.00152	.0059	.0024	.00149	.0145	.00206
%RSD	1.1372	1.9674	2.462	2.434	1.8993	106.5	.98059
#1	3.7035	.07875	.2435	.1009	.07932	-.0199	.21159
#2	3.6377	.07655	.2390	.0991	.07978	.0030	.21152
#3	3.6266	.07584	.2318	.0962	.07699	-.0240	.20798
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL12004-001A(10) Acquired: 12/26/2019 06:39:09 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0039	-.0054	1.9232
Stddev	.0006	.0163	.0355
%RSD	14.64	302.8	1.8449
#1	-.0034	-.0233	1.9629
#2	-.0046	.0086	1.9121
#3	-.0037	-.0015	1.8946
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3037.1	274170.	16998.
Stddev	12.9	7243.	56.
%RSD	.42603	2.6417	.33073
#1	3025.4	282530.	16976.
#2	3051.0	270270.	16957.
#3	3034.9	269720.	17062.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	104.54%	103.28%	103.17%
Range			

Sample Name: UQ39838-001 Acquired: 12/26/2019 06:44:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00007	-.04122	-.00105	-.0017	-.00153	-.00003	-.50262
Stddev	.00062	.00794	.00013	.0005	.00028	.00011	.00142
%RSD	895.28	19.261	12.607	28.83	18.519	374.56	.28342
#1	-.00058	-.03599	-.00114	-.0020	-.00121	.00006	-.50410
#2	.00061	-.05036	-.00110	-.0019	-.00165	.00000	-.50250
#3	-.00024	-.03732	-.00090	-.0011	-.00174	-.00015	-.50126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00109	-.00013	-.00038	-.00519	-.37173	-.5438
Stddev	.0001	.00015	.00026	.00171	.00434	.03094	.0151
%RSD	58.18	13.374	198.25	454.31	83.580	8.3221	2.771
#1	.0003	-.00112	-.00040	-.00173	-.00028	-.40540	-.5357
#2	.0001	-.00093	.00012	-.00095	-.00850	-.34457	-.5345
#3	.0001	-.00122	-.00012	.00155	-.00679	-.36522	-.5612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39838-001 Acquired: 12/26/2019 06:44:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00085	.00013	-1.1237	-.00107	-.00020	.00064	.00138
Stddev	.00003	.00026	.0092	.00007	.00165	.00096	.00180
%RSD	3.7986	201.81	.81505	6.3385	820.36	150.31	130.73
#1	-.00088	.00029	-1.1131	-.00104	-.00186	.00157	-.00065
#2	-.00087	.00026	-1.1293	-.00115	.00145	.00067	.00199
#3	-.00082	-.00017	-1.1286	-.00103	-.00019	-.00034	.00279
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10790	.02194	-.0006	-.0004	-.00685	.0038	-.00789
Stddev	.02642	.00042	.0000	.0001	.00155	.0084	.00096
%RSD	24.490	1.8925	6.995	16.50	22.666	224.5	12.162
#1	.13645	.02147	-.0005	-.0004	-.00731	.0003	-.00681
#2	.10294	.02211	-.0006	-.0004	-.00512	.0134	-.00823
#3	.08430	.02224	-.0006	-.0005	-.00812	-.0024	-.00863
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39838-001 Acquired: 12/26/2019 06:44:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0020	-.0151	-.00014
Stddev	.0005	.0085	.00003
%RSD	27.00	56.61	23.388
#1	.0025	-.0219	-.00011
#2	.0022	-.0055	-.00015
#3	.0014	-.0178	-.00017
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3104.5	285300.	17856.
Stddev	3.5	3307.	107.
%RSD	.11325	1.1590	.60192
#1	3100.6	281780.	17734.
#2	3107.3	285790.	17903.
#3	3105.6	288340.	17933.

Sample Name: UQ39838-002 Acquired: 12/26/2019 06:50:04 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.93901	19.149	5.0822	.8987	9.8113	1.9924	39.271
Stddev	.00342	.078	.0252	.0158	.0740	.0291	.057
%RSD	.36435	.40613	.49527	1.753	.75422	1.4613	.14567
#1	.93646	19.211	5.0548	.8806	9.8887	1.9665	39.258
#2	.93766	19.062	5.0878	.9064	9.8039	1.9867	39.221
#3	.94290	19.174	5.1042	.9092	9.7413	2.0239	39.334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9316	1.9637	4.8322	1.9684	19.291	39.985	38.79
Stddev	.0039	.0059	.0268	.0155	.061	.182	.12
%RSD	.4137	.29802	.55515	.78504	.31855	.45597	.3193
#1	.9276	1.9577	4.8289	1.9509	19.294	40.163	38.92
#2	.9320	1.9641	4.8072	1.9743	19.228	39.992	38.75
#3	.9352	1.9694	4.8605	1.9801	19.351	39.799	38.68
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39838-002 Acquired: 12/26/2019 06:50:04 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9397	1.9448	39.210	1.9577	4.9111	.96567	.97383
Stddev	.0069	.0035	.125	.0031	.0337	.00708	.00229
%RSD	.35605	.17965	.31841	.15642	.68543	.73357	.23513
#1	1.9335	1.9437	39.319	1.9597	4.8723	.97087	.97313
#2	1.9385	1.9420	39.073	1.9541	4.9325	.95760	.97197
#3	1.9472	1.9487	39.237	1.9592	4.9284	.96854	.97639
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.3593	.99634	.9798	.9803	.79595	2.018	1.9053
Stddev	.0084	.00665	.0015	.0073	.00201	.025	.0176
%RSD	.35598	.66744	.1503	.7460	.25219	1.254	.92310
#1	2.3498	.98892	.9796	.9763	.79720	1.994	1.8964
#2	2.3624	.99832	.9785	.9759	.79364	2.016	1.8939
#3	2.3658	1.0018	.9814	.9888	.79702	2.044	1.9255
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	4.0000						
Range	-20.500%						

Sample Name: UQ39838-002 Acquired: 12/26/2019 06:50:04 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0958	-.0033	1.9490
Stddev	.0025	.0138	.0065
%RSD	2.586	424.4	.33389
#1	-.0982	-.0161	1.9534
#2	-.0932	.0114	1.9416
#3	-.0960	-.0050	1.9522
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2951.3	288400.	18068.
Stddev	6.1	2706.	242.
%RSD	.20741	.93832	1.3375
#1	2950.5	290370.	17800.
#2	2957.8	289530.	18269.
#3	2945.7	285320.	18136.

Sample Name: UL20021-010 Acquired: 12/26/2019 06:55:33 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12C-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00127	272.11	.18948	.2032	2.0209	.01285	222.33
Stddev	.00038	.56	.00138	.0021	.0080	.00030	1.11
%RSD	29.790	.20693	.72695	1.039	.39643	2.3111	.49734
#1	-.00111	271.87	.18843	.2043	2.0204	.01290	222.70
#2	-.00171	271.71	.19103	.2045	2.0132	.01312	223.21
#3	-.00101	272.75	.18897	.2008	2.0292	.01253	221.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	.13376	.35671	.35210	339.05	45.249	134.0
Stddev	.0001	.00048	.00469	.00480	.83	.139	.4
%RSD	3.313	.36076	1.3153	1.3646	.24337	.30725	.2771
#1	.0036	.13326	.35655	.35112	339.09	45.259	134.4
#2	.0035	.13382	.36148	.35732	338.20	45.383	133.7
#3	.0034	.13422	.35210	.34786	339.85	45.106	133.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-010 Acquired: 12/26/2019 06:55:33 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12C-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.883	.02244	1.5767	.30003	.37696	.00164	.00824
Stddev	.273	.00031	.0393	.00078	.00250	.00217	.00183
%RSD	2.5069	1.3893	2.4899	.26013	.66409	132.05	22.157
#1	10.969	.02277	1.6106	.29978	.37551	.00273	.00980
#2	11.102	.02215	1.5857	.29941	.37553	.00306	.00623
#3	10.577	.02241	1.5337	.30090	.37985	-.00086	.00868
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.7511	.02858	.3728	3.365	-.05167	-.7867	.61224
Stddev	.0129	.00027	.0007	.033	.00144	.0062	.00827
%RSD	.22426	.96194	.1967	.9888	2.7956	.7900	1.3508
#1	5.7412	.02827	.3732	3.357	-.05317	-.7845	.61416
#2	5.7465	.02871	.3720	3.402	-.05158	-.7819	.61939
#3	5.7657	.02878	.3734	3.337	-.05028	-.7937	.60318
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-010 Acquired: 12/26/2019 06:55:33 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12C-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0245	-.0016	1.6398
Stddev	.0012	.0166	.0064
%RSD	4.915	1028.	.38763
#1	-.0250	.0167	1.6395
#2	-.0253	-.0058	1.6337
#3	-.0231	-.0157	1.6464
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2757.1	282440.	18454.
Stddev	8.6	7450.	123.
%RSD	.31155	2.6378	.66705
#1	2751.7	277720.	18345.
#2	2767.0	278570.	18429.
#3	2752.6	291030.	18588.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.903%	106.40%	112.00%
Range			

Sample Name: UL20021-011 Acquired: 12/26/2019 07:01:10 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-13A-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00141	293.26	.18302	.1900	1.7164	.01257	119.41
Stddev	.00038	1.57	.00272	.0020	.0125	.00025	.31
%RSD	26.896	.53450	1.4882	1.050	.72588	1.9691	.26373
#1	-.00184	295.06	.18406	.1902	1.7308	.01277	119.65
#2	-.00122	292.21	.17993	.1919	1.7098	.01230	119.06
#3	-.00116	292.51	.18507	.1879	1.7087	.01264	119.53
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.15651	.36651	.33206	357.41	51.831	97.70
Stddev	.0003	.00079	.00583	.00460	1.69	.056	.47
%RSD	36.87	.50252	1.5901	1.3852	.47316	.10720	.4854
#1	.0006	.15601	.37167	.33528	359.28	51.841	98.25
#2	.0007	.15610	.36019	.32679	355.99	51.880	97.40
#3	.0012	.15741	.36767	.33411	356.95	51.771	97.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-011 Acquired: 12/26/2019 07:01:10 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-13A-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.5824	.02895	-.73727	.33829	.33831	.00646	.00862
Stddev	.1077	.00069	.03472	.00075	.00419	.00332	.00178
%RSD	1.2550	2.3688	4.7089	.22108	1.2391	51.298	20.665
#1	8.7066	.02855	-.70419	.33802	.34104	.00531	.00658
#2	8.5147	.02855	-.77342	.33771	.33348	.00388	.00987
#3	8.5258	.02974	-.73419	.33914	.34040	.01020	.00942
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.7169	.02753	.2237	3.380	-.03959	-.6993	.60301
Stddev	.0355	.00033	.0004	.044	.00477	.0177	.00881
%RSD	.62059	1.1936	.1590	1.305	12.047	2.534	1.4614
#1	5.6897	.02789	.2241	3.411	-.03408	-.6835	.60951
#2	5.7039	.02726	.2235	3.329	-.04248	-.6960	.59298
#3	5.7571	.02743	.2235	3.398	-.04220	-.7185	.60654
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-011 Acquired: 12/26/2019 07:01:10 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-13A-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0316	-.0240	1.1517
Stddev	.0024	.0148	.0028
%RSD	7.647	61.69	.24201
#1	-.0343	-.0409	1.1535
#2	-.0297	-.0140	1.1485
#3	-.0308	-.0169	1.1532
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2803.2	296310.	18656.
Stddev	8.2	4339.	137.
%RSD	.29276	1.4645	.73674
#1	2794.3	291730.	18498.
#2	2804.9	300360.	18744.
#3	2810.5	296850.	18728.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.491%	111.62%	113.23%
Range			

Sample Name: UL20021-012 Acquired: 12/26/2019 07:06:38 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-13B-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00096	314.32	.19920	.2012	1.9444	.01400	134.34
Stddev	.00046	2.01	.00030	.0036	.0134	.00021	.55
%RSD	48.144	.64064	.15103	1.796	.69109	1.4927	.41141
#1	-.00066	316.49	.19942	.2042	1.9579	.01424	134.96
#2	-.00073	312.51	.19886	.1972	1.9310	.01384	134.18
#3	-.00150	313.96	.19934	.2021	1.9445	.01393	133.89
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.15184	.41969	.40271	358.64	59.394	98.13
Stddev	.0002	.00024	.00529	.00017	1.98	.294	.71
%RSD	13.10	.15641	1.2600	.04284	.55322	.49429	.7252
#1	.0014	.15211	.42560	.40279	360.76	59.679	98.95
#2	.0015	.15167	.41807	.40283	356.83	59.411	97.68
#3	.0018	.15174	.41540	.40251	358.33	59.092	97.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-012 Acquired: 12/26/2019 07:06:38 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-13B-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.2256	.02503	-.59341	.35049	.45029	.00575	.00839
Stddev	.0848	.00049	.09098	.00149	.00254	.00354	.00205
%RSD	1.0306	1.9479	15.331	.42472	.56480	61.567	24.441
#1	8.3215	.02541	-.48976	.35162	.45031	.00220	.00946
#2	8.1606	.02448	-.66006	.34880	.44774	.00577	.00968
#3	8.1947	.02520	-.63040	.35105	.45283	.00928	.00603
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.9040	.03386	.2838	3.544	-.03322	-.7989	.65770
Stddev	.0196	.00070	.0009	.021	.00215	.0205	.00585
%RSD	.33264	2.0693	.3251	.5917	6.4685	2.567	.88985
#1	5.9255	.03415	.2848	3.566	-.03192	-.7868	.66426
#2	5.8996	.03436	.2829	3.543	-.03204	-.8226	.65579
#3	5.8870	.03306	.2838	3.524	-.03570	-.7873	.65303
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-012 Acquired: 12/26/2019 07:06:38 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-13B-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0330	-.0237	1.3395
Stddev	.0018	.0270	.0081
%RSD	5.490	113.7	.60165
#1	-.0325	-.0185	1.3454
#2	-.0315	.0003	1.3303
#3	-.0350	-.0530	1.3428
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2800.9	293830.	18998.
Stddev	11.4	5724.	314.
%RSD	.40613	1.9481	1.6549
#1	2789.5	287240.	18641.
#2	2801.0	297640.	19231.
#3	2812.3	296600.	19124.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.412%	110.69%	115.31%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 07:12:09 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.46958	24.361	.50524	.5078	2.4474	2.5053	50.909
Stddev	.00673	.077	.00427	.0096	.0131	.0257	.120
%RSD	1.4330	.31611	.84487	1.894	.53680	1.0250	.23596
#1	.47636	24.450	.50505	.5169	2.4609	2.5324	51.047
#2	.46949	24.310	.50107	.5086	2.4467	2.5022	50.829
#3	.46290	24.324	.50960	.4978	2.4346	2.4814	50.851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5007	2.5516	2.3593	2.5192	24.898	50.772	48.29
Stddev	.0025	.0127	.0294	.0312	.096	.110	.08
%RSD	.4904	.49580	1.2473	1.2389	.38588	.21707	.1675
#1	.4999	2.5509	2.3877	2.5463	25.002	50.879	48.23
#2	.4987	2.5393	2.3615	2.5262	24.880	50.659	48.38
#3	.5035	2.5646	2.3289	2.4851	24.812	50.779	48.25
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 07:12:09 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4551	2.5208	51.178	2.5185	.51958	.47079	.49576
Stddev	.0262	.0120	.222	.0103	.00258	.00257	.00419
%RSD	1.0693	.47492	.43416	.40942	.49566	.54686	.84426
#1	2.4800	2.5105	51.432	2.5160	.52071	.47375	.49168
#2	2.4577	2.5178	51.079	2.5096	.51663	.46905	.49557
#3	2.4277	2.5339	51.023	2.5298	.52139	.46957	.50004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5661	.52504	2.540	.4841	1.0277	2.498	2.4221
Stddev	.0112	.00332	.010	.0054	.0038	.010	.0316
%RSD	.43805	.63288	.3835	1.110	.37168	.3964	1.3061
#1	2.5633	.52483	2.551	.4890	1.0241	2.510	2.4543
#2	2.5565	.52182	2.538	.4850	1.0272	2.493	2.4209
#3	2.5785	.52846	2.532	.4784	1.0317	2.492	2.3911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 07:12:09 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.546	2.359	2.4892
Stddev	.016	.023	.0065
%RSD	.6325	.9637	.26008
#1	2.541	2.379	2.4862
#2	2.533	2.364	2.4848
#3	2.564	2.335	2.4967
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2765.3	277370.	17028.
Stddev	18.3	3187.	62.
%RSD	.66254	1.1489	.36449
#1	2784.2	274090.	17010.
#2	2764.1	277560.	17098.
#3	2747.6	280450.	16978.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 07:17:33 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00025	-.03835	-.00046	.0001	-.00099	-.00005	-.49707
Stddev	.00020	.01880	.00067	.0002	.00016	.00005	.00456
%RSD	79.799	49.005	146.03	247.0	16.600	106.85	.91818
#1	-.00046	-.01824	-.00067	.0004	-.00113	.00000	-.49360
#2	-.00007	-.04136	-.00101	.0000	-.00081	-.00011	-.49536
#3	-.00022	-.05547	.00029	-.0001	-.00105	-.00004	-.50224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.00077	-.00054	.00005	-.00724	-.24532	-.5335
Stddev	.0002	.00022	.00019	.00123	.00239	.03294	.0166
%RSD	56.36	28.388	35.302	2262.8	33.060	13.429	3.108
#1	.0002	-.00093	-.00042	-.00127	-.00680	-.20739	-.5152
#2	.0006	-.00052	-.00044	.00027	-.00983	-.26173	-.5475
#3	.0004	-.00087	-.00076	.00117	-.00510	-.26684	-.5379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 07:17:33 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00090	.00367	-.64698	-.00110	-.00091	.00006	.00061
Stddev	.00005	.00156	.02163	.00016	.00092	.00137	.00262
%RSD	5.1818	42.598	3.3428	14.674	100.63	2428.2	430.50
#1	-.00090	.00524	-.66889	-.00117	-.00172	-.00129	.00339
#2	-.00086	.00365	-.62565	-.00121	-.00110	.00001	.00025
#3	-.00095	.00211	-.64639	-.00091	.00009	.00145	-.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02475	-.00147	-.0004	-.0017	-.00461	.0042	-.00245
Stddev	.00096	.00040	.0001	.0001	.00254	.0167	.00092
%RSD	3.8930	27.239	25.57	6.265	54.966	400.9	37.746
#1	.02466	-.00129	-.0003	-.0016	-.00720	-.0148	-.00249
#2	.02575	-.00119	-.0005	-.0018	-.00214	.0107	-.00336
#3	.02383	-.00193	-.0004	-.0018	-.00450	.0166	-.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 07:17:33 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0030	-.0216	-.00062
Stddev	.0017	.0041	.00010
%RSD	55.18	18.85	16.688
#1	.0046	-.0257	-.00054
#2	.0031	-.0216	-.00074
#3	.0013	-.0175	-.00058
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2947.7	267650.	16464.
Stddev	4.3	2247.	48.
%RSD	.14435	.83965	.29241
#1	2946.2	267400.	16508.
#2	2944.4	270020.	16469.
#3	2952.5	265550.	16413.

Sample Name: UL20021-013 Acquired: 12/26/2019 07:23:04 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14A-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00124	277.01	.12950	.1648	1.6655	.01179	101.25
Stddev	.00031	.07	.00106	.0013	.0057	.00008	.39
%RSD	24.619	.02370	.82192	.8066	.33975	.71852	.38511
#1	-.00138	276.95	.12848	.1636	1.6692	.01169	100.92
#2	-.00089	277.08	.13061	.1662	1.6684	.01185	101.16
#3	-.00145	276.99	.12940	.1645	1.6590	.01182	101.68
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.11261	.34238	.27839	275.92	37.353	73.81
Stddev	.0002	.00058	.00223	.00144	.17	.166	.32
%RSD	9.022	.51584	.65235	.51645	.06261	.44432	.4359
#1	.0023	.11296	.34076	.27978	275.75	37.215	73.50
#2	.0021	.11194	.34493	.27847	275.92	37.307	73.80
#3	.0019	.11293	.34145	.27691	276.10	37.538	74.14
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-013 Acquired: 12/26/2019 07:23:04 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14A-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.8019	.01137	.95906	.24258	.30485	.00449	.00615
Stddev	.0402	.00056	.06735	.00098	.00141	.00249	.00135
%RSD	.59157	4.9655	7.0228	.40542	.46253	55.538	21.927
#1	6.7557	.01167	.91968	.24225	.30478	.00249	.00757
#2	6.8291	.01173	.92067	.24179	.30348	.00369	.00488
#3	6.8209	.01072	1.0368	.24368	.30630	.00728	.00601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.7753	.02685	.2443	3.252	-.02703	-.7222	.60789
Stddev	.0138	.00027	.0009	.014	.00185	.0166	.00198
%RSD	.28831	.98875	.3799	.4346	6.8589	2.298	.32545
#1	4.7818	.02659	.2440	3.257	-.02562	-.7380	.60738
#2	4.7595	.02684	.2435	3.263	-.02634	-.7236	.61007
#3	4.7846	.02712	.2453	3.236	-.02913	-.7049	.60621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-013 Acquired: 12/26/2019 07:23:04 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14A-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0222	-.0113	1.2445
Stddev	.0010	.0072	.0044
%RSD	4.423	63.82	.35542
#1	-.0212	-.0040	1.2422
#2	-.0224	-.0116	1.2418
#3	-.0231	-.0185	1.2496
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2823.9	289060.	18534.
Stddev	10.6	671.	159.
%RSD	.37447	.23225	.85709
#1	2814.5	289800.	18535.
#2	2835.3	288900.	18692.
#3	2821.7	288490.	18374.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.201%	108.89%	112.49%
Range			

Sample Name: UL20021-014 Acquired: 12/26/2019 07:28:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14A-121919-D

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00071	249.88	.14677	.1400	1.7842	.01132	93.765
Stddev	.00019	.63	.00199	.0018	.0098	.00018	.205
%RSD	26.711	.25142	1.3557	1.319	.54725	1.5539	.21816
#1	-.00082	249.27	.14798	.1383	1.7733	.01144	93.764
#2	-.00049	249.86	.14447	.1419	1.7874	.01140	93.561
#3	-.00081	250.53	.14786	.1397	1.7920	.01112	93.970
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.14216	.31594	.27338	285.27	32.146	66.21
Stddev	.0002	.00040	.00277	.00408	.99	.043	.03
%RSD	5.170	.28081	.87537	1.4912	.34805	.13236	.0428
#1	.0030	.14176	.31898	.27809	284.48	32.161	66.20
#2	.0032	.14215	.31528	.27096	284.95	32.097	66.24
#3	.0034	.14256	.31357	.27111	286.38	32.178	66.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-014 Acquired: 12/26/2019 07:28:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14A-121919-D

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.212	.01353	.73621	.27550	.31840	-.00037	.00619
Stddev	.080	.00016	.06952	.00099	.00257	.00250	.00097
%RSD	.70904	1.1464	9.4434	.36038	.80640	677.53	15.660
#1	11.292	.01336	.79549	.27475	.31551	-.00317	.00636
#2	11.212	.01361	.65969	.27512	.32041	.00162	.00706
#3	11.133	.01364	.75344	.27662	.31930	.00044	.00514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.6656	.02378	.2333	2.673	-.04608	-.8086	.56889
Stddev	.0123	.00048	.0013	.021	.00200	.0121	.00531
%RSD	.33629	2.0121	.5594	.7809	4.3382	1.496	.93376
#1	3.6514	.02340	.2320	2.697	-.04830	-.8226	.57498
#2	3.6714	.02432	.2332	2.665	-.04442	-.8021	.56642
#3	3.6739	.02363	.2346	2.658	-.04553	-.8012	.56525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-014 Acquired: 12/26/2019 07:28:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14A-121919-D

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0224	-.0329	1.1964
Stddev	.0008	.0125	.0049
%RSD	3.428	38.14	.41181
#1	-.0228	-.0277	1.1956
#2	-.0230	-.0472	1.1920
#3	-.0216	-.0238	1.2017
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2847.4	287880.	18396.
Stddev	5.9	5049.	205.
%RSD	.20770	1.7538	1.1127
#1	2841.1	283420.	18181.
#2	2852.9	286860.	18588.
#3	2848.0	293360.	18418.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.010%	108.45%	111.65%
Range			

Sample Name: UL20021-015 Acquired: 12/26/2019 07:34:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14B-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00052	235.60	.17085	.1955	1.6778	.01153	256.97
Stddev	.00039	.64	.00073	.0018	.0041	.00015	2.77
%RSD	74.898	.27069	.42607	.9444	.24425	1.2953	1.0793
#1	-.00096	236.13	.17053	.1974	1.6815	.01158	260.17
#2	-.00025	235.78	.17033	.1937	1.6784	.01136	255.49
#3	-.00033	234.90	.17168	.1955	1.6734	.01164	255.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.14190	.31511	.32629	326.43	38.067	158.2
Stddev	.0002	.00029	.00262	.00232	.65	.033	.3
%RSD	7.884	.20124	.83059	.70977	.20039	.08621	.1851
#1	.0030	.14221	.31626	.32394	327.06	38.039	158.2
#2	.0027	.14166	.31212	.32634	326.48	38.058	158.4
#3	.0031	.14181	.31696	.32857	325.75	38.103	157.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-015 Acquired: 12/26/2019 07:34:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14B-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.630	.02682	1.4522	.31308	.34851	.00010	.00546
Stddev	.102	.00020	.0705	.00081	.00140	.00137	.00150
%RSD	.96425	.74742	4.8571	.25857	.40091	1407.2	27.523
#1	10.715	.02703	1.5241	.31363	.34774	.00093	.00700
#2	10.516	.02679	1.3831	.31215	.35013	.00085	.00538
#3	10.660	.02663	1.4496	.31347	.34768	-.00149	.00400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.6010	.02617	.2991	2.917	-.04731	-.7099	.53680
Stddev	.0160	.00052	.0011	.013	.00267	.0030	.00348
%RSD	.34882	1.9827	.3711	.4271	5.6436	.4236	.64859
#1	4.6193	.02569	.2991	2.925	-.04595	-.7132	.53963
#2	4.5945	.02672	.3002	2.903	-.05038	-.7073	.53291
#3	4.5892	.02611	.2980	2.924	-.04559	-.7091	.53785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-015 Acquired: 12/26/2019 07:34:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14B-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0238	-.0313	1.7795
Stddev	.0017	.0139	.0069
%RSD	7.271	44.40	.38673
#1	-.0218	-.0240	1.7835
#2	-.0249	-.0473	1.7715
#3	-.0248	-.0225	1.7833
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2711.5	284980.	17958.
Stddev	6.8	4004.	247.
%RSD	.25169	1.4050	1.3772
#1	2703.9	281680.	17698.
#2	2713.8	289440.	18191.
#3	2717.0	283840.	17986.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.334%	107.36%	108.99%
Range			

Sample Name: UL20021-016 Acquired: 12/26/2019 07:39:37 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14C-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00059	211.96	.18305	.1655	1.9567	.01039	219.47
Stddev	.00026	.59	.00287	.0022	.0063	.00038	1.32
%RSD	43.477	.27873	1.5652	1.325	.31930	3.6446	.60139
#1	-.00031	211.28	.18000	.1633	1.9495	.01057	218.21
#2	-.00082	212.28	.18568	.1676	1.9595	.00995	219.34
#3	-.00063	212.32	.18348	.1657	1.9610	.01064	220.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	.16552	.28574	.30352	327.27	34.761	115.3
Stddev	.0002	.00040	.00835	.00759	1.10	.102	.2
%RSD	4.190	.24169	2.9226	2.5014	.33692	.29397	.1678
#1	.0038	.16592	.28871	.30477	326.00	34.857	115.5
#2	.0036	.16512	.27631	.29538	327.96	34.771	115.3
#3	.0039	.16553	.29220	.31042	327.86	34.654	115.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-016 Acquired: 12/26/2019 07:39:37 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14C-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.753	.02590	.68860	.30770	.35262	.00178	.00639
Stddev	.395	.00074	.03646	.00021	.00111	.00160	.00410
%RSD	3.0939	2.8561	5.2953	.06679	.31507	89.622	64.118
#1	12.686	.02523	.71953	.30792	.35142	.00125	.00816
#2	12.396	.02578	.69788	.30752	.35282	.00357	.00170
#3	13.176	.02669	.64840	.30765	.35362	.00052	.00930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.3112	.02233	.2634	2.737	-.05967	-.7394	.51872
Stddev	.0173	.00036	.0006	.069	.00059	.0112	.01636
%RSD	.40103	1.5984	.2431	2.534	.99661	1.511	3.1548
#1	4.3114	.02268	.2627	2.744	-.06016	-.7439	.52284
#2	4.2938	.02234	.2640	2.664	-.05901	-.7266	.50068
#3	4.3284	.02197	.2635	2.802	-.05983	-.7475	.53262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-016 Acquired: 12/26/2019 07:39:37 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-14C-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0229	-.0216	1.4278
Stddev	.0023	.0121	.0022
%RSD	10.13	56.10	.15436
#1	-.0249	-.0319	1.4253
#2	-.0236	-.0246	1.4294
#3	-.0204	-.0083	1.4287
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2776.2	288510.	18122.
Stddev	4.2	9989.	137.
%RSD	.15152	3.4623	.75450
#1	2779.6	282950.	17984.
#2	2777.4	300040.	18125.
#3	2771.5	282540.	18257.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.559%	108.68%	109.99%
Range			

Sample Name: UL20030-001 Acquired: 12/26/2019 07:45:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Treated

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00055	4.1563	.00131	-.0027	1.2892	-.00022	-.46020
Stddev	.00034	.0305	.00035	.0008	.0061	.00010	.00258
%RSD	61.489	.73405	26.462	31.65	.47123	45.408	.56036
#1	.00093	4.1746	.00134	-.0017	1.2960	-.00011	-.45745
#2	.00032	4.1211	.00095	-.0031	1.2875	-.00030	-.46256
#3	.00038	4.1733	.00165	-.0032	1.2842	-.00026	-.46059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00124	.00161	.07254	.73465	-.32088	.1167
Stddev	.0002	.00016	.00021	.00120	.00551	.00712	.0086
%RSD	101.4	12.934	13.093	1.6606	.75044	2.2182	7.396
#1	.0002	-.00106	.00152	.07115	.74083	-.32781	.1202
#2	.0003	-.00130	.00185	.07330	.73291	-.31359	.1068
#3	-.0000	-.00137	.00145	.07317	.73023	-.32122	.1230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20030-001 Acquired: 12/26/2019 07:45:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Treated

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00033	-.00044	-1.0012	.00016	-.00043	.00000	.00183
Stddev	.00005	.00036	.0932	.00020	.00012	.00096	.00060
%RSD	15.927	80.812	9.3104	122.62	29.224	21583.	32.896
#1	.00038	-.00026	-.89357	-.00005	-.00048	.00015	.00208
#2	.00028	-.00085	-1.0549	.00034	-.00052	.00089	.00226
#3	.00032	-.00021	-1.0551	.00020	-.00028	-.00102	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.97003	.02411	.0179	.1886	-.00584	.0192	-.01187
Stddev	.00381	.00040	.0000	.0025	.00134	.0089	.00234
%RSD	.39317	1.6479	.1832	1.306	22.909	46.31	19.709
#1	.96836	.02422	.0179	.1914	-.00731	.0116	-.00926
#2	.96732	.02444	.0178	.1866	-.00550	.0290	-.01378
#3	.97439	.02367	.0178	.1878	-.00470	.0171	-.01257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20030-001 Acquired: 12/26/2019 07:45:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Treated

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0027	-.0094	.00122
Stddev	.0014	.0105	.00006
%RSD	51.86	111.8	4.5802
#1	.0019	-.0210	.00125
#2	.0042	-.0064	.00126
#3	.0018	-.0007	.00115
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3182.9	301010.	18125.
Stddev	7.2	10988.	315.
%RSD	.22554	3.6505	1.7399
#1	3178.7	288700.	17762.
#2	3191.2	309820.	18284.
#3	3178.9	304510.	18329.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	109.56%	113.39%	110.00%
Range			

Sample Name: UL20031-001 Acquired: 12/26/2019 07:50:47 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Treated

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00000	2.4499	-.00011	-.0016	.21431	-.00023	-.46587
Stddev	.00034	.0147	.00049	.0005	.00116	.00001	.00064
%RSD	8449.0	.60017	468.19	30.86	.54101	6.2292	.13665
#1	-.00035	2.4567	.00034	-.0018	.21409	-.00023	-.46529
#2	.00033	2.4599	-.00064	-.0010	.21556	-.00021	-.46578
#3	.00003	2.4330	-.00002	-.0019	.21327	-.00024	-.46655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00120	.00231	.01984	.24722	-.34417	-.3009
Stddev	.0001	.00010	.00003	.00087	.00177	.01163	.0144
%RSD	46.49	8.1400	1.4781	4.3724	.71787	3.3803	4.801
#1	.0004	-.00126	.00235	.02083	.24824	-.33614	-.2965
#2	.0001	-.00124	.00229	.01944	.24825	-.35751	-.2892
#3	.0004	-.00108	.00230	.01924	.24517	-.33886	-.3171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20031-001 Acquired: 12/26/2019 07:50:47 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Treated

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00026	-.00022	-.90018	-.00099	.00164	.00041	.00222
Stddev	.00002	.00026	.07494	.00015	.00079	.00268	.00089
%RSD	7.2301	114.58	8.3246	15.077	47.875	656.30	40.276
#1	-.00024	.00007	-.82675	-.00082	.00191	-.00099	.00128
#2	-.00025	-.00042	-.89723	-.00110	.00226	.00350	.00305
#3	-.00028	-.00032	-.97654	-.00104	.00076	-.00128	.00233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.32409	.02113	.0025	.0612	-.00686	.0155	-.01165
Stddev	.00064	.00044	.0001	.0013	.00096	.0019	.00108
%RSD	.19595	2.0721	5.564	2.048	14.009	12.55	9.2947
#1	.32343	.02062	.0026	.0609	-.00577	.0177	-.01136
#2	.32417	.02140	.0025	.0625	-.00724	.0144	-.01075
#3	.32469	.02136	.0023	.0600	-.00757	.0143	-.01285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20031-001 Acquired: 12/26/2019 07:50:47 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Treated

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0024	-.0122	.00047
Stddev	.0013	.0156	.00014
%RSD	54.65	127.6	29.359
#1	.0019	.0018	.00041
#2	.0039	-.0290	.00063
#3	.0014	-.0094	.00037
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3186.3	299460.	17924.
Stddev	7.8	2568.	255.
%RSD	.24458	.85755	1.4231
#1	3177.3	298810.	17700.
#2	3191.0	297270.	17870.
#3	3190.5	302290.	18202.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	109.68%	112.81%	108.79%
Range			

Sample Name: UL20034-001 Acquired: 12/26/2019 07:56:18 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Sludge

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00276	23.381	.00026	-.0049	3.5138	-.00024	-.40730
Stddev	.00032	.158	.00079	.0007	.0285	.00011	.00317
%RSD	11.485	.67526	302.69	13.47	.81210	45.363	.77868
#1	.00255	23.219	-.00012	-.0042	3.5061	-.00014	-.40816
#2	.00261	23.390	-.00026	-.0050	3.4899	-.00036	-.40995
#3	.00313	23.534	.00117	-.0055	3.5454	-.00024	-.40378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.00113	.03614	.29158	4.0796	-.04645	2.189
Stddev	.0001	.00016	.00041	.00205	.0388	.03476	.030
%RSD	17.76	14.142	1.1447	.70158	.95081	74.845	1.361
#1	-.0004	-.00123	.03615	.29039	4.0652	-.06700	2.217
#2	-.0002	-.00095	.03573	.29041	4.0501	-.06604	2.158
#3	-.0003	-.00122	.03656	.29394	4.1236	-.00631	2.194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20034-001 Acquired: 12/26/2019 07:56:18 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Sludge

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00634	-.00039	-.77412	.00113	.00011	.00350	.00214
Stddev	.00013	.00020	.03522	.00012	.00079	.00115	.00061
%RSD	2.0930	52.461	4.5503	10.953	713.31	32.837	28.363
#1	.00641	-.00037	-.74120	.00099	-.00079	.00392	.00148
#2	.00619	-.00019	-.81127	.00120	.00043	.00220	.00227
#3	.00642	-.00059	-.76988	.00121	.00069	.00438	.00267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9889	.03762	.0418	.8262	-.00147	.0077	.00407
Stddev	.0192	.00040	.0003	.0114	.00363	.0042	.00279
%RSD	.96294	1.0686	.8034	1.375	247.29	55.45	68.425
#1	1.9789	.03716	.0416	.8227	.00179	.0108	.00626
#2	1.9769	.03793	.0415	.8171	-.00538	.0094	.00093
#3	2.0110	.03776	.0421	.8390	-.00081	.0028	.00503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20034-001 Acquired: 12/26/2019 07:56:18 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Sludge

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0001	-.0051	.00539
Stddev	.0002	.0051	.00005
%RSD	415.1	99.07	.89091
#1	.0001	-.0094	.00535
#2	.0001	.0005	.00545
#3	-.0003	-.0064	.00538
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3134.5	287310.	17576.
Stddev	6.1	9188.	152.
%RSD	.19578	3.1980	.86723
#1	3135.2	280170.	17409.
#2	3140.2	297680.	17708.
#3	3128.0	284070.	17611.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	107.89%	108.23%	106.68%
Range			

Sample Name: UL20036-001 Acquired: 12/26/2019 08:01:48 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Sludge

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00142	10.703	.00086	-.0037	3.7329	-.00011	-.43399
Stddev	.00037	.083	.00065	.0001	.0332	.00013	.00237
%RSD	25.786	.77609	74.992	3.417	.88986	109.80	.54660
#1	.00102	10.635	.00145	-.0035	3.7003	-.00001	-.43396
#2	.00173	10.795	.00017	-.0038	3.7667	-.00025	-.43637
#3	.00151	10.678	.00097	-.0037	3.7316	-.00008	-.43163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.00133	.00523	.20549	2.0669	-.35170	1.277
Stddev	.0001	.00020	.00019	.00223	.0160	.01026	.012
%RSD	31.74	14.720	3.6956	1.0862	.77602	2.9173	.9290
#1	-.0002	-.00152	.00533	.20331	2.0639	-.36193	1.275
#2	-.0003	-.00133	.00536	.20777	2.0842	-.35175	1.266
#3	-.0003	-.00113	.00501	.20538	2.0525	-.34141	1.290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20036-001 Acquired: 12/26/2019 08:01:48 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Sludge

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00219	-.00047	-.75775	.00289	-.00105	.00059	.00129
Stddev	.00005	.00023	.02368	.00004	.00204	.00168	.00173
%RSD	2.3720	48.092	3.1250	1.2419	195.21	285.93	134.47
#1	.00217	-.00073	-.74666	.00291	-.00329	.00056	.00194
#2	.00216	-.00034	-.74166	.00291	-.00056	.00229	.00260
#3	.00225	-.00034	-.78494	.00285	.00071	-.00108	-.00068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.6616	.02631	.0493	.4710	-.00297	.0164	-.00387
Stddev	.0094	.00011	.0001	.0026	.00059	.0119	.00229
%RSD	.56504	.42685	.2811	.5426	19.876	72.43	59.186
#1	1.6572	.02644	.0491	.4684	-.00324	.0045	-.00146
#2	1.6552	.02628	.0494	.4711	-.00339	.0165	-.00602
#3	1.6724	.02622	.0493	.4735	-.00230	.0283	-.00415
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20036-001 Acquired: 12/26/2019 08:01:48 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Sludge

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0027	-.0152	.00298
Stddev	.0013	.0101	.00008
%RSD	47.03	66.35	2.5976
#1	.0039	-.0191	.00294
#2	.0014	-.0038	.00307
#3	.0027	-.0229	.00293
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3158.0	282000.	17191.
Stddev	15.2	7982.	74.
%RSD	.48158	2.8304	.43004
#1	3140.5	274070.	17164.
#2	3165.8	290030.	17134.
#3	3167.8	281920.	17275.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	108.70%	106.23%	104.34%
Range			

Sample Name: UL20038-001 Acquired: 12/26/2019 08:07:17 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Water - Run as High Solids

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.66254	-.00062	-.0034	.00125	-.00014	-.47546
Stddev	.00019	.01360	.00112	.0003	.00024	.00014	.00117
%RSD	81.270	2.0530	180.52	8.918	18.880	100.98	.24516
#1	.00036	.66042	.00067	-.0035	.00141	-.00024	-.47443
#2	.00033	.67708	-.00130	-.0031	.00137	.00002	-.47522
#3	.00002	.65013	-.00123	-.0037	.00098	-.00020	-.47673
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.00109	-.00027	.00195	-.00313	-.43625	-.4814
Stddev	.0001	.00015	.00017	.00170	.00232	.02305	.0074
%RSD	2832.	13.834	61.877	87.167	74.081	5.2838	1.534
#1	.0001	-.00126	-.00040	.00312	-.00062	-.46171	-.4890
#2	.0000	-.00102	-.00033	-.00000	-.00518	-.41680	-.4808
#3	-.0002	-.00098	-.00008	.00274	-.00358	-.43025	-.4743
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20038-001 Acquired: 12/26/2019 08:07:17 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Water - Run as High Solids

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00066	-.00060	-.68603	-.00152	.00011	.00026	.00227
Stddev	.00006	.00017	.02503	.00013	.00113	.00172	.00046
%RSD	9.4740	28.979	3.6479	8.6370	1077.2	671.33	20.098
#1	.00071	-.00080	-.71097	-.00159	.00135	.00222	.00218
#2	.00059	-.00055	-.66092	-.00161	-.00086	-.00046	.00186
#3	.00069	-.00046	-.68620	-.00137	-.00018	-.00099	.00276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05941	.02133	.0002	.0007	-.00520	.0248	-.00733
Stddev	.00160	.00040	.0000	.0002	.00172	.0138	.00245
%RSD	2.6945	1.8617	19.03	24.21	32.977	55.76	33.419
#1	.06097	.02166	.0002	.0005	-.00528	.0359	-.00810
#2	.05947	.02089	.0001	.0006	-.00345	.0093	-.00459
#3	.05777	.02143	.0002	.0008	-.00688	.0292	-.00930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20038-001 Acquired: 12/26/2019 08:07:17 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSS Water - Run as High Solids

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0028	-.0096	.00032
Stddev	.0008	.0053	.00010
%RSD	29.98	55.95	30.423
#1	.0031	-.0035	.00039
#2	.0035	-.0115	.00021
#3	.0019	-.0136	.00035
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3179.0	284190.	17109.
Stddev	5.7	8543.	91.
%RSD	.17804	3.0061	.52909
#1	3176.4	288060.	17124.
#2	3175.1	274390.	17012.
#3	3185.5	290100.	17192.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	109.42%	107.05%	103.84%
Range			

Sample Name: UL20039-001 Acquired: 12/26/2019 08:12:48 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Water - Run as High Solids

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	1.2587	-.00028	-.0018	.00024	-.00013	-.46617
Stddev	.00041	.0084	.00115	.0008	.00028	.00008	.00357
%RSD	633.75	.66698	413.62	46.16	117.56	59.136	.76521
#1	-.00027	1.2647	.00100	-.0010	.00048	-.00012	-.46571
#2	.00041	1.2491	-.00124	-.0018	.00030	-.00006	-.46285
#3	-.00033	1.2624	-.00060	-.0026	-.00007	-.00021	-.46994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00117	-.00009	.00175	-.00018	-.47322	-.4924
Stddev	.0002	.00017	.00018	.00074	.00191	.00590	.0083
%RSD	95.90	14.859	189.32	42.459	1082.4	1.2475	1.688
#1	.0003	-.00114	.00003	.00178	.00203	-.47009	-.4994
#2	-.0000	-.00101	-.00002	.00099	-.00120	-.48003	-.4944
#3	.0002	-.00136	-.00029	.00248	-.00136	-.46955	-.4832
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20039-001 Acquired: 12/26/2019 08:12:48 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Water - Run as High Solids

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00075	-.00046	-.74737	-.00134	-.00058	-.00249	.00211
Stddev	.00003	.00020	.02278	.00013	.00126	.00130	.00186
%RSD	3.8641	44.423	3.0475	9.4020	215.99	52.319	87.787
#1	-.00072	-.00024	-.77006	-.00143	-.00194	-.00175	.00015
#2	-.00078	-.00064	-.74753	-.00120	-.00036	-.00172	.00384
#3	-.00074	-.00050	-.72451	-.00140	.00055	-.00399	.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06886	.02166	-.0002	.0006	-.00492	.0121	-.00888
Stddev	.00069	.00025	.0001	.0005	.00318	.0025	.00142
%RSD	1.0056	1.1547	47.51	81.56	64.672	21.04	16.029
#1	.06842	.02156	-.0001	.0002	-.00319	.0147	-.00913
#2	.06966	.02149	-.0001	.0011	-.00298	.0096	-.00735
#3	.06851	.02195	-.0002	.0005	-.00859	.0120	-.01016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20039-001 Acquired: 12/26/2019 08:12:48 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PSN Water - Run as High Solids

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0024	.0026	.00072
Stddev	.0009	.0080	.00007
%RSD	38.96	312.0	10.320
#1	.0033	-.0008	.00064
#2	.0015	.0117	.00078
#3	.0023	-.0032	.00075
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3170.1	288730.	17355.
Stddev	10.8	5677.	55.
%RSD	.34112	1.9663	.31407
#1	3158.6	289660.	17378.
#2	3180.1	282650.	17395.
#3	3171.7	293890.	17293.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	109.12%	108.77%	105.33%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 08:18:18 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50864	25.645	.49907	.4942	2.6602	2.5765	51.148
Stddev	.01103	.321	.00241	.0099	.0368	.0487	.266
%RSD	2.1693	1.2530	.48216	1.997	1.3828	1.8899	.51956
#1	.51732	25.723	.50018	.5000	2.6678	2.6204	51.188
#2	.49622	25.921	.49631	.4828	2.6926	2.5241	51.391
#3	.51238	25.292	.50072	.4997	2.6203	2.5849	50.864
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4933	2.5156	2.5963	2.4909	25.463	53.519	51.52
Stddev	.0014	.0089	.0546	.0547	.215	.239	.42
%RSD	.2917	.35240	2.1019	2.1963	.84392	.44690	.8201
#1	.4942	2.5165	2.6447	2.5228	25.525	53.387	51.58
#2	.4917	2.5063	2.5371	2.4277	25.640	53.795	51.91
#3	.4941	2.5239	2.6069	2.5221	25.224	53.376	51.07
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 08:18:18 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5658	2.4957	53.320	2.5209	.50439	.50315	.50418
Stddev	.0570	.0131	.458	.0114	.00111	.00193	.00064
%RSD	2.2219	.52415	.85898	.45125	.22028	.38330	.12749
#1	2.6065	2.4877	53.357	2.5188	.50499	.50172	.50345
#2	2.5006	2.4886	53.758	2.5107	.50311	.50238	.50467
#3	2.5902	2.5108	52.844	2.5332	.50507	.50534	.50440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5186	.50401	2.586	.5087	1.0269	2.516	2.5608
Stddev	.0136	.00271	.018	.0111	.0020	.081	.0565
%RSD	.53810	.53821	.6886	2.183	.19704	3.227	2.2079
#1	2.5123	.50296	2.584	.5175	1.0251	2.572	2.6113
#2	2.5093	.50199	2.604	.4962	1.0291	2.423	2.4997
#3	2.5341	.50710	2.569	.5122	1.0266	2.552	2.5713
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 08:18:18 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.479	2.360	2.5384
Stddev	.012	.066	.0064
%RSD	.5001	2.815	.25327
#1	2.479	2.423	2.5374
#2	2.467	2.291	2.5326
#3	2.492	2.365	2.5453
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2810.4	262390.	15682.
Stddev	10.1	5544.	210.
%RSD	.36095	2.1131	1.3367
#1	2808.0	257590.	15809.
#2	2821.5	268460.	15440.
#3	2801.7	261110.	15798.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 08:23:43 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	-.02309	-.00021	-.0008	-.00069	.00012	-.49542
Stddev	.00024	.00895	.00026	.0001	.00063	.00010	.00519
%RSD	400.81	38.750	124.07	12.79	90.895	83.189	1.0484
#1	-.00031	-.03006	-.00041	-.0007	.00003	.00022	-.49050
#2	.00015	-.02622	-.00030	-.0009	-.00113	.00003	-.49491
#3	-.00001	-.01300	.00008	-.0008	-.00098	.00010	-.50085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00082	-.00031	.00020	-.00196	-.34241	-.5449
Stddev	.0001	.00013	.00021	.00118	.00113	.01257	.0152
%RSD	28.52	16.047	68.000	586.74	57.755	3.6703	2.789
#1	.0003	-.00077	-.00050	-.00055	-.00086	-.35408	-.5621
#2	.0003	-.00073	-.00034	.00156	-.00312	-.32910	-.5332
#3	.0002	-.00098	-.00008	-.00041	-.00189	-.34405	-.5395
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 08:23:43 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00086	.00365	-.55339	-.00117	-.00076	-.00060	.00241
Stddev	.00005	.00137	.05859	.00014	.00102	.00075	.00153
%RSD	5.5684	37.612	10.587	12.368	133.53	124.41	63.537
#1	-.00087	.00522	-.56296	-.00124	.00011	-.00123	.00416
#2	-.00090	.00298	-.49062	-.00127	-.00189	.00022	.00132
#3	-.00081	.00274	-.60661	-.00101	-.00052	-.00079	.00175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02036	-.00129	-.0005	-.0016	-.00478	-.0045	-.00113
Stddev	.00069	.00012	.0000	.0002	.00140	.0063	.00107
%RSD	3.3669	9.7021	5.693	10.74	29.300	141.2	94.948
#1	.02102	-.00123	-.0004	-.0018	-.00640	-.0045	.00011
#2	.02040	-.00143	-.0005	-.0015	-.00398	-.0107	-.00178
#3	.01965	-.00120	-.0005	-.0015	-.00397	.0018	-.00172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 08:23:43 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0035	-.0147	-.00051
Stddev	.0005	.0104	.00015
%RSD	13.98	70.89	29.457
#1	.0033	-.0038	-.00041
#2	.0041	-.0157	-.00045
#3	.0031	-.0245	-.00069
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3033.4	270070.	16088.
Stddev	16.2	4019.	96.
%RSD	.53249	1.4881	.59768
#1	3050.3	265520.	16109.
#2	3031.8	273150.	15983.
#3	3018.1	271540.	16172.

Sample Name: ZUL19163-001 Acquired: 12/26/2019 08:29:13 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: Mallard 1 of 4 N&M

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03121	51.764	.02859	.4357	7.6632	.00112	178.46
Stddev	.00077	.542	.00071	.0134	.1010	.00019	2.77
%RSD	2.4580	1.0478	2.4925	3.076	1.3184	16.965	1.5498
#1	.03183	52.390	.02841	.4466	7.7781	.00125	181.58
#2	.03035	51.479	.02938	.4207	7.6232	.00090	176.29
#3	.03143	51.425	.02799	.4396	7.5882	.00121	177.52
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.02378	.16056	1.7327	100.57	11.872	46.07
Stddev	.0002	.00014	.00395	.0317	1.08	.102	.35
%RSD	3.430	.56887	2.4591	1.8286	1.0769	.86005	.7591
#1	.0060	.02385	.16507	1.7676	101.81	11.971	46.40
#2	.0056	.02386	.15772	1.7057	100.13	11.767	45.71
#3	.0059	.02362	.15890	1.7249	99.782	11.878	46.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL19163-001 Acquired: 12/26/2019 08:29:13 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: Mallard 1 of 4 N&M

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.385	.06440	2.5297	.14877	.07144	.00351	.05460
Stddev	.285	.00060	.0930	.00101	.00237	.00130	.00194
%RSD	2.7413	.93499	3.6765	.68148	3.3208	36.937	3.5500
#1	10.707	.06478	2.6347	.14830	.07418	.00450	.05244
#2	10.167	.06371	2.4966	.14807	.07004	.00204	.05619
#3	10.281	.06472	2.4577	.14993	.07010	.00399	.05516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 8.9619	.42577	.7729	.7497	-.05267	-.0492	.12281
Stddev	.0402	.00079	.0067	.0147	.00369	.0070	.00596
%RSD	.44868	.18537	.8687	1.967	7.0125	14.29	4.8514
#1	8.9367	.42533	.7807	.7659	-.04994	-.0553	.12963
#2	8.9406	.42531	.7690	.7458	-.05120	-.0508	.11858
#3	9.0082	.42668	.7691	.7372	-.05688	-.0415	.12023
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: ZUL19163-001 Acquired: 12/26/2019 08:29:13 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: Mallard 1 of 4 N&M

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0017	-.0115	6.1757
Stddev	.0001	.0054	.0338
%RSD	7.039	46.87	.54737
#1	.0016	-.0091	6.1607
#2	.0018	-.0177	6.1520
#3	.0018	-.0078	6.2144
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2846.3	280590.	17333.
Stddev	15.9	10914.	286.
%RSD	.55828	3.8897	1.6524
#1	2828.0	269400.	17012.
#2	2856.3	291200.	17423.
#3	2854.7	281180.	17563.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.973%	105.70%	105.20%
Range			

Sample Name: ZUQ39905-001 Acquired: 12/26/2019 08:34:47 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00046	-.02438	.00022	-.0011	-.00100	-.00019	-.48105
Stddev	.00034	.01767	.00082	.0005	.00013	.00005	.00741
%RSD	75.368	72.454	369.90	50.37	13.027	27.223	1.5404
#1	-.00008	-.01161	.00116	-.0015	-.00088	-.00023	-.47250
#2	-.00076	-.01700	-.00010	-.0005	-.00099	-.00013	-.48535
#3	-.00053	-.04454	-.00039	-.0013	-.00114	-.00022	-.48531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00090	-.00060	.00038	.00069	-.41958	-.5544
Stddev	.0001	.00006	.00014	.00051	.00813	.03041	.0104
%RSD	38.32	6.3545	24.206	136.67	1170.0	7.2478	1.879
#1	.0001	-.00089	-.00072	.00057	.00682	-.42730	-.5595
#2	.0002	-.00096	-.00044	.00076	.00378	-.38606	-.5424
#3	.0001	-.00084	-.00063	-.00021	-.00852	-.44539	-.5612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUQ39905-001 Acquired: 12/26/2019 08:34:47 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00027	-.00011	-.89634	-.00119	-.00028	.00099	.00044
Stddev	.00033	.00024	.06397	.00016	.00047	.00097	.00112
%RSD	121.09	212.44	7.1368	13.292	169.60	97.447	252.82
#1	.00007	-.00004	-.86338	-.00123	-.00028	.00203	-.00085
#2	-.00031	.00008	-.85558	-.00102	-.00074	.00011	.00119
#3	-.00058	-.00039	-.97007	-.00133	.00020	.00084	.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03889	-.00128	-.0006	-.0015	-.00543	-.0059	-.00765
Stddev	.00774	.00016	.0001	.0002	.00184	.0090	.00062
%RSD	19.900	12.879	15.56	10.31	33.879	152.2	8.0655
#1	.04726	-.00112	-.0005	-.0017	-.00579	-.0069	-.00775
#2	.03741	-.00145	-.0006	-.0015	-.00705	-.0144	-.00700
#3	.03200	-.00127	-.0006	-.0014	-.00343	.0035	-.00822
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUQ39905-001 Acquired: 12/26/2019 08:34:47 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0041	-.0066	.00060
Stddev	.0009	.0287	.00024
%RSD	22.79	436.7	39.320
#1	-.0039	.0136	.00080
#2	-.0050	.0061	.00066
#3	-.0032	-.0395	.00034
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3100.3	283900.	17083.
Stddev	12.3	2248.	121.
%RSD	.39801	.79183	.70647
#1	3111.4	285040.	16996.
#2	3102.5	281310.	17032.
#3	3087.0	285350.	17221.

Sample Name: ZUQ39905-002 Acquired: 12/26/2019 08:40:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .38958	19.745	F .42143	F .4112	F 2.0017	2.0984	40.749
Stddev	.00947	.059	.00205	.0136	.0102	.0751	.063
%RSD	2.4298	.30137	.48697	3.297	.50788	3.5766	.15343
#1	.39472	19.728	.42156	.4120	1.9991	2.0994	40.702
#2	.37866	19.695	.41932	.3972	1.9931	2.0228	40.726
#3	.39537	19.811	.42341	.4243	2.0129	2.1729	40.820
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value	1.0000		5.0000	1.000	10.000		
Range	-20.500%		-20.500%	-20.50%	-20.500%		

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .4012	2.0184	F 1.9277	2.0478	19.996	41.118	38.68
Stddev	.0010	.0063	.0429	.0399	.084	.106	.11
%RSD	.2573	.31464	2.2241	1.9479	.42011	.25858	.2775
#1	.4006	2.0190	1.9387	2.0710	19.965	41.193	38.81
#2	.4006	2.0118	1.8804	2.0017	19.931	41.165	38.61
#3	.4024	2.0245	1.9641	2.0706	20.091	40.997	38.63
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	1.000		5.0000				
Range	-20.50%		-20.500%				

Sample Name: ZUQ39905-002 Acquired: 12/26/2019 08:40:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0042	1.9271	41.639	1.9786	F .41460	F .36870	F .39700
Stddev	.0415	.0031	.261	.0145	.00558	.00665	.00066
%RSD	2.0710	.16016	.62662	.73246	1.3460	1.8024	.16676
#1	2.0231	1.9306	41.444	1.9954	.41127	.37596	.39747
#2	1.9566	1.9247	41.538	1.9701	.41148	.36720	.39624
#3	2.0329	1.9260	41.936	1.9704	.42104	.36293	.39727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value					5.0000	1.0000	1.0000
Range					-20.500%	-20.500%	-20.500%

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.0371	F .41821	1.021	F .4007	.83940	-.0018	1.9850
Stddev	.0062	.00286	.003	.0069	.00608	.0169	.0494
%RSD	.30549	.68313	.2959	1.710	.72438	914.3	2.4893
#1	2.0424	.41589	1.021	.4024	.83376	.0175	1.9883
#2	2.0302	.41733	1.018	.3931	.84584	-.0098	1.9341
#3	2.0386	.42140	1.024	.4065	.83860	-.0132	2.0327
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value	4.0000	1.0000		1.000			
Range	-20.500%	-20.500%		-20.50%			

Sample Name: ZUQ39905-002 Acquired: 12/26/2019 08:40:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0364	-.0031	1.9614
Stddev	.0015	.0062	.0153
%RSD	4.164	200.3	.78148
#1	-.0382	-.0061	1.9790
#2	-.0354	.0040	1.9543
#3	-.0357	-.0073	1.9510
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2866.6	275910.	17108.
Stddev	6.2	10864.	290.
%RSD	.21712	3.9375	1.6931
#1	2871.0	278510.	17383.
#2	2869.3	285230.	17137.
#3	2859.5	263980.	16805.

Sample Name: ZUL20021-017 Acquired: 12/26/2019 08:45:44 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MPG1-RB-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00048	-.03454	.00023	.0555	-.00129	-.00025	-.37151
Stddev	.00002	.01047	.00055	.0015	.00037	.00002	.00239
%RSD	4.2903	30.324	235.93	2.676	28.299	9.1713	.64218
#1	-.00049	-.02247	.00069	.0552	-.00143	-.00027	-.37029
#2	-.00049	-.03993	-.00037	.0571	-.00088	-.00023	-.36999
#3	-.00046	-.04123	.00038	.0541	-.00156	-.00026	-.37426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.00079	-.00026	.00103	-.00836	-.38523	-.4686
Stddev	.0002	.00012	.00034	.00095	.00196	.02979	.0101
%RSD	39.21	14.788	133.47	92.200	23.442	7.7333	2.147
#1	.0003	-.00073	.00011	.00087	-.00779	-.35125	-.4802
#2	.0007	-.00072	-.00056	.00205	-.01054	-.40685	-.4630
#3	.0005	-.00093	-.00032	.00017	-.00675	-.39759	-.4626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL20021-017 Acquired: 12/26/2019 08:45:44 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MPG1-RB-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00078	.00326	.26420	-.00113	-.00024	.00111	-.00004
Stddev	.00002	.00160	.01458	.00038	.00100	.00098	.00063
%RSD	2.0365	49.155	5.5199	33.491	411.70	88.592	1677.6
#1	-.00077	.00511	.25210	-.00100	.00049	.00063	-.00006
#2	-.00079	.00243	.26010	-.00083	.00016	.00224	-.00066
#3	-.00080	.00224	.28039	-.00155	-.00138	.00045	.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09534	-.00121	.0001	-.0014	-.00266	-.0017	-.00884
Stddev	.00146	.00012	.0001	.0002	.00108	.0099	.00119
%RSD	1.5324	9.8789	68.38	13.68	40.688	591.6	13.456
#1	.09694	-.00125	.0001	-.0013	-.00382	.0001	-.01015
#2	.09409	-.00108	.0001	-.0016	-.00249	-.0123	-.00784
#3	.09497	-.00131	.0002	-.0014	-.00168	.0072	-.00851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL20021-017 Acquired: 12/26/2019 08:45:44 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MPG1-RB-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0039	-.0005	-.00000
Stddev	.0003	.0043	.00006
%RSD	8.706	843.7	55975.
#1	-.0041	.0042	-.00006
#2	-.0035	-.0015	.00007
#3	-.0042	-.0042	-.00001
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3090.5	288980.	16925.
Stddev	17.6	5041.	121.
%RSD	.57032	1.7443	.71508
#1	3080.5	294670.	16992.
#2	3110.8	285080.	16997.
#3	3080.1	287190.	16785.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	106.38%	108.86%	102.72%
Range			

Sample Name: ZUL18047-001 Acquired: 12/26/2019 08:51:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: EFF

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00063	.02337	.00038	1.394	.02760	-.00014	4.1010
Stddev	.00039	.01512	.00088	.026	.00023	.00009	.0082
%RSD	62.552	64.675	230.24	1.842	.84553	68.574	.20103
#1	.00021	.04021	.00008	1.414	.02743	-.00003	4.1096
#2	.00099	.01892	-.00031	1.365	.02751	-.00021	4.1003
#3	.00069	.01098	.00137	1.403	.02787	-.00017	4.0932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.01282	.01254	.01199	.28653	54.678	.7768
Stddev	.0004	.00024	.00022	.00152	.00136	.129	.0230
%RSD	98.40	1.8531	1.7417	12.646	.47440	.23577	2.967
#1	.0000	.01263	.01266	.01117	.28770	54.740	.7648
#2	.0008	.01276	.01229	.01374	.28504	54.764	.8033
#3	.0003	.01309	.01267	.01106	.28685	54.530	.7622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL18047-001 Acquired: 12/26/2019 08:51:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: EFF

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02793	.00153	100.39	-.00043	-.00032	.00110	.00145
Stddev	.00041	.00029	.11	.00033	.00057	.00124	.00028
%RSD	1.4821	18.983	.10587	77.056	176.45	112.82	19.140
#1	.02825	.00178	100.51	-.00079	-.00009	-.00014	.00115
#2	.02746	.00161	100.33	-.00014	.00010	.00235	.00153
#3	.02809	.00121	100.32	-.00035	-.00098	.00109	.00169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.818	-.00011	.0765	.0005	-.00097	-.0090	-.00525
Stddev	.059	.00026	.0001	.0004	.00123	.0091	.00179
%RSD	.29897	236.76	.0893	74.16	126.23	100.9	34.189
#1	19.771	-.00016	.0766	.0008	-.00215	-.0188	-.00393
#2	19.799	-.00034	.0765	.0005	.00030	-.0075	-.00729
#3	19.885	.00017	.0764	.0001	-.00107	-.0008	-.00452
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: ZUL18047-001 Acquired: 12/26/2019 08:51:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: EFF

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0040	-.0173	.08567
Stddev	.0034	.0156	.00021
%RSD	84.59	90.15	.25066
#1	-.0006	-.0006	.08577
#2	-.0074	-.0198	.08542
#3	-.0040	-.0315	.08581
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2851.3	272560.	16364.
Stddev	11.7	7089.	76.
%RSD	.41060	2.6008	.46311
#1	2864.6	266930.	16448.
#2	2842.4	280530.	16344.
#3	2847.0	270230.	16301.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.146%	102.68%	99.318%
Range			

Sample Name: UQ39640-001TC Acquired: 12/26/2019 08:56:43 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00023	-.02883	-.00041	-.0004	-.00104	-.00019	-.50004
Stddev	.00031	.00866	.00069	.0007	.00038	.00005	.00201
%RSD	133.05	30.058	166.41	158.9	36.446	24.460	.40117
#1	-.00059	-.03034	-.00098	-.0012	-.00135	-.00015	-.49793
#2	-.00007	-.01951	-.00060	-.0003	-.00114	-.00025	-.50193
#3	-.00004	-.03664	.00035	.0002	-.00062	-.00019	-.50027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.00097	-.00041	.00042	-.01139	-.36608	-.5348
Stddev	.0000	.00007	.00018	.00054	.00143	.06614	.0091
%RSD	7.151	7.4934	43.497	130.47	12.587	18.068	1.699
#1	.0005	-.00103	-.00061	-.00015	-.00974	-.29175	-.5395
#2	.0005	-.00100	-.00037	.00094	-.01230	-.41844	-.5244
#3	.0005	-.00089	-.00026	.00046	-.01213	-.38805	-.5406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39640-001TC Acquired: 12/26/2019 08:56:43 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00098	.00002	-.67210	-.00129	-.00175	.00158	-.00025
Stddev	.00005	.00015	.04462	.00008	.00125	.00242	.00198
%RSD	4.9771	873.50	6.6383	6.3140	71.205	153.18	779.31
#1	-.00093	.00010	-.66786	-.00136	-.00132	-.00106	.00200
#2	-.00102	.00010	-.71868	-.00120	-.00078	.00370	-.00175
#3	-.00099	-.00016	-.62975	-.00132	-.00316	.00210	-.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02070	.00003	-.0006	-.0015	-.00369	.0131	-.00643
Stddev	.00067	.00033	.0001	.0003	.00261	.0137	.00083
%RSD	3.2254	952.44	19.08	21.52	70.842	104.8	12.928
#1	.02145	-.00031	-.0006	-.0019	-.00548	.0263	-.00623
#2	.02017	.00008	-.0007	-.0014	-.00069	.0140	-.00734
#3	.02047	.00034	-.0005	-.0013	-.00489	-.0011	-.00572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39640-001TC Acquired: 12/26/2019 08:56:43 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0022	-.0193	-.00048
Stddev	.0010	.0146	.00007
%RSD	47.71	75.57	14.977
#1	-.0026	-.0335	-.00043
#2	-.0029	-.0200	-.00045
#3	-.0010	-.0044	-.00057
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3013.9	279730.	16532.
Stddev	17.0	3056.	138.
%RSD	.56432	1.0925	.83388
#1	3013.2	278290.	16524.
#2	3031.2	283240.	16673.
#3	2997.2	277670.	16398.

Sample Name: UQ39640-002TC Acquired: 12/26/2019 09:02:16 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.97493	20.786	5.3553	.9804	10.519	2.0944	41.978
Stddev	.00821	.161	.0155	.0163	.114	.0125	.363
%RSD	.84187	.77627	.29025	1.664	1.0829	.59486	.86428
#1	.96565	20.882	5.3562	.9714	10.646	2.0804	42.393
#2	.97789	20.600	5.3394	.9993	10.485	2.1045	41.721
#3	.98124	20.876	5.3705	.9707	10.427	2.0982	41.820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9920	2.0518	5.0883	2.0759	22.510	42.688	40.81
Stddev	.0035	.0067	.0439	.0004	.189	.389	.42
%RSD	.3524	.32488	.86177	.01854	.83780	.91202	1.030
#1	.9905	2.0526	5.0433	2.0756	22.689	43.136	41.29
#2	.9895	2.0448	5.0908	2.0757	22.313	42.493	40.50
#3	.9960	2.0581	5.1309	2.0763	22.526	42.435	40.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39640-002TC Acquired: 12/26/2019 09:02:16 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0607	1.9748	44.247	2.0068	5.3259	.98422	1.0025
Stddev	.0114	.0104	.382	.0103	.0067	.00439	.0080
%RSD	.55227	.52615	.86368	.51466	.12547	.44636	.79571
#1	2.0481	1.9714	44.659	2.0104	5.3300	.98298	1.0038
#2	2.0640	1.9666	43.904	1.9951	5.3181	.98058	.99399
#3	2.0701	1.9865	44.177	2.0148	5.3295	.98910	1.0098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.9406	1.0583	1.057	1.059	.85127	2.101	2.0904
Stddev	.0146	.0008	.007	.009	.00612	.021	.0166
%RSD	.37002	.07339	.6933	.8064	.71879	.9986	.79315
#1	3.9298	1.0574	1.063	1.053	.84422	2.121	2.0749
#2	3.9349	1.0586	1.049	1.055	.85438	2.079	2.0883
#3	3.9572	1.0588	1.059	1.068	.85521	2.103	2.1079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39640-002TC Acquired: 12/26/2019 09:02:16 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0908	-.0071	1.9939
Stddev	.0003	.0144	.0132
%RSD	.3170	202.4	.65940
#1	-.0906	-.0083	1.9989
#2	-.0907	.0078	1.9790
#3	-.0911	-.0208	2.0037
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2752.7	264250.	15629.
Stddev	3.1	4063.	177.
%RSD	.11179	1.5377	1.1357
#1	2749.7	268240.	15430.
#2	2755.9	260110.	15771.
#3	2752.4	264390.	15687.

Sample Name: LR Acquired: 12/26/2019 09:07:50 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3121	-.03990	10.150	18.79	19.955	.01862	-.47691
Stddev	.0164	.01180	.040	.12	.593	.00040	.00094
%RSD	.70849	29.561	.39159	.6348	2.9728	2.1680	.19715
#1	2.3239	-.02840	10.131	18.84	20.611	.01892	-.47790
#2	2.3189	-.05197	10.123	18.87	19.457	.01878	-.47679
#3	2.2934	-.03935	10.195	18.65	19.796	.01816	-.47603
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.956	19.196	18.974	47.315	-.01176	453.03	-.6790
Stddev	.045	.089	.158	.284	.00290	3.08	.0113
%RSD	.4529	.46601	.83166	.60019	24.628	.68069	1.661
#1	9.943	19.138	19.148	47.146	-.01510	454.92	-.6896
#2	9.919	19.150	18.934	47.643	-.01027	454.71	-.6804
#3	10.01	19.299	18.840	47.156	-.00991	449.48	-.6671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None
Value							
Range							

Sample Name: LR Acquired: 12/26/2019 09:07:50 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 17.848	9.4069	444.64	19.195	19.956	4.8147	4.9536
Stddev	.124	.0512	3.34	.112	.078	.0550	.0285
%RSD	.69219	.54437	.75060	.58470	.39019	1.1423	.57488
#1	17.792	9.3845	448.49	19.140	19.884	4.8026	4.9596
#2	17.989	9.3708	442.61	19.121	19.944	4.7668	4.9226
#3	17.762	9.4655	442.81	19.324	20.039	4.8748	4.9786
Check ?	Chk Fail	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value	20.000						
Range	-10.000%						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.241	9.7696	9.799	46.33	9.3525	.6165	19.433
Stddev	.238	.0481	.017	.03	.0575	.0132	.037
%RSD	.51450	.49227	.1776	.0603	.61529	2.145	.18929
#1	46.089	9.7242	9.814	46.34	9.3146	.6204	19.472
#2	46.120	9.7645	9.780	46.30	9.3242	.6273	19.428
#3	46.516	9.8200	9.802	46.35	9.4187	.6017	19.399
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None
Value							
Range							

Sample Name: LR Acquired: 12/26/2019 09:07:50 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.5191	-.0760	27.998
Stddev	.0051	.0058	.183
%RSD	.9862	7.596	.65205
#1	-.5169	-.0824	27.837
#2	-.5155	-.0710	27.961
#3	-.5250	-.0747	28.196
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2633.4	260460.	15401.
Stddev	16.7	980.	89.
%RSD	.63333	.37639	.57525
#1	2633.1	259720.	15307.
#2	2650.2	260090.	15411.
#3	2616.9	261580.	15484.

Sample Name: LR 2X Acquired: 12/26/2019 09:14:25 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.1902	-.03814	5.2430	9.845	10.621	.00954	-.48670
Stddev	.0151	.00162	.0814	.132	.143	.00006	.00322
%RSD	1.2713	4.2514	1.5530	1.340	1.3492	.67160	.66223
#1	1.2027	-.03938	5.3348	9.915	10.777	.00952	-.49041
#2	1.1946	-.03874	5.2146	9.928	10.593	.00949	-.48509
#3	1.1734	-.03630	5.1795	9.693	10.494	.00961	-.48461
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.212	10.181	10.065	25.165	-.01257	256.03	-.6179
Stddev	.085	.169	.136	.482	.00215	8.04	.0163
%RSD	1.635	1.6625	1.3556	1.9155	17.088	3.1412	2.640
#1	5.309	10.375	10.160	25.554	-.01056	265.14	-.6366
#2	5.175	10.106	10.127	25.315	-.01484	253.01	-.6071
#3	5.151	10.063	9.9090	24.626	-.01233	249.93	-.6099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None
Value							
Range							

Sample Name: LR 2X Acquired: 12/26/2019 09:14:25 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8573	4.9609	256.59	10.140	10.447	2.4382	2.5629
Stddev	.2457	.0872	5.94	.172	.183	.0326	.0380
%RSD	2.4924	1.7574	2.3165	1.6946	1.7484	1.3366	1.4817
#1	10.104	5.0616	263.32	10.338	10.651	2.4747	2.6064
#2	9.8551	4.9133	252.05	10.044	10.394	2.4119	2.5360
#3	9.6128	4.9079	254.41	10.038	10.297	2.4279	2.5464
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.120	F 5.1811	5.255	25.20	5.0501	.3231	10.241
Stddev	.366	.0936	.141	.32	.0689	.0232	.166
%RSD	1.5170	1.8057	2.688	1.287	1.3643	7.187	1.6186
#1	24.536	5.2857	5.414	25.52	5.1290	.2965	10.350
#2	23.978	5.1522	5.205	25.20	5.0196	.3330	10.323
#3	23.846	5.1054	5.146	24.87	5.0018	.3396	10.050
Check ?	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	None	None
Value		50.000					
Range		-10.000%					

Sample Name: LR 2X Acquired: 12/26/2019 09:14:25 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.2696	-.0387	15.055
Stddev	.0052	.0051	.252
%RSD	1.925	13.07	1.6759
#1	-.2743	-.0405	15.347
#2	-.2640	-.0330	14.909
#3	-.2703	-.0427	14.911
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2621.1	256420.	15062.
Stddev	13.9	4595.	164.
%RSD	.52903	1.7918	1.0868
#1	2609.2	261720.	15127.
#2	2636.3	253610.	15183.
#3	2617.8	253930.	14876.

Sample Name: LR2 Acquired: 12/26/2019 09:20:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12202

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00092	.00061	.00301	.0176	-.00060	-.00150	-.47899
Stddev	.00023	.02854	.00138	.0024	.00030	.00002	.00436
%RSD	25.291	4683.0	45.909	13.90	49.188	1.1525	.90934
#1	-.00067	.03301	.00461	.0201	-.00034	-.00149	-.47831
#2	-.00113	-.02079	.00224	.0176	-.00055	-.00150	-.48364
#3	-.00094	-.01039	.00219	.0152	-.00092	-.00152	-.47501
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00307	-.00017	.00240	-.01130	F .00713	-.5612
Stddev	.0000	.00018	.00053	.00028	.00142	.13274	.0067
%RSD	10.94	5.8764	310.95	11.849	12.556	1862.3	1.200
#1	.0002	-.00286	.00004	.00207	-.01027	.16040	-.5687
#2	.0002	-.00317	.00022	.00258	-.01071	-.06790	-.5556
#3	.0002	-.00319	-.00077	.00254	-.01292	-.07111	-.5593
Check ?	None	None	None	None	None	Chk Fail	None
Value						250.00	
Range						-10.000%	

Sample Name: LR2 Acquired: 12/26/2019 09:20:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12202

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00093	.00674	F -.15694	-.00137	5.3472	.01118	.00176
Stddev	.00004	.00244	.04604	.00015	.0241	.00366	.00217
%RSD	4.8503	36.129	29.334	10.760	.45042	32.707	123.06
#1	-.00087	.00937	-.12566	-.00121	5.3612	.01402	.00335
#2	-.00095	.00631	-.13536	-.00140	5.3194	.01247	-.00071
#3	-.00095	.00455	-.20981	-.00151	5.3609	.00706	.00264
Check ?	None	None	Chk Fail	None	Chk Pass	None	None
Value			250.00				
Range			-10.000%				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05466	-.00061	-.0003	8.251	-.00195	.0808	F .00831
Stddev	.00577	.00037	.0001	.123	.00142	.0079	.00134
%RSD	10.554	60.696	31.45	1.487	72.542	9.793	16.132
#1	.06057	-.00062	-.0002	8.122	-.00082	.0798	.00731
#2	.05436	-.00099	-.0004	8.264	-.00150	.0734	.00983
#3	.04905	-.00024	-.0004	8.367	-.00354	.0891	.00779
Check ?	None	None	None	Chk Pass	None	None	Chk Fail
Value							10.000
Range							-10.000%

Sample Name: LR2 Acquired: 12/26/2019 09:20:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12202

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0010	-.0023	-.00056
Stddev	.0005	.0043	.00007
%RSD	54.51	186.8	12.656
#1	-.0016	-.0007	-.00061
#2	-.0008	.0010	-.00048
#3	-.0006	-.0071	-.00059
Check ?	None	None	None
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2972.4	268090.	15704.
Stddev	13.2	2563.	82.
%RSD	.44254	.95589	.52013
#1	2964.7	270030.	15788.
#2	2987.6	265180.	15625.
#3	2965.0	269050.	15698.

Sample Name: CCV MW-12174 Acquired: 12/26/2019 09:26:07 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51625	26.524	.52251	.5268	2.7342	2.6669	53.089
Stddev	.00779	.153	.00120	.0101	.0163	.0241	.090
%RSD	1.5095	.57753	.22972	1.921	.59481	.90481	.17027
#1	.51848	26.617	.52216	.5230	2.7490	2.6432	53.136
#2	.50759	26.347	.52153	.5191	2.7168	2.6663	53.147
#3	.52269	26.608	.52385	.5382	2.7369	2.6914	52.985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5120	2.6168	2.6369	2.6003	26.376	W 55.193	52.48
Stddev	.0014	.0107	.0363	.0512	.064	.098	.35
%RSD	.2821	.40774	1.3768	1.9674	.24445	.17690	.6597
#1	.5108	2.6089	2.6448	2.6142	26.403	55.287	52.82
#2	.5117	2.6124	2.5972	2.5437	26.303	55.198	52.49
#3	.5136	2.6289	2.6685	2.6432	26.423	55.092	52.13
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
Value						50.000	
Range						10.000%	

Sample Name: CCV MW-12174 Acquired: 12/26/2019 09:26:07 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6412	2.5911	F 55.889	2.5958	.53013	.50795	.51630
Stddev	.0403	.0135	.139	.0140	.00267	.00366	.00359
%RSD	1.5252	.52137	.24793	.53982	.50288	.72132	.69577
#1	2.6531	2.5839	56.043	2.5884	.52784	.50614	.51374
#2	2.5963	2.5827	55.774	2.5871	.52949	.50555	.51476
#3	2.6741	2.6067	55.849	2.6120	.53305	.51217	.52041
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			50.000				
Range			10.400%				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6280	.53195	2.683	.5283	1.0682	2.579	2.6555
Stddev	.0063	.00222	.003	.0093	.0106	.037	.0415
%RSD	.23897	.41783	.0977	1.762	.99107	1.448	1.5644
#1	2.6231	.52986	2.684	.5337	1.0570	2.601	2.6684
#2	2.6259	.53172	2.680	.5176	1.0694	2.536	2.6090
#3	2.6351	.53428	2.685	.5337	1.0781	2.601	2.6890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 09:26:07 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.607	2.398	2.6027
Stddev	.014	.052	.0131
%RSD	.5246	2.180	.50445
#1	2.592	2.381	2.5968
#2	2.608	2.356	2.5936
#3	2.619	2.456	2.6178
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2667.3	250740.	14799.
Stddev	17.5	4416.	67.
%RSD	.65774	1.7610	.45172
#1	2680.9	253540.	14749.
#2	2673.5	253030.	14875.
#3	2647.5	245650.	14774.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 09:31:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00006	-.01612	.00091	.0081	-.00051	.00014	-.49770
Stddev	.00012	.00910	.00073	.0006	.00029	.00009	.00203
%RSD	203.89	56.482	80.187	7.096	57.050	62.641	.40831
#1	-.00013	-.02606	.00173	.0081	-.00041	.00022	-.49695
#2	.00008	-.00820	.00067	.0075	-.00084	.00015	-.49614
#3	-.00012	-.01409	.00033	.0086	-.00028	.00005	-.50000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.00083	-.00071	-.00029	-.00151	-.04749	-.5311
Stddev	.0001	.00017	.00031	.00139	.00155	.02057	.0088
%RSD	20.49	20.315	43.410	472.92	102.60	43.303	1.660
#1	.0004	-.00093	-.00077	-.00180	-.00148	-.02375	-.5410
#2	.0006	-.00064	-.00037	-.00003	-.00308	-.05908	-.5281
#3	.0004	-.00093	-.00098	.00095	.00002	-.05966	-.5242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 09:31:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00086	.00484	-.00190	-.00128	-.00075	.00238	.00050
Stddev	.00000	.00166	.00504	.00008	.00109	.00036	.00105
%RSD	.46744	34.181	265.41	6.5475	146.17	15.315	207.63
#1	-.00085	.00668	-.00708	-.00137	-.00072	.00280	-.00043
#2	-.00085	.00441	-.00159	-.00125	-.00185	.00220	.00164
#3	-.00086	.00345	.00298	-.00121	.00033	.00214	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02592	-.00141	-.0004	-.0016	-.00315	-.0179	.00330
Stddev	.00116	.00026	.0000	.0001	.00202	.0258	.00129
%RSD	4.4927	18.511	4.898	7.563	64.227	143.9	39.061
#1	.02666	-.00146	-.0004	-.0017	-.00539	-.0377	.00450
#2	.02652	-.00113	-.0004	-.0015	-.00146	.0112	.00345
#3	.02458	-.00164	-.0004	-.0016	-.00260	-.0272	.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 09:31:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0034	.0026	-.00063
Stddev	.0015	.0172	.00007
%RSD	45.57	668.0	10.584
#1	.0051	.0138	-.00064
#2	.0022	-.0172	-.00069
#3	.0028	.0112	-.00056
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2889.1	257250.	15076.
Stddev	9.3	2863.	38.
%RSD	.32172	1.1129	.24970
#1	2879.2	254630.	15117.
#2	2897.7	256800.	15068.
#3	2890.5	260310.	15043.

Sample Name: CCV Acquired: 12/26/2019 09:38:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51354	25.790	.51446	.5182	2.6579	2.6527	52.318
Stddev	.00637	.143	.00276	.0085	.0106	.0427	.072
%RSD	1.2404	.55364	.53701	1.633	.39713	1.6086	.13731
#1	.52086	25.842	.51204	.5279	2.6572	2.7016	52.317
#2	.51058	25.628	.51387	.5146	2.6477	2.6335	52.247
#3	.50919	25.899	.51747	.5122	2.6688	2.6231	52.390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5060	2.5856	2.6170	2.5709	25.703	54.740	51.85
Stddev	.0015	.0095	.0230	.0355	.077	.247	.25
%RSD	.2990	.36647	.87720	1.3824	.30033	.45157	.4757
#1	.5048	2.5803	2.6435	2.6076	25.715	54.908	52.00
#2	.5056	2.5799	2.6043	2.5684	25.621	54.456	51.56
#3	.5077	2.5965	2.6032	2.5366	25.774	54.855	51.98
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/26/2019 09:38:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6226	2.5711	54.780	2.5763	.51919	.50616	.51415
Stddev	.0318	.0085	.163	.0058	.00398	.00179	.00101
%RSD	1.2125	.33140	.29698	.22416	.76655	.35433	.19583
#1	2.6580	2.5680	54.877	2.5739	.51654	.50461	.51514
#2	2.6136	2.5646	54.592	2.5720	.51725	.50812	.51313
#3	2.5963	2.5808	54.871	2.5828	.52376	.50575	.51419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5932	.52335	2.636	.5193	1.0619	2.577	2.6129
Stddev	.0107	.00141	.003	.0027	.0056	.052	.0195
%RSD	.41092	.26969	.1166	.5183	.52641	2.025	.74795
#1	2.5832	.52269	2.639	.5223	1.0610	2.626	2.6341
#2	2.5920	.52239	2.633	.5184	1.0569	2.582	2.6090
#3	2.6044	.52497	2.637	.5172	1.0679	2.522	2.5956
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/26/2019 09:38:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.568	2.344	2.5887
Stddev	.015	.012	.0048
%RSD	.5851	.5191	.18457
#1	2.557	2.335	2.5868
#2	2.562	2.357	2.5851
#3	2.585	2.338	2.5941
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2685.4	254840.	15080.
Stddev	5.8	3691.	147.
%RSD	.21524	1.4483	.97288
#1	2684.8	250580.	15026.
#2	2691.4	256780.	15246.
#3	2679.9	257160.	14968.

Sample Name: CCB Acquired: 12/26/2019 09:43:57 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00081	-.01885	.00169	.0050	-.00061	.00003	-.50309
Stddev	.00026	.01680	.00026	.0013	.00010	.00006	.00688
%RSD	32.281	89.129	15.410	25.37	16.396	212.71	1.3671
#1	-.00088	-.02790	.00160	.0065	-.00067	-.00001	-.51055
#2	-.00104	-.02917	.00198	.0041	-.00049	.00009	-.49701
#3	-.00052	.00054	.00148	.0044	-.00066	.00000	-.50170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00095	-.00073	-.00082	-.00808	.00205	-.5476
Stddev	.0001	.00009	.00049	.00136	.00378	.06374	.0130
%RSD	39.20	9.0935	67.604	165.77	46.766	3113.8	2.377
#1	.0003	-.00103	-.00113	-.00215	-.00424	.06911	-.5361
#2	.0002	-.00096	-.00086	-.00088	-.01180	-.00522	-.5448
#3	.0002	-.00085	-.00018	.00057	-.00821	-.05775	-.5617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/26/2019 09:43:57 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00105	.00407	-.00370	-.00155	-.00155	-.00026	.00135
Stddev	.00009	.00159	.00495	.00020	.00111	.00143	.00175
%RSD	8.5392	39.012	133.61	12.634	72.085	557.03	130.08
#1	-.00098	.00585	.00032	-.00177	-.00127	.00086	.00315
#2	-.00115	.00354	-.00923	-.00151	-.00277	-.00187	-.00035
#3	-.00102	.00282	-.00220	-.00139	-.00060	.00024	.00124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02238	-.00158	-.0006	-.0019	-.00348	-.0013	.00443
Stddev	.00207	.00004	.0001	.0002	.00148	.0166	.00039
%RSD	9.2303	2.5586	12.07	8.711	42.651	1246.	8.7295
#1	.02243	-.00163	-.0006	-.0020	-.00507	-.0143	.00412
#2	.02443	-.00155	-.0006	-.0017	-.00322	.0174	.00486
#3	.02030	-.00157	-.0005	-.0020	-.00214	-.0072	.00430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/26/2019 09:43:57 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0035	-.0006	-.00079
Stddev	.0016	.0271	.00016
%RSD	46.65	4397.	19.987
#1	.0053	-.0319	-.00063
#2	.0023	.0157	-.00094
#3	.0029	.0143	-.00079
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2876.4	251900.	14980.
Stddev	17.8	3111.	24.
%RSD	.61760	1.2350	.15698
#1	2893.6	254780.	15007.
#2	2877.6	248600.	14964.
#3	2858.1	252330.	14968.

Sample Name: ZLR 2X Acquired: 12/26/2019 09:49:32 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.85041	-.00420	3.6906	7.035	7.4835	.00653	-.48193
Stddev	.00567	.01816	.0737	.041	.0118	.00005	.00091
%RSD	.66640	432.37	1.9978	.5891	.15723	.70569	.18825
#1	.85047	-.00878	3.6464	7.055	7.4721	.00649	-.48244
#2	.84471	-.01962	3.7757	6.988	7.4827	.00651	-.48247
#3	.85604	.01581	3.6497	7.063	7.4956	.00658	-.48088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.676	7.2414	7.3022	17.742	-.01385	179.99	-.5994
Stddev	.070	.1417	.0323	.021	.00242	.98	.0211
%RSD	1.912	1.9561	.44228	.12118	17.448	.54517	3.524
#1	3.633	7.1526	7.3073	17.727	-.01634	180.66	-.5751
#2	3.757	7.4048	7.2677	17.731	-.01368	180.44	-.6099
#3	3.638	7.1668	7.3317	17.766	-.01151	178.87	-.6132
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZLR 2X Acquired: 12/26/2019 09:49:32 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.0916	3.5087	181.74	7.2334	F 8.7935	1.7520	1.8079
Stddev	.1333	.0656	.69	.1309	.1756	.0303	.0340
%RSD	1.8801	1.8686	.37715	1.8094	1.9967	1.7288	1.8782
#1	7.0124	3.4634	182.44	7.1438	8.7034	1.7263	1.7846
#2	7.0168	3.5839	181.70	7.3836	8.9959	1.7854	1.8468
#3	7.2455	3.4787	181.07	7.1729	8.6813	1.7443	1.7921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 16.901	3.6669	3.641	F 20.14	3.6242	.2469	7.3483
Stddev	.310	.0709	.004	.23	.0791	.0181	.0366
%RSD	1.8352	1.9349	.1240	1.167	2.1832	7.337	.49749
#1	16.707	3.6294	3.646	20.05	3.5775	.2534	7.3586
#2	17.259	3.7488	3.642	19.96	3.7155	.2608	7.3077
#3	16.737	3.6226	3.637	20.41	3.5795	.2264	7.3786
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000			8.000			
Low Limit	-5.0000			-8.000			

Sample Name: ZLR 2X Acquired: 12/26/2019 09:49:32 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1937	-.0358	10.827
Stddev	.0023	.0085	.198
%RSD	1.172	23.63	1.8296
#1	-.1920	-.0386	10.685
#2	-.1963	-.0263	11.053
#3	-.1927	-.0426	10.742
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2724.6	256140.	15264.
Stddev	49.0	3993.	74.
%RSD	1.7974	1.5588	.48748
#1	2754.5	255270.	15182.
#2	2668.1	260500.	15282.
#3	2751.2	252660.	15328.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.785%	96.490%	92.643%
Range			

Sample Name: UQ39905-001 Acquired: 12/26/2019 09:55:07 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: PBW

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00040	-.02281	.00239	.0081	-.00045	-.00010	-.49684
Stddev	.00058	.02049	.00113	.0015	.00007	.00010	.00161
%RSD	144.66	89.819	47.364	18.89	16.432	92.746	.32497
#1	-.00089	-.03047	.00319	.0094	-.00037	-.00013	-.49498
#2	.00024	-.03836	.00109	.0086	-.00051	.00000	-.49788
#3	-.00054	.00040	.00289	.0064	-.00048	-.00018	-.49765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.00036	.00045	.00067	-.00691	-.14359	-.5461
Stddev	.0003	.00034	.00032	.00116	.00370	.11621	.0024
%RSD	45.56	94.276	71.360	174.57	53.498	80.933	.4341
#1	.0009	-.00002	.00078	.00106	-.00979	-.02854	-.5439
#2	.0005	-.00035	.00043	-.00064	-.00274	-.14131	-.5486
#3	.0004	-.00070	.00014	.00158	-.00820	-.26094	-.5459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39905-001 Acquired: 12/26/2019 09:55:07 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: PBW

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00038	.00412	-.36877	-.00077	.00025	.00508	.00055
Stddev	.00022	.00147	.03708	.00030	.00010	.00221	.00152
%RSD	57.574	35.789	10.055	39.440	40.129	43.526	277.78
#1	-.00016	.00563	-.39210	-.00046	.00018	.00764	.00153
#2	-.00037	.00404	-.32601	-.00079	.00020	.00383	.00132
#3	-.00060	.00269	-.38819	-.00106	.00036	.00378	-.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02538	-.00112	-.0003	.0010	-.00476	-.0227	-.00108
Stddev	.00123	.00058	.0003	.0008	.00156	.0091	.00188
%RSD	4.8431	51.546	94.98	84.33	32.800	40.08	174.18
#1	.02669	-.00063	-.0001	.0018	-.00373	-.0237	-.00187
#2	.02520	-.00097	-.0002	.0010	-.00656	-.0132	.00107
#3	.02425	-.00176	-.0006	.0001	-.00400	-.0313	-.00243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39905-001 Acquired: 12/26/2019 09:55:07 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: PBW

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0023	-.0108	.00056
Stddev	.0013	.0037	.00032
%RSD	55.99	34.11	58.225
#1	-.0024	-.0149	.00081
#2	-.0036	-.0095	.00067
#3	-.0010	-.0079	.00019
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3058.9	270400.	16039.
Stddev	13.9	6549.	120.
%RSD	.45587	2.4218	.74569
#1	3069.7	274850.	16176.
#2	3063.9	262880.	15956.
#3	3043.2	273470.	15985.

Sample Name: UQ39905-002 Acquired: 12/26/2019 10:00:37 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: LCS

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41592	20.521	.41973	.4140	2.1263	2.1414	41.014
Stddev	.00361	.049	.00214	.0085	.0077	.0217	.032
%RSD	.86784	.23692	.51015	2.043	.36455	1.0152	.07871
#1	.41398	20.475	.42091	.4046	2.1189	2.1213	41.040
#2	.41370	20.514	.41726	.4162	2.1255	2.1386	41.024
#3	.42009	20.572	.42103	.4211	2.1344	2.1645	40.978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3971	2.0010	2.0740	2.0516	20.334	42.670	40.54
Stddev	.0005	.0020	.0141	.0190	.024	.097	.31
%RSD	.1332	.10045	.67941	.92605	.11734	.22812	.7591
#1	.3966	1.9987	2.0676	2.0404	20.314	42.717	40.73
#2	.3969	2.0022	2.0643	2.0409	20.328	42.734	40.70
#3	.3976	2.0021	2.0902	2.0736	20.360	42.558	40.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39905-002 Acquired: 12/26/2019 10:00:37 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: LCS

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0825	1.9150	43.559	1.9716	.40953	.38511	.40316
Stddev	.0195	.0058	.059	.0028	.00207	.00188	.00151
%RSD	.93512	.30427	.13544	.14207	.50497	.48689	.37539
#1	2.0746	1.9085	43.606	1.9697	.40941	.38488	.40144
#2	2.0683	1.9168	43.493	1.9704	.41166	.38709	.40378
#3	2.1047	1.9198	43.579	1.9749	.40753	.38336	.40427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0036	.40819	1.034	.4186	.84369	.0004	2.0871
Stddev	.0035	.00085	.003	.0040	.00278	.0140	.0202
%RSD	.17422	.20880	.2896	.9523	.32908	3853.	.96650
#1	2.0058	.40727	1.031	.4188	.84685	-.0097	2.0806
#2	1.9995	.40895	1.035	.4145	.84166	-.0055	2.0710
#3	2.0054	.40837	1.037	.4224	.84255	.0163	2.1097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39905-002 Acquired: 12/26/2019 10:00:37 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: LCS

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0378	-.0327	1.9846
Stddev	.0002	.0131	.0012
%RSD	.5631	40.00	.05995
#1	-.0376	-.0362	1.9847
#2	-.0376	-.0183	1.9834
#3	-.0380	-.0437	1.9858
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2846.6	258580.	15623.
Stddev	5.1	4413.	117.
%RSD	.17789	1.7065	.75037
#1	2848.7	263610.	15492.
#2	2850.2	256720.	15717.
#3	2840.8	255390.	15660.

Sample Name: LR 2X Acquired: 12/26/2019 10:06:05 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.1603	-.02766	5.0223	9.534	9.8675	.00950	-.48517
Stddev	.0207	.00315	.0335	.150	.3587	.00004	.00151
%RSD	1.7837	11.395	.66711	1.578	3.6347	.38558	.31182
#1	1.1525	-.03129	5.0231	9.464	9.4719	.00949	-.48537
#2	1.1837	-.02573	4.9884	9.706	9.9591	.00954	-.48357
#3	1.1445	-.02595	5.0554	9.431	10.171	.00946	-.48658
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.984	9.7610	9.7971	24.062	-.01105	243.24	-.6227
Stddev	.028	.0559	.2066	.303	.00279	.79	.0035
%RSD	.5682	.57291	2.1083	1.2587	25.294	.32447	.5594
#1	4.975	9.7498	9.7299	24.196	-.01390	243.04	-.6205
#2	4.962	9.7115	10.029	24.274	-.01093	242.57	-.6267
#3	5.016	9.8217	9.6325	23.715	-.00831	244.11	-.6209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None
Value							
Range							

Sample Name: LR 2X Acquired: 12/26/2019 10:06:05 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.4413	4.7448	242.51	9.7478	9.9838	2.3683	2.4593
Stddev	.1658	.0441	.79	.0830	.0164	.0383	.0179
%RSD	1.7555	.92975	.32451	.85182	.16396	1.6164	.72743
#1	9.3446	4.7230	241.73	9.7003	9.9992	2.3422	2.4503
#2	9.6327	4.7158	242.49	9.6994	9.9666	2.3504	2.4477
#3	9.3467	4.7955	243.30	9.8437	9.9858	2.4122	2.4799
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.915	F 4.9443	4.954	24.13	4.8415	.3120	9.8679
Stddev	.163	.0187	.018	.53	.0235	.0029	.2333
%RSD	.71162	.37888	.3595	2.184	.48531	.9424	2.3646
#1	22.816	4.9503	4.934	23.90	4.8273	.3115	9.8248
#2	22.826	4.9234	4.966	24.74	4.8285	.3152	10.120
#3	23.103	4.9594	4.963	23.76	4.8686	.3094	9.6592
Check ?	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	None	None
Value		50.000					
Range		-10.000%					

Sample Name: LR 2X Acquired: 12/26/2019 10:06:05 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.2607	-.0472	14.514
Stddev	.0046	.0102	.117
%RSD	1.765	21.54	.80709
#1	-.2573	-.0563	14.446
#2	-.2590	-.0362	14.446
#3	-.2660	-.0491	14.649
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2717.3	257730.	15258.
Stddev	5.9	4741.	120.
%RSD	.21680	1.8396	.78885
#1	2720.1	260920.	15368.
#2	2721.3	252280.	15275.
#3	2710.5	259980.	15129.

Sample Name: UQ39119-001 Acquired: 12/26/2019 10:55:57 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PBS

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00013	-.04053	-.00042	.0016	-.00135	-.00024	-.49763
Stddev	.00034	.02165	.00057	.0009	.00017	.00011	.00352
%RSD	264.98	53.431	133.92	55.91	12.951	45.088	.70726
#1	.00026	-.01562	-.00075	.0025	-.00115	-.00033	-.50102
#2	-.00029	-.05109	-.00075	.0008	-.00145	-.00028	-.49400
#3	-.00037	-.05487	.00023	.0014	-.00145	-.00012	-.49786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.00120	-.00023	.00149	-.00522	-.40837	-.5389
Stddev	.0000	.00014	.00029	.00132	.00021	.01116	.0028
%RSD	8.265	11.396	128.73	88.642	4.0203	2.7334	.5172
#1	.0005	-.00104	-.00017	.00270	-.00529	-.40800	-.5420
#2	.0005	-.00130	-.00055	.00170	-.00540	-.39739	-.5380
#3	.0006	-.00125	.00003	.00008	-.00499	-.41971	-.5367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39119-001 Acquired: 12/26/2019 10:55:57 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PBS

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00096	-.00009	-.81060	-.00119	-.00064	-.00060	-.00076
Stddev	.00007	.00009	.02959	.00039	.00103	.00049	.00122
%RSD	7.1438	98.272	3.6503	32.358	161.55	81.633	162.16
#1	-.00097	-.00001	-.83434	-.00160	-.00021	-.00016	-.00215
#2	-.00088	-.00018	-.82000	-.00083	.00011	-.00113	-.00028
#3	-.00102	-.00008	-.77745	-.00114	-.00182	-.00052	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03762	.02100	-.0006	-.0006	-.00548	.0340	-.00805
Stddev	.00095	.00008	.0001	.0002	.00184	.0095	.00252
%RSD	2.5205	.39359	15.77	29.48	33.591	28.03	31.308
#1	.03685	.02107	-.0006	-.0007	-.00748	.0326	-.01000
#2	.03868	.02100	-.0006	-.0004	-.00512	.0441	-.00894
#3	.03734	.02091	-.0007	-.0007	-.00385	.0252	-.00520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39119-001 Acquired: 12/26/2019 10:55:57 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: PBS

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0027	.0014	.00040
Stddev	.0011	.0042	.00010
%RSD	41.41	300.0	25.021
#1	.0023	.0058	.00049
#2	.0019	-.0027	.00029
#3	.0040	.0011	.00043
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3077.9	287740.	16720.
Stddev	14.5	9372.	41.
%RSD	.47148	3.2569	.24699
#1	3064.0	295020.	16715.
#2	3076.9	291040.	16764.
#3	3093.0	277170.	16682.

Sample Name: UQ39119-002 Acquired: 12/26/2019 11:01:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: LCS

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.93958	19.534	5.0288	.9183	9.9991	2.0362	39.459
Stddev	.01080	.049	.0176	.0041	.0380	.0266	.121
%RSD	1.1497	.24994	.34997	.4469	.38008	1.3050	.30566
#1	.92848	19.581	5.0349	.9143	10.029	2.0065	39.436
#2	.95006	19.539	5.0089	.9181	10.013	2.0577	39.589
#3	.94021	19.483	5.0425	.9225	9.9562	2.0443	39.351
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9269	1.9519	4.9735	1.9914	20.959	41.010	38.72
Stddev	.0025	.0064	.0784	.0247	.100	.129	.03
%RSD	.2667	.32713	1.5767	1.2421	.47787	.31339	.0791
#1	.9279	1.9523	4.8950	1.9699	21.047	40.958	38.69
#2	.9241	1.9454	5.0518	2.0184	20.979	40.915	38.75
#3	.9288	1.9581	4.9737	1.9858	20.850	41.156	38.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39119-002 Acquired: 12/26/2019 11:01:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: LCS

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9904	1.9148	41.942	1.9260	4.9575	.95874	.94963
Stddev	.0264	.0070	.090	.0066	.0087	.00331	.00563
%RSD	1.3255	.36570	.21347	.34516	.17491	.34539	.59294
#1	1.9649	1.9100	41.921	1.9249	4.9513	.95854	.94873
#2	2.0176	1.9115	42.040	1.9200	4.9538	.95553	.94451
#3	1.9888	1.9228	41.864	1.9331	4.9674	.96215	.95566
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.3918	1.0065	.9953	1.009	.79836	1.986	1.9945
Stddev	.0072	.0022	.0027	.016	.00337	.074	.0327
%RSD	.30168	.21679	.2719	1.580	.42222	3.707	1.6413
#1	2.3887	1.0063	.9976	.9942	.79616	1.915	1.9635
#2	2.3867	1.0044	.9960	1.026	.79668	2.062	2.0287
#3	2.4001	1.0087	.9924	1.007	.80224	1.982	1.9914
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	4.0000						
Range	-20.500%						

Sample Name: UQ39119-002 Acquired: 12/26/2019 11:01:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: LCS

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0893	-.0104	1.9258
Stddev	.0020	.0121	.0086
%RSD	2.268	116.0	.44394
#1	-.0896	-.0056	1.9222
#2	-.0872	-.0241	1.9196
#3	-.0912	-.0015	1.9356
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2835.9	264780.	15943.
Stddev	10.7	1351.	62.
%RSD	.37826	.51036	.38638
#1	2834.1	266200.	15876.
#2	2847.5	263510.	15958.
#3	2826.3	264620.	15996.

Sample Name: UL20021-017 Acquired: 12/26/2019 11:07:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MPG1-RB-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00037	-.03683	.00306	.0607	-.00040	.00010	-.36963
Stddev	.00030	.01022	.00194	.0012	.00012	.00010	.00075
%RSD	81.843	27.759	63.371	2.010	31.143	99.588	.20387
#1	-.00007	-.03452	.00466	.0621	-.00051	.00020	-.36895
#2	-.00037	-.02795	.00360	.0599	-.00026	.00007	-.36952
#3	-.00068	-.04801	.00090	.0600	-.00042	.00001	-.37044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00089	-.00027	-.00073	-.00883	-.31108	-.4557
Stddev	.0001	.00004	.00013	.00113	.00344	.10953	.0099
%RSD	50.10	4.3295	47.674	154.36	38.977	35.208	2.182
#1	.0001	-.00085	-.00017	-.00204	-.00721	-.18611	-.4672
#2	.0003	-.00093	-.00041	-.00016	-.00650	-.35681	-.4496
#3	.0004	-.00087	-.00022	.00000	-.01278	-.39034	-.4503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-017 Acquired: 12/26/2019 11:07:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MPG1-RB-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00080	.00090	.71454	-.00121	.00013	.00137	.00050
Stddev	.00007	.00066	.07135	.00045	.00070	.00161	.00127
%RSD	8.5629	73.300	9.9852	36.883	546.36	117.79	254.68
#1	-.00074	.00141	.77063	-.00070	-.00066	.00059	.00138
#2	-.00087	.00113	.73875	-.00152	.00039	.00029	-.00096
#3	-.00077	.00016	.63423	-.00141	.00065	.00322	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09228	-.00127	.0002	-.0017	-.00530	-.0196	.00062
Stddev	.00072	.00035	.0001	.0001	.00077	.0147	.00208
%RSD	.78241	27.843	61.25	4.572	14.505	75.19	334.03
#1	.09197	-.00139	.0004	-.0016	-.00481	-.0363	.00299
#2	.09310	-.00154	.0001	-.0017	-.00619	-.0089	-.00089
#3	.09176	-.00087	.0002	-.0017	-.00491	-.0135	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-017 Acquired: 12/26/2019 11:07:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: MPG1-RB-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0035	-.0056	-.00019
Stddev	.0010	.0073	.00006
%RSD	27.81	131.3	30.653
#1	-.0037	-.0120	-.00024
#2	-.0043	.0024	-.00013
#3	-.0024	-.0070	-.00021
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3055.9	262950.	15937.
Stddev	15.9	4915.	71.
%RSD	.52052	1.8693	.44425
#1	3070.0	257790.	15887.
#2	3059.2	267580.	15906.
#3	3038.7	263480.	16018.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	105.19%	99.054%	96.725%
Range			

Sample Name: UL18047-001 Acquired: 12/26/2019 11:12:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: EFF

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00053	.03746	.00144	1.364	.02698	-.00001	3.9397
Stddev	.00018	.00440	.00082	.024	.00035	.00004	.0147
%RSD	33.560	11.746	56.803	1.733	1.3137	716.30	.37324
#1	.00042	.04189	.00053	1.340	.02735	-.00005	3.9538
#2	.00073	.03309	.00166	1.367	.02692	.00000	3.9244
#3	.00043	.03739	.00212	1.387	.02665	.00003	3.9409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.01245	.01249	.01280	.27218	55.119	.7558
Stddev	.0002	.00017	.00012	.00035	.00244	.123	.0120
%RSD	127.2	1.3918	.98956	2.7529	.89796	.22310	1.593
#1	-.0000	.01238	.01247	.01271	.26942	55.257	.7426
#2	.0003	.01265	.01238	.01319	.27409	55.079	.7662
#3	.0001	.01233	.01262	.01250	.27301	55.021	.7586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL18047-001 Acquired: 12/26/2019 11:12:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: EFF

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02762	.00078	98.707	-.00047	-.00124	.00064	-.00006
Stddev	.00032	.00035	.566	.00024	.00091	.00233	.00040
%RSD	1.1643	44.214	.57387	50.542	72.854	363.04	643.16
#1	.02731	.00107	99.106	-.00052	-.00060	.00240	.00012
#2	.02761	.00088	98.957	-.00021	-.00085	-.00200	-.00051
#3	.02795	.00040	98.059	-.00067	-.00228	.00153	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 19.007	.00017	.0741	.0001	-.00215	-.0195	-.00456
Stddev	.055	.00064	.0001	.0002	.00045	.0182	.00062
%RSD	.28680	377.81	.0819	158.4	20.722	93.36	13.627
#1	18.997	-.00020	.0742	.0000	-.00212	-.0394	-.00527
#2	18.959	.00091	.0740	.0004	-.00172	-.0038	-.00424
#3	19.066	-.00020	.0741	.0000	-.00261	-.0153	-.00416
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL18047-001 Acquired: 12/26/2019 11:12:34 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A/6010D Custom ID2: Custom ID3:
Comment: EFF

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0045	-.0144	.08504
Stddev	.0008	.0064	.00035
%RSD	17.85	44.50	.41685
#1	-.0036	-.0070	.08464
#2	-.0049	-.0179	.08516
#3	-.0051	-.0182	.08532
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2931.0	272700.	16521.
Stddev	4.4	3263.	177.
%RSD	.14915	1.1965	1.0699
#1	2927.1	276420.	16408.
#2	2930.0	271400.	16431.
#3	2935.7	270290.	16725.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.89%	102.73%	100.27%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 11:18:01 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51020	25.347	.51149	.5186	2.6282	2.6568	51.200
Stddev	.01408	.062	.00258	.0155	.0038	.0587	.075
%RSD	2.7596	.24611	.50446	2.989	.14495	2.2085	.14597
#1	.49399	25.332	.50911	.5007	2.6323	2.5966	51.118
#2	.51723	25.294	.51112	.5277	2.6276	2.6599	51.264
#3	.51939	25.416	.51423	.5274	2.6247	2.7138	51.217
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4996	2.5621	2.5779	2.5585	25.212	53.420	50.25
Stddev	.0023	.0095	.0498	.0600	.024	.014	.12
%RSD	.4507	.36943	1.9339	2.3458	.09636	.02697	.2358
#1	.4974	2.5567	2.5227	2.4910	25.189	53.421	50.25
#2	.4997	2.5565	2.5914	2.5787	25.211	53.405	50.13
#3	.5019	2.5730	2.6197	2.6059	25.237	53.434	50.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 11:18:01 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5934	2.5349	53.557	2.5551	.51409	.50171	.51164
Stddev	.0552	.0180	.042	.0129	.00374	.00197	.00259
%RSD	2.1302	.71075	.07798	.50427	.72836	.39313	.50549
#1	2.5321	2.5197	53.509	2.5469	.50979	.50136	.51343
#2	2.6088	2.5302	53.582	2.5486	.51582	.49993	.50867
#3	2.6393	2.5548	53.580	2.5700	.51666	.50383	.51281
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5425	.51618	2.606	.5128	1.0303	2.527	2.5800
Stddev	.0108	.00268	.001	.0099	.0066	.046	.0477
%RSD	.42500	.51972	.0306	1.930	.63849	1.827	1.8504
#1	2.5347	.51511	2.606	.5030	1.0309	2.510	2.5289
#2	2.5380	.51421	2.607	.5127	1.0234	2.491	2.5877
#3	2.5549	.51924	2.606	.5227	1.0365	2.579	2.6234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 11:18:01 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.538	2.397	2.5557
Stddev	.015	.076	.0128
%RSD	.5975	3.171	.50125
#1	2.526	2.311	2.5494
#2	2.534	2.452	2.5473
#3	2.555	2.429	2.5704
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2750.8	257070.	15878.
Stddev	14.8	6305.	61.
%RSD	.53964	2.4528	.38302
#1	2767.3	264330.	15944.
#2	2746.3	252940.	15824.
#3	2738.7	253940.	15866.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 11:23:26 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00027	-.02707	.00106	.0021	-.00071	.00022	-.49618
Stddev	.00045	.00510	.00108	.0005	.00012	.00021	.00334
%RSD	165.57	18.832	101.17	22.80	17.157	93.017	.67363
#1	.00022	-.02212	.00145	.0026	-.00083	.00046	-.49321
#2	-.00036	-.03231	.00190	.0019	-.00058	.00006	-.49553
#3	-.00068	-.02679	-.00015	.0017	-.00071	.00015	-.49980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00054	-.00039	.00046	-.00273	-.23597	-.5323
Stddev	.0002	.00011	.00025	.00191	.00260	.02535	.0086
%RSD	147.7	20.150	63.518	414.78	95.179	10.743	1.622
#1	.0003	-.00066	-.00020	-.00173	-.00520	-.20951	-.5416
#2	.0001	-.00045	-.00030	.00179	-.00002	-.26005	-.5246
#3	-.0000	-.00052	-.00066	.00132	-.00297	-.23834	-.5308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 11:23:26 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00080	.00404	-.43898	-.00125	-.00057	.00013	.00232
Stddev	.00002	.00149	.03515	.00045	.00091	.00313	.00164
%RSD	2.1660	37.014	8.0067	35.578	160.29	2419.8	70.721
#1	-.00078	.00562	-.39845	-.00166	-.00133	.00017	.00205
#2	-.00081	.00385	-.46107	-.00133	.00044	-.00302	.00407
#3	-.00081	.00265	-.45741	-.00078	-.00082	.00324	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01905	-.00116	-.0003	-.0015	-.00462	-.0145	-.00114
Stddev	.00195	.00050	.0000	.0002	.00220	.0130	.00303
%RSD	10.214	43.257	3.799	14.54	47.615	89.40	266.34
#1	.02117	-.00155	-.0003	-.0013	-.00635	-.0227	.00231
#2	.01734	-.00134	-.0003	-.0016	-.00537	.0005	-.00340
#3	.01866	-.00059	-.0004	-.0017	-.00215	-.0214	-.00232
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 11:23:26 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0032	-.0160	-.00050
Stddev	.0028	.0131	.00012
%RSD	88.49	82.22	23.975
#1	.0062	-.0026	-.00054
#2	.0007	-.0288	-.00060
#3	.0026	-.0165	-.00037
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2906.9	264280.	15726.
Stddev	.3	10576.	64.
%RSD	.01153	4.0017	.40431
#1	2906.7	252420.	15653.
#2	2907.3	272740.	15763.
#3	2906.8	267690.	15763.

Sample Name: UL19163-001 Acquired: 12/26/2019 11:28:56 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: Mallard 1 of 4 N&M

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03143	51.502	.02868	.4348	7.6479	.00118	180.07
Stddev	.00025	.197	.00086	.0081	.0137	.00008	.46
%RSD	.80323	.38326	2.9928	1.870	.17915	6.6074	.25610
#1	.03139	51.376	.02962	.4255	7.6509	.00110	179.58
#2	.03170	51.729	.02794	.4408	7.6598	.00126	180.14
#3	.03120	51.400	.02848	.4380	7.6329	.00119	180.50
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	.02416	.16347	1.7469	99.140	12.339	46.44
Stddev	.0001	.00018	.00201	.0122	.252	.094	.13
%RSD	1.278	.75769	1.2276	.69689	.25370	.76060	.2895
#1	.0058	.02414	.16182	1.7360	98.860	12.300	46.29
#2	.0058	.02399	.16571	1.7600	99.348	12.446	46.54
#3	.0059	.02435	.16289	1.7446	99.212	12.271	46.50
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19163-001 Acquired: 12/26/2019 11:28:56 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: Mallard 1 of 4 N&M

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.468	.06571	2.7947	.15175	.07241	.00242	.05400
Stddev	.120	.00049	.0776	.00029	.00215	.00084	.00122
%RSD	1.1464	.75267	2.7772	.19313	2.9726	34.629	2.2562
#1	10.355	.06605	2.7115	.15197	.07184	.00182	.05504
#2	10.593	.06594	2.8074	.15185	.07060	.00207	.05266
#3	10.455	.06514	2.8652	.15141	.07479	.00338	.05430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 8.7893	.42604	.7736	.7121	-.05841	-.0395	.12406
Stddev	.0440	.00066	.0003	.0071	.00327	.0122	.00190
%RSD	.50006	.15551	.0350	1.003	5.6021	30.95	1.5334
#1	8.7845	.42556	.7733	.7039	-.05749	-.0358	.12207
#2	8.7479	.42680	.7739	.7168	-.06204	-.0531	.12586
#3	8.8354	.42576	.7735	.7156	-.05570	-.0295	.12425
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL19163-001 Acquired: 12/26/2019 11:28:56 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: Mallard 1 of 4 N&M

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0008	-.0012	6.3192
Stddev	.0014	.0121	.0068
%RSD	185.5	1008.	.10708
#1	.0015	.0046	6.3259
#2	.0017	.0069	6.3124
#3	-.0009	-.0151	6.3195
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2785.1	276730.	16864.
Stddev	17.7	3171.	82.
%RSD	.63442	1.1459	.48633
#1	2766.0	279620.	16958.
#2	2800.9	273340.	16829.
#3	2788.3	277240.	16806.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.867%	104.25%	102.35%
Range			

Sample Name: UL11005-001TC Acquired: 12/26/2019 11:34:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	-.01724	.00090	.0097	.02001	.00004	29.082
Stddev	.00028	.00373	.00081	.0001	.00007	.00007	.066
%RSD	593.51	21.654	89.506	1.437	.35675	159.24	.22840
#1	-.00013	-.02154	.00014	.0098	.01999	.00002	29.145
#2	.00026	-.01531	.00082	.0097	.01995	-.00001	29.013
#3	-.00027	-.01486	.00174	.0095	.02009	.00012	29.088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00037	.00130	-.00054	.00601	.08947	3.013
Stddev	.0000	.00004	.00019	.00084	.00376	.01180	.031
%RSD	5.595	10.385	14.856	155.66	62.588	13.189	1.033
#1	.0002	.00033	.00119	-.00115	.00269	.07587	3.044
#2	.0002	.00038	.00153	.00042	.01009	.09689	2.982
#3	.0002	.00041	.00119	-.00090	.00524	.09567	3.013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001TC Acquired: 12/26/2019 11:34:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.31862	-.00030	5.5081	.00447	-.00092	-.00053	.00038
Stddev	.00228	.00025	.0907	.00011	.00102	.00105	.00184
%RSD	.71432	82.823	1.6470	2.4508	110.35	197.27	487.02
#1	.31791	-.00005	5.6128	.00449	-.00185	-.00168	.00236
#2	.31679	-.00054	5.4591	.00435	-.00107	.00038	-.00126
#3	.32117	-.00032	5.4525	.00457	.00016	-.00030	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.47858	-.00098	.0903	-.0016	-.00446	-.0106	-.00090
Stddev	.00764	.00035	.0006	.0004	.00378	.0072	.00189
%RSD	1.5973	35.913	.7044	26.75	84.661	67.73	211.13
#1	.48697	-.00081	.0902	-.0012	-.00302	-.0048	-.00100
#2	.47676	-.00074	.0898	-.0016	-.00161	-.0084	-.00274
#3	.47201	-.00139	.0910	-.0020	-.00874	-.0187	.00104
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001TC Acquired: 12/26/2019 11:34:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0000	-.0081	.00026
Stddev	.0002	.0174	.00019
%RSD	1120.	213.7	72.370
#1	.0001	-.0271	.00027
#2	-.0002	-.0044	.00045
#3	.0002	.0071	.00007
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2907.9	263040.	15816.
Stddev	12.9	5247.	130.
%RSD	.44249	1.9949	.82185
#1	2909.3	263890.	15667.
#2	2920.0	267810.	15905.
#3	2894.4	257420.	15875.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.09%	99.090%	95.990%
Range			

Sample Name: UL11005-001MSTC Acquired: 12/26/2019 11:39:57 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002S

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0163	20.458	5.3542	1.019	10.573	2.1550	70.074
Stddev	.0066	.107	.0349	.011	.121	.0285	.126
%RSD	.64696	.52279	.65234	1.049	1.1423	1.3207	.17918
#1	1.0201	20.334	5.3287	1.029	10.434	2.1741	70.194
#2	1.0088	20.525	5.3398	1.008	10.632	2.1223	69.944
#3	1.0202	20.514	5.3940	1.021	10.652	2.1686	70.083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9824	2.0314	5.2188	2.0821	21.846	44.043	44.30
Stddev	.0060	.0115	.0326	.0031	.061	.168	.17
%RSD	.6147	.56597	.62535	.15048	.27750	.38135	.3804
#1	.9791	2.0204	5.2333	2.0819	21.777	43.850	44.37
#2	.9787	2.0305	5.1814	2.0790	21.889	44.155	44.43
#3	.9894	2.0433	5.2416	2.0853	21.872	44.124	44.11
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001MSTC Acquired: 12/26/2019 11:39:57 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002S

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4169	1.9819	49.864	2.0274	F 5.1840	1.0300	1.0131
Stddev	.0111	.0106	.084	.0078	.0371	.0006	.0006
%RSD	.45823	.53344	.16879	.38256	.71565	.05980	.05745
#1	2.4248	1.9745	49.768	2.0203	5.1584	1.0304	1.0132
#2	2.4042	1.9772	49.924	2.0262	5.1670	1.0293	1.0125
#3	2.4216	1.9940	49.900	2.0357	5.2266	1.0303	1.0137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.4274	1.0289	1.132	1.049	.84030	2.083	2.0813
Stddev	.0191	.0086	.003	.004	.00362	.027	.0150
%RSD	.43022	.83725	.2337	.4108	.43091	1.305	.71809
#1	4.4124	1.0223	1.129	1.053	.83714	2.102	2.0905
#2	4.4209	1.0257	1.132	1.045	.83950	2.096	2.0641
#3	4.4488	1.0387	1.135	1.048	.84425	2.052	2.0893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001MSTC Acquired: 12/26/2019 11:39:57 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002S

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1003	-.0180	2.0287
Stddev	.0017	.0104	.0066
%RSD	1.669	57.62	.32280
#1	-.1018	-.0060	2.0229
#2	-.0985	-.0243	2.0273
#3	-.1006	-.0237	2.0358
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2761.7	254690.	15412.
Stddev	16.0	4696.	95.
%RSD	.57756	1.8438	.61869
#1	2773.4	253640.	15431.
#2	2768.1	259820.	15309.
#3	2743.5	250610.	15496.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.060%	95.943%	93.539%
Range			

Sample Name: UL11005-001MDTC Acquired: 12/26/2019 11:45:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002SD

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98895	20.223	5.2626	.9856	10.468	2.0721	69.071
Stddev	.00963	.250	.0192	.0142	.184	.0498	.542
%RSD	.97342	1.2351	.36544	1.445	1.7556	2.4027	.78422
#1	.98817	20.477	5.2790	.9965	10.629	2.1174	69.565
#2	.99894	20.214	5.2414	.9909	10.508	2.0801	69.157
#3	.97973	19.978	5.2673	.9695	10.268	2.0188	68.492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9637	1.9953	5.0944	2.0248	21.625	43.319	43.71
Stddev	.0017	.0072	.0534	.0083	.204	.213	.30
%RSD	.1740	.36124	1.0493	.41122	.94366	.49091	.6825
#1	.9646	1.9997	5.1006	2.0214	21.802	43.528	43.97
#2	.9617	1.9870	5.1445	2.0343	21.671	43.328	43.78
#3	.9646	1.9993	5.0381	2.0187	21.402	43.103	43.38
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001MDTC Acquired: 12/26/2019 11:45:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002SD

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3503	1.9525	49.265	1.9953	F 5.0811	1.0192	1.0023
Stddev	.0204	.0063	.501	.0089	.0266	.0070	.0056
%RSD	.86576	.32326	1.0171	.44830	.52382	.68657	.55605
#1	2.3506	1.9478	49.771	1.9944	5.1059	1.0114	1.0010
#2	2.3705	1.9501	49.256	1.9868	5.0530	1.0212	.99750
#3	2.3298	1.9597	48.769	2.0046	5.0844	1.0249	1.0084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.3364	1.0080	1.117	1.027	.82203	2.066	2.0335
Stddev	.0031	.0055	.008	.007	.00408	.007	.0203
%RSD	.07095	.54226	.7559	.7188	.49635	.3313	.99976
#1	4.3366	1.0116	1.124	1.026	.81768	2.059	2.0384
#2	4.3332	1.0017	1.119	1.035	.82265	2.073	2.0510
#3	4.3394	1.0106	1.107	1.020	.82577	2.066	2.0112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001MDTC Acquired: 12/26/2019 11:45:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 040-CPWC0002-WA-ER0002SD

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1005	-.0096	1.9994
Stddev	.0034	.0098	.0092
%RSD	3.406	102.5	.46105
#1	-.0966	-.0204	1.9978
#2	-.1021	-.0013	1.9911
#3	-.1028	-.0070	2.0093
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2759.4	259650.	15348.
Stddev	8.9	5268.	237.
%RSD	.32193	2.0287	1.5469
#1	2755.8	254880.	15089.
#2	2769.6	258770.	15401.
#3	2753.0	265310.	15555.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.983%	97.812%	93.153%
Range			

Sample Name: UL11005-001TCL(5) Acquired: 12/26/2019 11:51:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00011	-.03951	.00386	.0042	.00368	.00003	5.3900
Stddev	.00028	.00956	.00032	.0017	.00021	.00013	.0330
%RSD	245.10	24.199	8.3813	40.11	5.7857	425.15	.61171
#1	-.00019	-.04134	.00404	.0053	.00384	-.00001	5.4062
#2	-.00035	-.02917	.00404	.0023	.00343	-.00008	5.4118
#3	.00019	-.04803	.00348	.0051	.00375	.00018	5.3521
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00066	-.00029	.00000	-.00339	-.14060	.1921
Stddev	.0001	.00012	.00005	.00180	.00403	.04082	.0035
%RSD	73.08	18.478	16.184	38107.	119.05	29.036	1.837
#1	.0001	-.00079	-.00024	.00048	.00123	-.14920	.1955
#2	.0001	-.00055	-.00034	.00152	-.00624	-.09616	.1925
#3	.0003	-.00063	-.00029	-.00198	-.00516	-.17644	.1884
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001TCL(5) Acquired: 12/26/2019 11:51:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06359	.00263	.91559	-.00027	-.00077	.00047	.00262
Stddev	.00065	.00105	.03830	.00029	.00128	.00183	.00088
%RSD	1.0180	39.860	4.1833	103.87	165.43	387.38	33.575
#1	.06377	.00375	.89595	-.00060	-.00014	-.00031	.00331
#2	.06287	.00246	.95973	-.00011	.00007	.00256	.00163
#3	.06412	.00167	.89110	-.00011	-.00224	-.00083	.00293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10610	-.00140	.0175	-.0016	-.00211	-.0065	.00102
Stddev	.00111	.00014	.0001	.0002	.00142	.0271	.00176
%RSD	1.0430	10.233	.4407	13.03	67.317	417.7	172.55
#1	.10738	-.00129	.0175	-.0018	-.00175	-.0256	.00061
#2	.10546	-.00156	.0176	-.0015	-.00367	.0246	-.00050
#3	.10546	-.00134	.0175	-.0014	-.00090	-.0184	.00295
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001TCL(5) Acquired: 12/26/2019 11:51:02 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0015	-.0168	-.00046
Stddev	.0002	.0080	.00011
%RSD	13.75	47.28	24.391
#1	-.0013	-.0103	-.00046
#2	-.0017	-.0145	-.00034
#3	-.0014	-.0257	-.00057
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2913.6	261070.	15488.
Stddev	2.7	6740.	76.
%RSD	.09341	2.5818	.48789
#1	2911.7	262750.	15539.
#2	2912.4	266810.	15401.
#3	2916.7	253640.	15524.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.29%	98.345%	94.002%
Range			

Sample Name: UL11005-001TCPS Acquired: 12/26/2019 11:56:31 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40260	20.096	.41620	.3990	2.1016	2.0522	67.472
Stddev	.01143	.459	.00633	.0159	.0494	.0636	1.265
%RSD	2.8387	2.2827	1.5198	3.986	2.3514	3.0980	1.8753
#1	.40724	20.521	.42291	.3996	2.1481	2.0810	68.606
#2	.41098	20.158	.41533	.4146	2.1069	2.0962	67.702
#3	.38958	19.610	.41035	.3828	2.0497	1.9793	66.107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3891	1.9792	2.0014	1.9977	19.888	43.611	43.55
Stddev	.0065	.0294	.0516	.0549	.424	.676	.77
%RSD	1.667	1.4833	2.5764	2.7474	2.1332	1.5508	1.768
#1	.3966	2.0131	2.0295	2.0170	20.264	44.153	44.16
#2	.3855	1.9638	2.0328	2.0403	19.971	43.826	43.80
#3	.3852	1.9608	1.9419	1.9357	19.428	42.853	42.68
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001TCPS Acquired: 12/26/2019 11:56:31 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3100	1.9349	48.321	1.9870	.40233	.39776	.39922
Stddev	.0618	.0237	1.078	.0308	.00402	.00580	.00608
%RSD	2.6757	1.2268	2.2307	1.5481	1.0004	1.4572	1.5228
#1	2.3348	1.9622	49.289	2.0224	.40697	.40442	.40589
#2	2.3557	1.9220	48.514	1.9718	.40012	.39500	.39400
#3	2.2397	1.9204	47.159	1.9668	.39989	.39385	.39777
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4150	.40445	1.111	.4073	.81562	-.0221	1.9813
Stddev	.0370	.00576	.022	.0118	.01323	.0208	.0551
%RSD	1.5328	1.4231	1.971	2.895	1.6219	94.35	2.7814
#1	2.4575	.41101	1.133	.4145	.83031	-.0078	2.0076
#2	2.3972	.40211	1.113	.4136	.80464	-.0460	2.0184
#3	2.3901	.40023	1.089	.3937	.81190	-.0124	1.9180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11005-001TCPS Acquired: 12/26/2019 11:56:31 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0404	-.0061	1.9950
Stddev	.0016	.0067	.0309
%RSD	3.850	109.7	1.5471
#1	-.0420	-.0035	2.0306
#2	-.0389	-.0011	1.9781
#3	-.0403	-.0137	1.9763
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2799.0	263450.	15862.
Stddev	46.4	8177.	337.
%RSD	1.6572	3.1040	2.1238
#1	2745.5	263370.	15559.
#2	2823.3	255310.	15802.
#3	2828.2	271660.	16225.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.346%	99.241%	96.271%
Range			

Sample Name: UQ39836-001TC Acquired: 12/26/2019 12:01:58 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00045	-.02801	.00062	.0015	-.00122	-.00009	-.49838
Stddev	.00020	.00849	.00104	.0007	.00019	.00007	.00200
%RSD	45.077	30.298	167.11	43.79	15.669	76.984	.40177
#1	-.00061	-.02615	.00154	.0021	-.00102	-.00009	-.49810
#2	-.00022	-.02061	.00083	.0008	-.00124	-.00015	-.49653
#3	-.00053	-.03727	-.00051	.0016	-.00140	-.00002	-.50050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00082	-.00038	.00138	-.00880	.05289	-.5431
Stddev	.0002	.00017	.00015	.00088	.00142	.11686	.0301
%RSD	194.1	20.579	40.953	63.408	16.141	220.95	5.537
#1	.0003	-.00093	-.00026	.00039	-.00906	.18777	-.5743
#2	.0001	-.00091	-.00032	.00207	-.00727	-.01776	-.5144
#3	-.0001	-.00063	-.00055	.00169	-.01008	-.01135	-.5405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39836-001TC Acquired: 12/26/2019 12:01:58 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00104	.00249	F 175.59	-.00053	.00032	.00048	.00134
Stddev	.00005	.00103	1.63	.00037	.00086	.00026	.00178
%RSD	4.5712	41.469	.92861	69.961	266.20	53.030	132.77
#1	-.00099	.00367	177.36	-.00094	-.00060	.00078	.00062
#2	-.00109	.00204	175.25	-.00021	.00047	.00036	.00336
#3	-.00103	.00176	174.16	-.00044	.00111	.00031	.00004
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			5.0000				
Low Limit			-5.0000				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03730	-.00136	-.0005	-.0016	-.00337	.0149	-.00466
Stddev	.00241	.00055	.0001	.0001	.00223	.0092	.00101
%RSD	6.4473	40.126	22.13	4.081	66.098	61.76	21.560
#1	.03714	-.00074	-.0006	-.0017	-.00433	.0251	-.00385
#2	.03498	-.00158	-.0004	-.0017	-.00496	.0125	-.00579
#3	.03978	-.00177	-.0006	-.0016	-.00082	.0072	-.00435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39836-001TC Acquired: 12/26/2019 12:01:58 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0022	-.0154	-.00040
Stddev	.0016	.0097	.00012
%RSD	69.85	62.70	28.875
#1	-.0027	-.0258	-.00054
#2	-.0035	-.0137	-.00035
#3	-.0005	-.0067	-.00032
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2897.6	278000.	16406.
Stddev	8.1	4663.	159.
%RSD	.27932	1.6774	.96712
#1	2900.2	274940.	16222.
#2	2904.1	283370.	16501.
#3	2888.5	275690.	16493.

Sample Name: UQ39836-002TC Acquired: 12/26/2019 12:07:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0028	19.504	5.3098	.9707	10.254	2.0782	39.413
Stddev	.0532	.276	.0647	.0526	.310	.1138	.307
%RSD	5.3062	1.4147	1.2181	5.418	3.0189	5.4735	.77787
#1	.97799	19.263	5.2623	.9511	9.8974	2.0409	39.120
#2	.96644	19.443	5.2837	.9308	10.457	1.9878	39.387
#3	1.0638	19.805	5.3835	1.030	10.407	2.2059	39.731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9609	1.9823	5.0510	2.0095	19.427	42.146	38.75
Stddev	.0110	.0256	.2687	.0950	.215	.245	.34
%RSD	1.147	1.2903	5.3206	4.7279	1.1061	.58020	.8722
#1	.9533	1.9665	4.9201	1.9628	19.227	41.954	38.48
#2	.9558	1.9686	4.8727	1.9469	19.400	42.064	38.64
#3	.9735	2.0118	5.3601	2.1188	19.654	42.421	39.13
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39836-002TC Acquired: 12/26/2019 12:07:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0086	1.9391	F 213.67	1.9759	5.0091	.98552	1.0089
Stddev	.1010	.0298	2.26	.0268	.0612	.01338	.0162
%RSD	5.0287	1.5349	1.0554	1.3580	1.2225	1.3575	1.6100
#1	1.9613	1.9187	212.80	1.9596	4.9617	.97608	.99872
#2	1.9399	1.9252	211.98	1.9613	4.9874	.97966	1.0003
#3	2.1245	1.9732	216.23	2.0069	5.0782	1.0008	1.0276
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			40.000				
Range			20.500%				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.8583	.99766	.9990	1.025	.80261	2.037	2.0167
Stddev	.0562	.01346	.0104	.052	.01092	.075	.1099
%RSD	1.4556	1.3492	1.046	5.097	1.3605	3.683	5.4487
#1	3.8138	.99064	.9886	.9972	.79507	2.010	1.9608
#2	3.8397	.98916	.9991	.9923	.79763	1.979	1.9460
#3	3.9214	1.0132	1.009	1.085	.81513	2.121	2.1433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39836-002TC Acquired: 12/26/2019 12:07:29 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0977	-.0159	2.0045
Stddev	.0030	.0057	.0279
%RSD	3.060	35.68	1.3932
#1	-.0947	-.0138	1.9891
#2	-.0975	-.0115	1.9877
#3	-.1007	-.0223	2.0368
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2777.0	263530.	16111.
Stddev	32.3	14547.	223.
%RSD	1.1638	5.5202	1.3833
#1	2797.0	268840.	16303.
#2	2794.3	274680.	16163.
#3	2739.7	247080.	15867.

Sample Name: UL14023-001TC Acquired: 12/26/2019 12:13:10 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00021	.11798	.00248	.0099	.00978	-.00000	.36639
Stddev	.00004	.00600	.00183	.0011	.00040	.00007	.00258
%RSD	16.547	5.0847	73.647	10.66	4.1012	7292.5	.70484
#1	-.00019	.11106	.00455	.0093	.00981	.00003	.36548
#2	-.00020	.12114	.00182	.0111	.01017	.00005	.36930
#3	-.00025	.12173	.00108	.0093	.00937	-.00008	.36439
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00098	.00014	.00068	-.00960	-.11217	-.4968
Stddev	.0001	.00010	.00016	.00094	.00105	.06915	.0085
%RSD	75.11	10.452	114.24	138.91	10.976	61.650	1.708
#1	.0002	-.00109	.00025	.00094	-.00842	-.06953	-.4889
#2	.0001	-.00090	-.00004	-.00037	-.00994	-.19196	-.5057
#3	.0000	-.00094	.00020	.00146	-.01044	-.07503	-.4957
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001TC Acquired: 12/26/2019 12:13:10 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00016	.00247	148.06	.00341	.00013	.00181	.00102
Stddev	.00009	.00129	1.03	.00018	.00202	.00165	.00174
%RSD	58.634	52.357	.69357	5.1352	1606.0	91.125	169.77
#1	-.00007	.00386	148.95	.00359	.00122	-.00009	.00295
#2	-.00016	.00223	148.30	.00324	.00136	.00290	.00053
#3	-.00026	.00131	146.94	.00341	-.00220	.00262	-.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05760	-.00136	.0027	-.0017	-.00335	-.0102	-.00227
Stddev	.00105	.00021	.0001	.0002	.00204	.0077	.00270
%RSD	1.8245	15.103	3.876	12.70	61.020	75.28	119.09
#1	.05880	-.00157	.0027	-.0019	-.00158	-.0045	-.00109
#2	.05715	-.00116	.0028	-.0015	-.00288	-.0072	-.00036
#3	.05685	-.00135	.0026	-.0018	-.00559	-.0190	-.00536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001TC Acquired: 12/26/2019 12:13:10 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0030	-.0033	.00122
Stddev	.0019	.0043	.00011
%RSD	61.27	129.2	9.3769
#1	-.0012	-.0011	.00123
#2	-.0031	-.0082	.00133
#3	-.0049	-.0006	.00110
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2856.9	269260.	15782.
Stddev	22.8	8957.	92.
%RSD	.79902	3.3263	.58543
#1	2831.7	266720.	15741.
#2	2876.2	261850.	15717.
#3	2862.9	279220.	15888.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.340%	101.43%	95.786%
Range			

Sample Name: UL14023-001MSTC Acquired: 12/26/2019 12:18:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213S

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98029	19.271	5.1933	.9510	10.018	1.9943	39.783
Stddev	.00676	.118	.0511	.0187	.214	.0436	.128
%RSD	.69000	.61350	.98482	1.971	2.1361	2.1878	.32125
#1	.97876	19.316	5.1638	.9464	10.247	1.9971	39.907
#2	.97443	19.360	5.1637	.9350	9.9830	1.9494	39.788
#3	.98769	19.136	5.2523	.9717	9.8236	2.0365	39.652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9408	1.9470	4.9275	1.9494	19.019	42.148	38.70
Stddev	.0084	.0182	.0285	.0127	.079	.109	.07
%RSD	.8928	.93544	.57791	.65173	.41611	.25886	.1729
#1	.9374	1.9399	4.9324	1.9458	19.058	42.229	38.62
#2	.9346	1.9334	4.8970	1.9389	19.070	42.024	38.72
#3	.9504	1.9677	4.9533	1.9636	18.927	42.192	38.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001MSTC Acquired: 12/26/2019 12:18:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213S

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9624	1.9204	182.82	1.9609	4.8698	.99132	.99907
Stddev	.0118	.0205	.90	.0161	.0435	.00562	.01246
%RSD	.60071	1.0659	.48998	.82032	.89264	.56677	1.2476
#1	1.9614	1.9099	183.65	1.9532	4.8600	.98961	.99044
#2	1.9512	1.9073	182.94	1.9502	4.8320	.98676	.99340
#3	1.9747	1.9440	181.87	1.9794	4.9173	.99760	1.0134
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.8359	.97233	.9928	.9915	.78939	2.043	1.9367
Stddev	.0366	.00878	.0036	.0033	.01036	.014	.0129
%RSD	.95310	.90316	.3620	.3331	1.3124	.6832	.66667
#1	3.8204	.96844	.9942	.9913	.79352	2.039	1.9400
#2	3.8097	.96617	.9955	.9883	.77760	2.058	1.9224
#3	3.8777	.98238	.9887	.9949	.79705	2.032	1.9476
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001MSTC Acquired: 12/26/2019 12:18:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213S

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1010	-.0179	1.9846
Stddev	.0027	.0217	.0179
%RSD	2.670	120.9	.90262
#1	-.0993	.0068	1.9748
#2	-.0994	-.0334	1.9738
#3	-.1041	-.0272	2.0053
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2803.1	271520.	16199.
Stddev	14.1	4130.	89.
%RSD	.50149	1.5211	.55154
#1	2807.1	271010.	16112.
#2	2814.7	275880.	16193.
#3	2787.5	267670.	16291.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.486%	102.28%	98.313%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 12:24:13 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51447	24.761	.50649	.5155	2.5619	2.6292	50.591
Stddev	.01625	.203	.00258	.0145	.0228	.0646	.338
%RSD	3.1582	.81924	.50962	2.811	.88828	2.4565	.66759
#1	.53292	24.528	.50381	.5322	2.5384	2.7034	50.203
#2	.50229	24.861	.50669	.5067	2.5634	2.5852	50.752
#3	.50819	24.895	.50896	.5076	2.5838	2.5992	50.817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4952	2.5327	2.5959	2.5637	24.592	54.178	50.31
Stddev	.0018	.0095	.0823	.0778	.210	.126	.12
%RSD	.3566	.37607	3.1692	3.0330	.85302	.23225	.2332
#1	.4934	2.5223	2.6883	2.6534	24.363	54.094	50.18
#2	.4953	2.5347	2.5305	2.5162	24.638	54.323	50.41
#3	.4969	2.5410	2.5688	2.5214	24.774	54.117	50.34
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 12:24:13 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6136	2.5288	53.184	2.5492	.50514	.50723	.50781
Stddev	.0835	.0096	.332	.0076	.00342	.00141	.00365
%RSD	3.1945	.38119	.62400	.29688	.67751	.27796	.71812
#1	2.7093	2.5217	52.802	2.5422	.50225	.50702	.50592
#2	2.5556	2.5250	53.356	2.5482	.50424	.50594	.50549
#3	2.5759	2.5398	53.395	2.5572	.50892	.50873	.51201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5154	.50535	2.560	.5117	1.0276	2.608	2.5625
Stddev	.0159	.00291	.016	.0157	.0047	.098	.0772
%RSD	.63145	.57501	.6289	3.061	.45311	3.769	3.0137
#1	2.5010	.50264	2.542	.5296	1.0223	2.713	2.6502
#2	2.5129	.50500	2.567	.5004	1.0299	2.518	2.5044
#3	2.5324	.50842	2.572	.5052	1.0307	2.593	2.5331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 12:24:13 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.494	W 2.248	2.5602
Stddev	.014	.042	.0086
%RSD	.5546	1.883	.33789
#1	2.479	2.292	2.5518
#2	2.498	2.207	2.5599
#3	2.506	2.245	2.5691
Check ?	Chk Pass	Chk Warn	Chk Pass
Value		2.500	
Range		-10.00%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2729.1	256020.	15517.
Stddev	13.6	6549.	109.
%RSD	.49841	2.5582	.70456
#1	2742.1	248750.	15629.
#2	2730.1	261470.	15410.
#3	2715.0	257820.	15512.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 12:29:37 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00015	-.01998	.00121	.0001	-.00064	.00025	-.49560
Stddev	.00035	.01036	.00113	.0006	.00025	.00003	.00236
%RSD	236.69	51.847	93.462	592.3	38.589	11.423	.47668
#1	-.00024	-.02308	.00247	-.0003	-.00064	.00028	-.49465
#2	-.00044	-.02842	.00031	.0008	-.00040	.00025	-.49387
#3	.00024	-.00842	.00084	-.0002	-.00089	.00023	-.49829
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00055	-.00027	.00043	.00080	-.35110	-.5340
Stddev	.0001	.00015	.00015	.00031	.00434	.05471	.0201
%RSD	64.62	27.232	55.981	71.697	540.82	15.581	3.760
#1	.0001	-.00038	-.00036	.00009	.00098	-.39030	-.5535
#2	.0001	-.00067	-.00035	.00070	.00505	-.28860	-.5134
#3	.0002	-.00059	-.00009	.00049	-.00363	-.37441	-.5350
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 12:29:37 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00077	.00449	-.24968	-.00109	-.00022	-.00063	.00064
Stddev	.00006	.00174	.04408	.00034	.00114	.00204	.00058
%RSD	8.0148	38.834	17.655	31.082	507.18	321.49	89.830
#1	-.00082	.00638	-.25870	-.00107	-.00150	.00165	.00073
#2	-.00070	.00417	-.20179	-.00144	.00013	-.00228	.00003
#3	-.00077	.00293	-.28856	-.00077	.00069	-.00128	.00117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01887	-.00115	-.0002	-.0017	-.00400	-.0157	.00036
Stddev	.00067	.00032	.0001	.0001	.00179	.0118	.00110
%RSD	3.5306	28.081	40.14	4.340	44.819	75.53	302.97
#1	.01954	-.00078	-.0002	-.0017	-.00607	-.0266	.00123
#2	.01821	-.00130	-.0001	-.0018	-.00287	-.0031	.00074
#3	.01887	-.00137	-.0003	-.0018	-.00307	-.0174	-.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 12:29:37 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0023	-.0017	-.00045
Stddev	.0009	.0200	.00009
%RSD	38.37	1186.	20.933
#1	.0033	-.0049	-.00056
#2	.0018	-.0199	-.00041
#3	.0018	.0197	-.00039
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2917.5	263240.	15344.
Stddev	17.0	3453.	141.
%RSD	.58313	1.3117	.92208
#1	2925.4	260660.	15425.
#2	2929.1	261890.	15181.
#3	2898.0	267160.	15427.

Sample Name: ZUL14023-001MDTC Acquired: 12/26/2019 12:35:08 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213SD

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.97246	19.293	5.1480	.9318	9.8576	1.9700	39.569
Stddev	.01683	.078	.0258	.0261	.0585	.0240	.166
%RSD	1.7311	.40365	.50077	2.801	.59363	1.2210	.41874
#1	.97214	19.366	5.1211	.9436	9.9252	1.9862	39.751
#2	.95579	19.302	5.1502	.9018	9.8217	1.9424	39.531
#3	.98946	19.211	5.1726	.9499	9.8260	1.9815	39.426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9338	1.9307	4.8948	1.9196	18.910	42.071	38.63
Stddev	.0046	.0096	.0683	.0281	.032	.157	.18
%RSD	.4974	.49687	1.3962	1.4633	.16923	.37325	.4708
#1	.9291	1.9229	4.9037	1.9124	18.939	42.252	38.75
#2	.9339	1.9279	4.8225	1.8957	18.914	41.984	38.73
#3	.9384	1.9414	4.9583	1.9505	18.876	41.977	38.42
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL14023-001MDTC Acquired: 12/26/2019 12:35:08 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213SD

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9420	1.9046	182.93	1.9518	4.8209	.98882	.99176
Stddev	.0273	.0165	1.19	.0094	.0239	.00663	.00577
%RSD	1.4045	.86919	.64783	.48227	.49596	.67017	.58203
#1	1.9430	1.8911	184.24	1.9441	4.7942	.98153	.98731
#2	1.9142	1.8995	182.63	1.9490	4.8279	.99046	.98968
#3	1.9688	1.9231	181.93	1.9623	4.8404	.99447	.99828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.8050	.95983	.9860	.9810	.78315	2.030	1.9197
Stddev	.0232	.00384	.0043	.0097	.00171	.009	.0222
%RSD	.61022	.40020	.4367	.9933	.21882	.4417	1.1589
#1	3.7816	.95579	.9908	.9809	.78166	2.039	1.9255
#2	3.8056	.96027	.9826	.9713	.78278	2.021	1.8951
#3	3.8280	.96343	.9844	.9908	.78502	2.030	1.9384
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL14023-001MDTC Acquired: 12/26/2019 12:35:08 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: 67IDW01SO20191213SD

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1041	-.0195	1.9806
Stddev	.0025	.0208	.0074
%RSD	2.433	106.7	.37476
#1	-.1052	-.0340	1.9748
#2	-.1012	-.0290	1.9780
#3	-.1059	.0044	1.9890
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2815.8	272310.	16061.
Stddev	6.4	5606.	94.
%RSD	.22622	2.0585	.58477
#1	2819.5	271490.	16001.
#2	2819.4	278270.	16012.
#3	2808.4	267150.	16169.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.923%	102.58%	97.477%
Range			

Sample Name: ZUL14023-001TCL(5) Acquired: 12/26/2019 12:40:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00052	-.00745	.00250	.0026	.00089	-.00008	-.32148
Stddev	.00057	.00319	.00164	.0006	.00027	.00002	.00172
%RSD	108.92	42.879	65.694	21.58	30.635	28.499	.53534
#1	-.00105	-.00864	.00439	.0032	.00118	-.00006	-.31974
#2	-.00060	-.00988	.00163	.0023	.00064	-.00011	-.32319
#3	.00008	-.00383	.00148	.0022	.00085	-.00008	-.32151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00076	-.00042	.00149	-.01319	-.29855	-.5277
Stddev	.0001	.00016	.00005	.00054	.00176	.00539	.0182
%RSD	151.2	21.332	13.033	36.420	13.310	1.8058	3.450
#1	-.0001	-.00092	-.00042	.00096	-.01130	-.29249	-.5319
#2	.0002	-.00078	-.00037	.00204	-.01476	-.30034	-.5077
#3	.0001	-.00059	-.00048	.00146	-.01351	-.30281	-.5434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL14023-001TCL(5) Acquired: 12/26/2019 12:40:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	.00252	30.852	-.00038	-.00047	.00117	.00264
Stddev	.00002	.00074	.132	.00025	.00044	.00282	.00049
%RSD	1.8546	29.395	.42691	66.945	93.703	240.43	18.689
#1	-.00085	.00333	31.002	-.00022	-.00076	-.00199	.00234
#2	-.00086	.00235	30.796	-.00025	.00004	.00342	.00321
#3	-.00088	.00188	30.757	-.00067	-.00068	.00208	.00237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02831	-.00136	.0002	-.0016	-.00709	-.0079	-.00435
Stddev	.00051	.00038	.0001	.0003	.00326	.0063	.00054
%RSD	1.7912	28.253	52.71	16.76	45.977	79.28	12.385
#1	.02873	-.00164	.0003	-.0018	-.00388	-.0145	-.00436
#2	.02845	-.00151	.0001	-.0017	-.01039	-.0020	-.00381
#3	.02774	-.00092	.0001	-.0013	-.00700	-.0073	-.00489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL14023-001TCL(5) Acquired: 12/26/2019 12:40:41 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0015	-.0105	-.00025
Stddev	.0007	.0149	.00003
%RSD	44.45	142.6	13.149
#1	-.0018	-.0277	-.00024
#2	-.0008	-.0012	-.00022
#3	-.0020	-.0025	-.00029
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2967.5	276970.	15763.
Stddev	10.7	2155.	48.
%RSD	.36148	.77810	.30426
#1	2968.8	276150.	15721.
#2	2977.6	275340.	15751.
#3	2956.2	279420.	15815.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.15%	104.34%	95.667%
Range			

Sample Name: ZUL14023-001TCPS Acquired: 12/26/2019 12:46:13 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40960	19.885	.42802	.3986	2.0615	2.0474	40.995
Stddev	.00634	.132	.00380	.0069	.0099	.0251	.118
%RSD	1.5473	.66373	.88785	1.743	.48110	1.2252	.28767
#1	.40377	19.746	.42553	.3926	2.0536	2.0227	40.889
#2	.41634	19.899	.42613	.4062	2.0583	2.0728	40.974
#3	.40868	20.009	.43240	.3969	2.0726	2.0467	41.122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4015	2.0270	2.0160	1.9944	19.484	44.160	40.36
Stddev	.0035	.0190	.0352	.0334	.128	.053	.08
%RSD	.8635	.93508	1.7447	1.6759	.65476	.12010	.1923
#1	.3996	2.0150	1.9784	1.9683	19.368	44.181	40.41
#2	.3993	2.0172	2.0481	2.0321	19.463	44.199	40.27
#3	.4055	2.0488	2.0216	1.9828	19.621	44.100	40.39
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL14023-001TCPS Acquired: 12/26/2019 12:46:13 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0316	2.0054	180.67	2.0545	.39984	.41541	.41756
Stddev	.0321	.0115	.45	.0151	.00393	.00349	.00468
%RSD	1.5786	.57550	.24933	.73582	.98206	.84000	1.1207
#1	2.0020	1.9970	180.39	2.0499	.39667	.41772	.41521
#2	2.0657	2.0006	180.44	2.0422	.39862	.41140	.41452
#3	2.0272	2.0186	181.19	2.0714	.40423	.41712	.42295
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0740	.40275	1.018	.4004	.82467	-.0195	1.9708
Stddev	.0215	.00459	.003	.0061	.00651	.0367	.0311
%RSD	1.0358	1.1400	.3181	1.532	.78954	188.5	1.5781
#1	2.0617	.39916	1.014	.3937	.81786	.0145	1.9367
#2	2.0616	.40116	1.019	.4057	.82531	-.0583	1.9976
#3	2.0988	.40792	1.020	.4017	.83083	-.0145	1.9782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL14023-001TCPS Acquired: 12/26/2019 12:46:13 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0434	-.0115	2.0894
Stddev	.0006	.0041	.0123
%RSD	1.285	35.84	.59041
#1	-.0430	-.0137	2.0849
#2	-.0440	-.0067	2.0799
#3	-.0432	-.0140	2.1033
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2730.5	267470.	15821.
Stddev	23.3	4125.	177.
%RSD	.85233	1.5421	1.1193
#1	2744.5	271490.	16004.
#2	2743.4	263240.	15810.
#3	2703.6	267680.	15650.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.987%	100.76%	96.025%
Range			

Sample Name: ZUL16044-002TC Acquired: 12/26/2019 12:51:40 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: IDW-2

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00034	-.02257	.00087	.0068	.01722	-.00003	63.833
Stddev	.00023	.00689	.00157	.0008	.00035	.00004	.262
%RSD	67.035	30.503	180.54	11.21	2.0582	131.77	.41117
#1	-.00027	-.02969	-.00039	.0076	.01717	.00001	64.122
#2	-.00015	-.01595	.00036	.0061	.01760	-.00007	63.768
#3	-.00059	-.02208	.00263	.0066	.01690	-.00004	63.609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00041	-.00014	.00220	.00343	.22531	.1394
Stddev	.0001	.00011	.00021	.00052	.00473	.04375	.0134
%RSD	70.40	25.874	148.27	23.527	138.02	19.419	9.603
#1	.0001	-.00029	-.00039	.00270	-.00074	.20671	.1471
#2	.0003	-.00047	-.00007	.00167	.00856	.27529	.1239
#3	.0001	-.00048	.00002	.00222	.00246	.19394	.1471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL16044-002TC Acquired: 12/26/2019 12:51:40 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: IDW-2

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04552	.00276	165.79	.00088	.00116	.00168	.00144
Stddev	.00037	.00062	.81	.00018	.00124	.00264	.00014
%RSD	.82339	22.560	.48725	20.801	107.66	156.99	9.6897
#1	.04591	.00346	166.64	.00067	.00206	.00361	.00139
#2	.04547	.00254	165.70	.00097	.00168	-.00132	.00159
#3	.04517	.00227	165.03	.00100	-.00026	.00276	.00133
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.24346	-.00160	.1873	-.0023	-.00414	-.0047	-.00380
Stddev	.00120	.00020	.0004	.0004	.00268	.0214	.00090
%RSD	.49117	12.838	.2179	19.47	64.764	456.5	23.681
#1	.24290	-.00144	.1878	-.0028	-.00135	.0125	-.00291
#2	.24264	-.00152	.1871	-.0020	-.00670	.0020	-.00378
#3	.24483	-.00183	.1870	-.0020	-.00439	-.0286	-.00472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL16044-002TC Acquired: 12/26/2019 12:51:40 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A D Custom ID2: Custom ID3:
Comment: IDW-2

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0017	-.0144	.00284
Stddev	.0007	.0055	.00007
%RSD	39.12	38.01	2.3666
#1	-.0010	-.0081	.00276
#2	-.0017	-.0172	.00288
#3	-.0023	-.0178	.00287
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2827.8	271430.	15880.
Stddev	14.5	3284.	90.
%RSD	.51452	1.2100	.56859
#1	2830.4	267870.	15791.
#2	2840.9	272060.	15878.
#3	2812.1	274350.	15971.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.337%	102.25%	96.380%
Range			

Sample Name: ZUL11023-005(5) Acquired: 12/26/2019 12:57:11 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00102	.00818	.00144	.0024	.00977	-.00004	40.531
Stddev	.00036	.01273	.00032	.0003	.00046	.00003	.097
%RSD	34.727	155.61	22.551	14.32	4.6687	81.240	.23809
#1	.00126	-.00575	.00115	.0025	.00999	-.00002	40.598
#2	.00061	.01920	.00137	.0021	.00925	-.00007	40.575
#3	.00120	.01109	.00179	.0028	.01007	-.00002	40.420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.09347	.00251	.00042	38.284	.41649	38.52
Stddev	.0001	.00091	.00052	.00132	.088	.07290	.18
%RSD	51.16	.96906	20.826	313.42	.23115	17.505	.4545
#1	.0000	.09337	.00308	-.00101	38.342	.50066	38.54
#2	.0001	.09262	.00241	.00157	38.328	.37321	38.68
#3	.0001	.09442	.00205	.00070	38.182	.37560	38.33
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL11023-005(5) Acquired: 12/26/2019 12:57:11 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.609	-.00149	29.216	.01112	.00137	-.00012	.00073
Stddev	.082	.00019	.075	.00025	.00181	.00059	.00150
%RSD	.70931	12.880	.25505	2.2635	131.92	510.41	206.60
#1	11.693	-.00170	29.283	.01116	.00306	-.00054	.00201
#2	11.603	-.00134	29.230	.01085	.00159	-.00037	-.00092
#3	11.529	-.00142	29.136	.01135	-.00054	.00056	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.97039	-.00151	.2405	-.0022	-.07216	-.0492	.00002
Stddev	.00875	.00008	.0007	.0000	.00196	.0172	.00100
%RSD	.90178	5.1225	.3031	.6711	2.7163	34.86	5095.4
#1	.97032	-.00150	.2408	-.0022	-.07022	-.0677	.00113
#2	.96167	-.00160	.2410	-.0022	-.07212	-.0337	-.00078
#3	.97917	-.00145	.2397	-.0022	-.07414	-.0463	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL11023-005(5) Acquired: 12/26/2019 12:57:11 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0033	-.0244	.00166
Stddev	.0014	.0069	.00002
%RSD	41.21	28.50	.92442
#1	-.0043	-.0183	.00165
#2	-.0038	-.0228	.00167
#3	-.0018	-.0320	.00164
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2818.0	268210.	15450.
Stddev	10.1	3754.	16.
%RSD	.35918	1.3996	.10535
#1	2818.7	263920.	15435.
#2	2827.8	270840.	15467.
#3	2807.6	269890.	15446.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.000%	101.04%	93.768%
Range			

Sample Name: ZUL11023-007(10) Acquired: 12/26/2019 13:02:47 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00105	.25872	-.00065	-.0009	.00221	.00035	26.634
Stddev	.00038	.00840	.00047	.0013	.00044	.00004	.585
%RSD	35.838	3.2472	72.419	146.7	20.139	10.269	2.1973
#1	.00062	.25804	-.00020	.0004	.00219	.00031	26.050
#2	.00132	.26744	-.00061	-.0009	.00177	.00035	26.633
#3	.00119	.25067	-.00113	-.0021	.00266	.00038	27.220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.31886	.00210	.00107	41.333	.24055	32.85
Stddev	.0001	.00661	.00012	.00103	1.000	.01689	.87
%RSD	10.26	2.0733	5.8812	96.000	2.4194	7.0230	2.640
#1	.0013	.31165	.00209	.00146	40.278	.25964	31.97
#2	.0016	.32028	.00223	-.00010	41.454	.23449	32.86
#3	.0014	.32464	.00199	.00185	42.267	.22752	33.71
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL11023-007(10) Acquired: 12/26/2019 13:02:47 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.265	-.00225	8.5808	.25072	.00231	-.00056	.00023
Stddev	.365	.00040	.2542	.00554	.00029	.00155	.00171
%RSD	3.5606	17.703	2.9629	2.2083	12.375	278.41	750.92
#1	9.8751	-.00181	8.3154	.24451	.00244	-.00218	.00122
#2	10.318	-.00237	8.6050	.25251	.00251	.00091	-.00175
#3	10.600	-.00258	8.8221	.25513	.00198	-.00040	.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.60887	-.00118	.1077	-.0019	-.06333	-.0477	.00055
Stddev	.01099	.00054	.0026	.0002	.00232	.0201	.00198
%RSD	1.8052	45.666	2.387	11.36	3.6571	42.07	362.90
#1	.59700	-.00178	.1048	-.0020	-.06075	-.0302	-.00163
#2	.61092	-.00072	.1087	-.0021	-.06524	-.0432	.00102
#3	.61869	-.00105	.1096	-.0017	-.06400	-.0696	.00225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL11023-007(10) Acquired: 12/26/2019 13:02:47 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0019	.0033	.44663
Stddev	.0008	.0170	.00969
%RSD	41.33	510.8	2.1701
#1	-.0014	.0193	.43602
#2	-.0027	.0053	.44887
#3	-.0014	-.0145	.45501
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2849.6	269230.	15419.
Stddev	7.5	4356.	101.
%RSD	.26430	1.6178	.65560
#1	2854.3	273730.	15524.
#2	2853.5	268930.	15411.
#3	2840.9	265040.	15322.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.086%	101.42%	93.582%
Range			

Sample Name: ZUQ39713-001 Acquired: 12/26/2019 13:08:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00031	-.02025	.00030	-.0010	-.00093	.00014	-.50026
Stddev	.00077	.01787	.00126	.0004	.00038	.00004	.00194
%RSD	252.01	88.235	424.04	41.14	40.799	25.848	.38862
#1	.00043	-.00002	.00033	-.0007	-.00095	.00018	-.49867
#2	-.00024	-.03389	.00154	-.0009	-.00130	.00011	-.50243
#3	-.00111	-.02683	-.00098	-.0015	-.00054	.00013	-.49969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.00095	-.00096	-.00052	-.00584	-.43925	-.5418
Stddev	.0001	.00007	.00030	.00021	.00306	.05786	.0093
%RSD	2780.	7.4038	31.512	39.681	52.491	13.172	1.724
#1	.0000	-.00098	-.00071	-.00075	-.00702	-.48615	-.5342
#2	-.0001	-.00086	-.00087	-.00034	-.00813	-.45701	-.5522
#3	.0000	-.00099	-.00130	-.00049	-.00236	-.37460	-.5390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUQ39713-001 Acquired: 12/26/2019 13:08:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00064	-.00022	-.23639	-.00168	-.00096	.00269	-.00026
Stddev	.00018	.00032	.03903	.00019	.00121	.00177	.00111
%RSD	27.287	144.81	16.509	11.084	126.48	65.698	426.93
#1	-.00045	-.00056	-.27090	-.00155	.00036	.00335	-.00100
#2	-.00067	-.00016	-.24423	-.00189	-.00120	.00069	.00102
#3	-.00080	.00006	-.19404	-.00159	-.00202	.00404	-.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01864	-.00171	-.0006	-.0022	-.00189	-.0263	.00051
Stddev	.00029	.00036	.0001	.0003	.00111	.0134	.00082
%RSD	1.5305	21.254	18.20	15.17	58.671	50.92	162.96
#1	.01844	-.00129	-.0005	-.0018	-.00085	-.0119	-.00044
#2	.01897	-.00193	-.0005	-.0024	-.00176	-.0384	.00107
#3	.01852	-.00191	-.0007	-.0024	-.00305	-.0285	.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUQ39713-001 Acquired: 12/26/2019 13:08:19 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0036	.0014	-.00077
Stddev	.0006	.0142	.00014
%RSD	15.92	999.2	18.309
#1	-.0032	-.0044	-.00061
#2	-.0042	-.0089	-.00082
#3	-.0033	.0176	-.00088
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2938.1	258010.	15154.
Stddev	14.1	1477.	114.
%RSD	.48073	.57235	.75065
#1	2923.1	259670.	15267.
#2	2951.2	256850.	15156.
#3	2939.8	257520.	15039.

Sample Name: ZUQ39713-002 Acquired: 12/26/2019 13:13:50 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.43380	20.796	.42736	.4083	2.1739	2.1665	41.594
Stddev	.00178	.204	.00187	.0054	.0129	.0276	.182
%RSD	.40957	.98100	.43647	1.310	.59445	1.2753	.43747
#1	.43417	20.672	.42617	.4114	2.1651	2.1939	41.642
#2	.43536	20.684	.42639	.4114	2.1678	2.1669	41.393
#3	.43187	21.031	.42951	.4021	2.1887	2.1386	41.748
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4068	2.0454	2.1303	2.0622	20.229	45.773	42.21
Stddev	.0015	.0060	.0069	.0087	.124	.080	.18
%RSD	.3744	.29130	.32278	.42307	.61505	.17529	.4160
#1	.4060	2.0414	2.1359	2.0662	20.165	45.731	42.13
#2	.4059	2.0426	2.1324	2.0682	20.150	45.722	42.09
#3	.4086	2.0523	2.1227	2.0521	20.373	45.865	42.41
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ZUQ39713-002 Acquired: 12/26/2019 13:13:50 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1283	1.9910	44.985	2.0676	.40933	.42411	.41841
Stddev	.0078	.0137	.303	.0062	.00154	.00170	.00295
%RSD	.36561	.68820	.67279	.30001	.37591	.40116	.70596
#1	2.1302	1.9815	44.910	2.0642	.40952	.42559	.41898
#2	2.1350	1.9849	44.726	2.0638	.40770	.42225	.41521
#3	2.1198	2.0067	45.318	2.0748	.41076	.42448	.42103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0335	.40636	1.058	.4200	.86741	.0173	2.0739
Stddev	.0109	.00177	.003	.0005	.00455	.0088	.0067
%RSD	.53460	.43621	.3136	.1073	.52431	50.92	.32213
#1	2.0275	.40504	1.056	.4202	.86474	.0072	2.0812
#2	2.0270	.40566	1.056	.4202	.86482	.0210	2.0724
#3	2.0461	.40837	1.062	.4194	.87266	.0236	2.0681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: ZUQ39713-002 Acquired: 12/26/2019 13:13:50 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0465	-.0060	2.0914
Stddev	.0010	.0161	.0077
%RSD	2.088	267.9	.36661
#1	-.0453	.0116	2.0862
#2	-.0472	-.0097	2.0877
#3	-.0469	-.0200	2.1002
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2765.5	257520.	15178.
Stddev	9.7	2094.	188.
%RSD	.35033	.81320	1.2412
#1	2775.6	255170.	15185.
#2	2764.8	258200.	15363.
#3	2756.2	259190.	14986.

Sample Name: ZUK05004-016 Acquired: 12/26/2019 13:19:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: MDLv ICP5 200.7 [6010D SHARE]

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01052	.38232	.01520	.0534	.02619	.00569	4.7487
Stddev	.00027	.01455	.00180	.0006	.00045	.00006	.0194
%RSD	2.6079	3.8054	11.842	1.144	1.7254	1.0715	.40761
#1	.01021	.37734	.01409	.0528	.02669	.00567	4.7268
#2	.01069	.39871	.01423	.0534	.02604	.00576	4.7633
#3	.01067	.37092	.01727	.0541	.02583	.00564	4.7562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	.02462	.01052	.01222	.09444	5.5365	4.900
Stddev	.0002	.00038	.00021	.00039	.00245	.0844	.060
%RSD	5.034	1.5383	2.0322	3.2026	2.5918	1.5254	1.228
#1	.0049	.02427	.01031	.01266	.09520	5.4476	4.833
#2	.0048	.02456	.01052	.01193	.09642	5.6157	4.920
#3	.0045	.02502	.01074	.01206	.09170	5.5460	4.948
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUK05004-016 Acquired: 12/26/2019 13:19:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: MDLv ICP5 200.7 [6010D SHARE]

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01555	.04300	5.2642	.04040	.00956	.01754	.02056
Stddev	.00018	.00159	.0369	.00075	.00068	.00236	.00116
%RSD	1.1736	3.6946	.70087	1.8516	7.0888	13.485	5.6465
#1	.01562	.04477	5.2287	.03980	.00990	.01937	.02189
#2	.01568	.04250	5.3024	.04017	.00878	.01487	.02005
#3	.01534	.04172	5.2614	.04124	.00999	.01837	.01974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.57283	.04832	.0100	.0498	.04988	.5068	.05049
Stddev	.00587	.00068	.0001	.0007	.00197	.0049	.00029
%RSD	1.0244	1.4044	1.054	1.421	3.9548	.9698	.58264
#1	.56738	.04826	.0101	.0502	.04841	.5124	.05046
#2	.57207	.04768	.0100	.0502	.04909	.5046	.05079
#3	.57905	.04903	.0099	.0490	.05212	.5033	.05020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUK05004-016 Acquired: 12/26/2019 13:19:16 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: MDLv ICP5 200.7 [6010D SHARE]

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.4892	.4432	.02026
Stddev	.0051	.0075	.00016
%RSD	1.039	1.689	.79057
#1	.4869	.4427	.02008
#2	.4857	.4509	.02031
#3	.4950	.4359	.02039
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2939.5	261600.	15533.
Stddev	14.3	2249.	31.
%RSD	.48622	.85973	.20131
#1	2947.0	262040.	15538.
#2	2948.6	259160.	15499.
#3	2923.1	263590.	15561.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.18%	98.545%	94.273%
Range			

Sample Name: ZUL18027-001 Acquired: 12/26/2019 13:24:40 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Effluent

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00138	.14823	.00040	.0398	.02267	.00010	10.739
Stddev	.00055	.00580	.00063	.0004	.00015	.00006	.018
%RSD	39.763	3.9120	156.08	1.124	.64756	61.756	.16664
#1	.00076	.14248	.00111	.0397	.02252	.00013	10.728
#2	.00154	.14814	.00018	.0402	.02268	.00014	10.759
#3	.00182	.15408	-.00008	.0393	.02281	.00003	10.729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.00068	.00187	.04500	.27102	39.131	3.197
Stddev	.0001	.00033	.00016	.00071	.00646	.154	.025
%RSD	32.18	49.064	8.5692	1.5723	2.3851	.39309	.7708
#1	.0003	-.00105	.00201	.04487	.26360	39.181	3.173
#2	.0003	-.00054	.00191	.04437	.27409	39.253	3.194
#3	.0005	-.00043	.00169	.04577	.27538	38.958	3.223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL18027-001 Acquired: 12/26/2019 13:24:40 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Effluent

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01989	.02083	52.192	.00145	.00131	.00160	.00109
Stddev	.00021	.00024	.038	.00010	.00115	.00073	.00230
%RSD	1.0516	1.1542	.07234	6.5927	87.477	45.400	211.02
#1	.02005	.02102	52.188	.00156	.00208	.00087	.00263
#2	.01965	.02056	52.157	.00142	.00186	.00232	-.00155
#3	.01997	.02092	52.232	.00138	-.00001	.00162	.00219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.7775	-.00025	.0396	.0003	-.00316	-.0156	-.00431
Stddev	.0428	.00033	.0001	.0003	.00183	.0117	.00086
%RSD	.89583	133.74	.1264	84.15	58.143	75.23	19.953
#1	4.7507	.00003	.0396	.0006	-.00513	-.0289	-.00344
#2	4.7550	-.00062	.0396	.0002	-.00282	-.0113	-.00516
#3	4.8269	-.00016	.0395	.0001	-.00151	-.0066	-.00433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL18027-001 Acquired: 12/26/2019 13:24:40 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Effluent

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0008	-.0143	.09376
Stddev	.0003	.0110	.00079
%RSD	43.09	77.44	.84316
#1	-.0004	-.0015	.09306
#2	-.0011	-.0206	.09361
#3	-.0009	-.0206	.09461
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2885.2	268360.	15801.
Stddev	20.7	3264.	121.
%RSD	.71668	1.2162	.76841
#1	2905.4	264590.	15922.
#2	2886.0	270180.	15679.
#3	2864.1	270300.	15801.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.311%	101.09%	95.898%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 13:30:08 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .59078	F 28.494	F .57466	F .5706	F 2.9903	F 2.9163	F 57.771
Stddev	.00798	.429	.00829	.0112	.0393	.0755	.630
%RSD	1.3501	1.5060	1.4425	1.962	1.3144	2.5903	1.0905
#1	.58158	28.206	.56509	.5576	2.9731	2.8299	57.219
#2	.59500	28.288	.57945	.5768	2.9626	2.9493	57.636
#3	.59576	28.987	.57945	.5772	3.0353	2.9697	58.458
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.50000	25.000	.50000	.5000	2.5000	2.5000	50.000
Range	10.400%	10.400%	10.400%	10.40%	10.400%	10.400%	10.400%

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .5711	F 2.9042	F 2.9812	F 2.8868	F 27.967	F 63.661	F 58.39
Stddev	.0102	.0395	.0488	.0479	.355	.831	.85
%RSD	1.792	1.3595	1.6387	1.6598	1.2688	1.3051	1.458
#1	.5594	2.8594	2.9274	2.8316	27.736	63.051	57.77
#2	.5756	2.9196	2.9937	2.9107	27.790	63.324	58.05
#3	.5783	2.9337	3.0227	2.9181	28.376	64.607	59.36
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.5000	2.5000	2.5000	2.5000	25.000	50.000	50.00
Range	10.40%	10.400%	10.400%	10.400%	10.400%	10.400%	10.40%

Sample Name: CCV MW-12174 Acquired: 12/26/2019 13:30:08 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.9621	F 2.9303	F 61.603	F 2.9492	F .56784	F .60393	F .58951
Stddev	.0472	.0449	.802	.0372	.00883	.00957	.01022
%RSD	1.5949	1.5337	1.3013	1.2619	1.5558	1.5854	1.7333
#1	2.9082	2.8791	61.048	2.9071	.55821	.59332	.57861
#2	2.9822	2.9487	61.239	2.9629	.56975	.60657	.59106
#3	2.9961	2.9632	62.522	2.9777	.57556	.61192	.59887
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	2.5000	2.5000	50.000	2.5000	.50000	.50000	.50000
Range	10.400%	10.400%	10.400%	10.400%	10.400%	10.400%	10.400%

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.8751	F .57064	F 2.947	F .5838	F 1.1756	F 2.969	F 2.9102
Stddev	.0521	.00853	.030	.0086	.0244	.071	.0504
%RSD	1.8117	1.4950	1.014	1.469	2.0774	2.383	1.7331
#1	2.8153	.56085	2.924	.5742	1.1475	2.889	2.8545
#2	2.8994	.57462	2.936	.5864	1.1879	2.995	2.9233
#3	2.9106	.57646	2.981	.5907	1.1915	3.023	2.9528
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	2.5000	.50000	2.500	.5000	1.0000	2.500	2.5000
Range	10.400%	10.400%	10.40%	10.40%	10.400%	10.40%	10.400%

Sample Name: CCV MW-12174 Acquired: 12/26/2019 13:30:08 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	F 2.859	2.506	F 2.9745
Stddev	.045	.043	.0363
%RSD	1.571	1.734	1.2196
#1	2.807	2.460	2.9337
#2	2.880	2.512	2.9867
#3	2.889	2.546	3.0030
Check ?	Chk Fail	Chk Pass	Chk Fail
Value	2.500		2.5000
Range	10.40%		10.400%
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2685.7	257240.	15073.
Stddev	33.3	4831.	217.
%RSD	1.2406	1.8781	1.4383
#1	2724.1	262730.	15200.
#2	2668.8	255370.	15195.
#3	2664.3	253620.	14822.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 13:35:34 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00018	-.00951	.00126	.0002	-.00018	.00037	-.49720
Stddev	.00022	.01127	.00041	.0007	.00034	.00005	.00398
%RSD	120.44	118.42	32.474	395.0	192.71	12.507	.80146
#1	-.00005	-.01857	.00081	.0005	-.00052	.00037	-.49662
#2	.00020	-.01307	.00135	.0007	-.00017	.00032	-.49354
#3	.00039	.00310	.00162	-.0006	.00016	.00042	-.50145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00065	-.00018	.00110	-.00747	-.31794	-.5196
Stddev	.0001	.00003	.00009	.00129	.00415	.05831	.0109
%RSD	46.93	4.3341	48.355	116.96	55.475	18.339	2.091
#1	.0001	-.00063	-.00023	.00184	-.00355	-.29642	-.5142
#2	.0002	-.00068	-.00023	.00186	-.00706	-.38394	-.5321
#3	.0002	-.00065	-.00008	-.00039	-.01182	-.27344	-.5125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 13:35:34 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00071	.00443	-.30351	-.00108	-.00098	.00119	-.00085
Stddev	.00002	.00159	.02806	.00026	.00081	.00191	.00134
%RSD	3.4851	35.830	9.2464	23.625	82.442	160.29	156.40
#1	-.00073	.00621	-.32069	-.00100	-.00095	-.00086	.00069
#2	-.00068	.00394	-.31873	-.00088	-.00019	.00151	-.00160
#3	-.00071	.00315	-.27113	-.00137	-.00181	.00292	-.00165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01978	-.00121	-.0003	-.0016	-.00315	-.0192	-.00147
Stddev	.00051	.00013	.0001	.0001	.00096	.0149	.00136
%RSD	2.5681	10.824	28.08	4.285	30.533	77.85	92.189
#1	.01920	-.00133	-.0002	-.0016	-.00211	-.0045	-.00231
#2	.02014	-.00122	-.0004	-.0016	-.00401	-.0344	-.00220
#3	.02000	-.00107	-.0003	-.0015	-.00331	-.0187	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 13:35:34 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0030	-.0002	-.00033
Stddev	.0016	.0099	.00010
%RSD	52.28	4220.	29.600
#1	.0043	-.0031	-.00037
#2	.0013	-.0083	-.00041
#3	.0035	.0108	-.00022
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2943.9	266770.	15289.
Stddev	25.2	4218.	119.
%RSD	.85553	1.5813	.77682
#1	2951.5	268660.	15411.
#2	2964.4	269710.	15284.
#3	2915.8	261940.	15173.

Sample Name: ZUL18057-001 Acquired: 12/26/2019 13:41:09 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Effluent

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00063	128.34	.00342	.0267	.02448	.00143	12.766
Stddev	.00018	.19	.00127	.0008	.00027	.00005	.025
%RSD	29.374	.14426	37.061	2.978	1.0834	3.5940	.19340
#1	-.00057	128.27	.00462	.0273	.02433	.00144	12.755
#2	-.00083	128.20	.00209	.0258	.02433	.00138	12.748
#3	-.00048	128.55	.00355	.0269	.02479	.00148	12.794
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.04180	1.3081	.28656	144.38	2.2848	23.02
Stddev	.0002	.00025	.0151	.00352	.20	.0454	.13
%RSD	37.27	.58783	1.1545	1.2296	.13899	1.9862	.5726
#1	-.0004	.04203	1.3255	.29036	144.17	2.3185	22.89
#2	-.0003	.04154	1.2994	.28593	144.39	2.3026	23.15
#3	-.0006	.04182	1.2994	.28340	144.57	2.2332	23.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ZUL18057-001 Acquired: 12/26/2019 13:41:09 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Effluent

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.5772	.03064	16.330	.52136	.00845	.02614	.00121
Stddev	.0306	.00043	.025	.00196	.00157	.00124	.00285
%RSD	.66933	1.3903	.15151	.37498	18.621	4.7474	235.08
#1	4.6125	.03016	16.354	.51988	.00664	.02568	.00195
#2	4.5593	.03078	16.331	.52063	.00947	.02519	.00362
#3	4.5596	.03097	16.304	.52358	.00923	.02755	-.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 74.203	.00215	.0396	.8353	-.02610	-.1286	.10453
Stddev	.204	.00085	.0002	.0128	.00120	.0117	.00276
%RSD	.27523	39.461	.5944	1.528	4.6161	9.066	2.6417
#1	74.041	.00305	.0397	.8493	-.02643	-.1187	.10749
#2	74.136	.00137	.0398	.8321	-.02710	-.1257	.10203
#3	74.433	.00202	.0394	.8244	-.02476	-.1415	.10406
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: ZUL18057-001 Acquired: 12/26/2019 13:41:09 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Effluent

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0670	-.0066	1.7487
Stddev	.0007	.0373	.0072
%RSD	1.056	563.9	.41206
#1	-.0662	-.0373	1.7441
#2	-.0676	.0349	1.7450
#3	-.0671	-.0174	1.7570
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2869.8	271100.	16237.
Stddev	11.0	3256.	56.
%RSD	.38459	1.2008	.34574
#1	2873.1	268490.	16172.
#2	2878.8	274750.	16275.
#3	2857.4	270060.	16263.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.781%	102.12%	98.545%
Range			

Sample Name: CCV Acquired: 12/26/2019 13:46:42 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.52328	25.602	.50834	.5018	2.7032	2.5756	51.578
Stddev	.00501	.123	.00461	.0047	.0107	.0309	.093
%RSD	.95828	.48036	.90784	.9364	.39549	1.2016	.18049
#1	.52509	25.741	.50653	.5011	2.7156	2.5881	51.583
#2	.52714	25.557	.50490	.5069	2.6976	2.5984	51.668
#3	.51761	25.508	.51359	.4976	2.6965	2.5404	51.482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5029	2.5694	2.6522	2.5394	25.129	F 56.684	52.18
Stddev	.0018	.0060	.0323	.0210	.028	.124	.16
%RSD	.3535	.23505	1.2186	.82562	.10967	.21945	.3129
#1	.5022	2.5655	2.6577	2.5420	25.136	56.543	52.04
#2	.5015	2.5664	2.6814	2.5590	25.153	56.780	52.36
#3	.5049	2.5764	2.6174	2.5173	25.099	56.728	52.14
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						50.000	
Range						10.400%	

Sample Name: CCV Acquired: 12/26/2019 13:46:42 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6251	2.5740	F 55.489	2.5990	.50641	.53155	.52081
Stddev	.0253	.0160	.036	.0076	.00084	.00396	.00169
%RSD	.96508	.62132	.06542	.29183	.16537	.74582	.32376
#1	2.6272	2.5607	55.524	2.5965	.50594	.52922	.52079
#2	2.6494	2.5697	55.491	2.5930	.50592	.52929	.51914
#3	2.5989	2.5918	55.451	2.6075	.50738	.53612	.52251
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			50.000				
Range			10.400%				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5599	.50560	2.637	.5186	1.0484	2.625	2.5904
Stddev	.0100	.00053	.002	.0044	.0029	.051	.0310
%RSD	.39076	.10474	.0558	.8460	.27382	1.924	1.1977
#1	2.5489	.50620	2.639	.5183	1.0467	2.585	2.5962
#2	2.5624	.50519	2.636	.5231	1.0468	2.682	2.6181
#3	2.5685	.50541	2.637	.5144	1.0517	2.607	2.5568
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV Acquired: 12/26/2019 13:46:42 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.525	F 2.231	2.6194
Stddev	.009	.032	.0082
%RSD	.3637	1.411	.31257
#1	2.516	2.247	2.6172
#2	2.526	2.251	2.6125
#3	2.535	2.194	2.6284
Check ?	Chk Pass	Chk Fail	Chk Pass
Value		2.500	
Range		-10.40%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2687.1	255940.	14681.
Stddev	2.4	4016.	28.
%RSD	.08938	1.5691	.18978
#1	2688.7	253050.	14708.
#2	2688.2	254240.	14684.
#3	2684.3	260520.	14652.

Sample Name: CCB Acquired: 12/26/2019 13:52:08 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00023	-.01640	.00110	-.0007	-.00070	.00008	-.50570
Stddev	.00028	.00351	.00067	.0008	.00022	.00006	.00269
%RSD	123.70	21.388	61.530	119.3	31.103	75.149	.53164
#1	-.00052	-.01382	.00186	-.0012	-.00088	.00016	-.50880
#2	-.00019	-.01498	.00059	.0003	-.00046	.00004	-.50398
#3	.00004	-.02039	.00083	-.0011	-.00075	.00006	-.50433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0000	-.00086	-.00068	.00017	-.01168	-.35610	-.5330
Stddev	.0002	.00026	.00033	.00102	.00251	.05710	.0031
%RSD	1881.	30.035	48.949	607.82	21.497	16.034	.5825
#1	-.0001	-.00098	-.00031	-.00012	-.01323	-.36795	-.5299
#2	.0002	-.00104	-.00076	-.00067	-.01303	-.29401	-.5330
#3	-.0001	-.00057	-.00097	.00130	-.00878	-.40634	-.5361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/26/2019 13:52:08 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00105	.00350	-.15801	-.00136	-.00126	-.00214	.00193
Stddev	.00003	.00124	.06874	.00053	.00087	.00210	.00034
%RSD	2.6411	35.540	43.505	39.151	69.439	98.334	17.531
#1	-.00107	.00492	-.21023	-.00094	-.00087	-.00247	.00155
#2	-.00105	.00298	-.18366	-.00196	-.00065	.00011	.00206
#3	-.00102	.00260	-.08013	-.00119	-.00226	-.00406	.00220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01820	-.00170	-.0005	-.0019	-.00337	-.0129	.00083
Stddev	.00066	.00067	.0002	.0002	.00210	.0161	.00047
%RSD	3.6028	39.417	41.10	11.38	62.150	124.7	56.285
#1	.01892	-.00100	-.0005	-.0021	-.00204	-.0315	.00029
#2	.01763	-.00175	-.0006	-.0017	-.00579	-.0024	.00111
#3	.01806	-.00234	-.0003	-.0020	-.00229	-.0049	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 12/26/2019 13:52:08 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0035	-.0017	-.00089
Stddev	.0028	.0116	.00017
%RSD	80.81	677.3	19.492
#1	.0067	.0044	-.00085
#2	.0016	.0056	-.00073
#3	.0022	-.0151	-.00107
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2870.2	258710.	14848.
Stddev	19.6	762.	197.
%RSD	.68415	.29471	1.3249
#1	2883.2	258890.	15025.
#2	2879.9	259370.	14884.
#3	2847.6	257870.	14636.

Sample Name: UL14023-001MDTC Acquired: 12/26/2019 14:00:17 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.99091	19.386	5.1389	.9325	10.176	1.9734	39.583
Stddev	.01172	.310	.0778	.0097	.161	.0377	.530
%RSD	1.1825	1.5998	1.5132	1.039	1.5868	1.9125	1.3395
#1	.99963	19.581	5.1769	.9419	10.288	1.9962	39.984
#2	.99550	19.548	5.0495	.9331	10.250	1.9941	39.782
#3	.97759	19.028	5.1904	.9226	9.9911	1.9298	38.982
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9319	1.9300	4.9772	1.9175	18.850	43.187	39.23
Stddev	.0136	.0302	.0566	.0224	.300	.609	.77
%RSD	1.461	1.5651	1.1370	1.1682	1.5926	1.4094	1.960
#1	.9409	1.9488	5.0167	1.9329	19.067	43.635	39.69
#2	.9163	1.8952	5.0025	1.9277	18.975	43.431	39.66
#3	.9386	1.9460	4.9123	1.8918	18.507	42.494	38.34
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001MDTC Acquired: 12/26/2019 14:00:17 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9580	1.9149	185.16	1.9594	4.7709	1.0155	.99924
Stddev	.0222	.0250	3.03	.0281	.0738	.0126	.01339
%RSD	1.1332	1.3077	1.6385	1.4341	1.5473	1.2376	1.3405
#1	1.9728	1.9334	187.26	1.9780	4.8208	1.0224	1.0053
#2	1.9687	1.8864	186.53	1.9271	4.6861	1.0010	.98389
#3	1.9325	1.9249	181.68	1.9732	4.8058	1.0231	1.0085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.7908	.95124	.9917	.9859	.78703	2.008	1.9261
Stddev	.0619	.01652	.0132	.0103	.01317	.042	.0193
%RSD	1.6337	1.7368	1.331	1.049	1.6728	2.100	1.0009
#1	3.8319	.96160	1.001	.9930	.79519	2.037	1.9419
#2	3.7195	.93219	.9974	.9907	.77184	2.027	1.9318
#3	3.8208	.95994	.9766	.9741	.79407	1.959	1.9046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001MDTC Acquired: 12/26/2019 14:00:17 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1069	-.0107	1.9916
Stddev	.0018	.0074	.0269
%RSD	1.651	69.27	1.3527
#1	-.1085	-.0023	2.0122
#2	-.1070	-.0163	1.9611
#3	-.1050	-.0135	2.0015
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2807.1	268100.	15697.
Stddev	35.0	2939.	229.
%RSD	1.2451	1.0961	1.4586
#1	2785.5	265580.	15596.
#2	2847.4	267390.	15535.
#3	2788.3	271330.	15959.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.624%	100.99%	95.269%
Range			

Sample Name: UL14023-001TCL(5) Acquired: 12/26/2019 14:05:51 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00062	.00830	.00333	.0016	.00209	.00006	-.31636
Stddev	.00031	.00893	.00064	.0011	.00022	.00002	.00365
%RSD	50.094	107.61	19.179	64.98	10.513	39.610	1.1543
#1	-.00065	.01837	.00399	.0027	.00232	.00008	-.31958
#2	-.00030	.00517	.00327	.0017	.00206	.00007	-.31239
#3	-.00092	.00135	.00272	.0006	.00188	.00003	-.31712
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0000	-.00106	-.00052	.00165	-.00454	-.34182	-.5286
Stddev	.0002	.00026	.00054	.00119	.00504	.05345	.0117
%RSD	916.2	24.871	104.33	71.843	111.21	15.637	2.209
#1	.0001	-.00077	.00008	.00198	-.00221	-.28231	-.5211
#2	.0001	-.00127	-.00066	.00034	-.00108	-.35739	-.5227
#3	-.0003	-.00115	-.00097	.00264	-.01032	-.38575	-.5421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001TCL(5) Acquired: 12/26/2019 14:05:51 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00077	.00248	32.086	-.00046	-.00156	.00081	.00072
Stddev	.00002	.00105	.561	.00022	.00043	.00238	.00088
%RSD	2.8574	42.509	1.7488	48.016	27.357	291.68	123.05
#1	-.00075	.00369	32.597	-.00059	-.00151	.00243	.00029
#2	-.00078	.00203	32.175	-.00060	-.00116	.00192	.00013
#3	-.00079	.00173	31.485	-.00021	-.00201	-.00191	.00173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02650	-.00145	.0001	-.0016	-.00412	-.0058	-.00244
Stddev	.00161	.00032	.0000	.0001	.00140	.0193	.00089
%RSD	6.0897	22.004	48.67	5.294	34.058	334.6	36.663
#1	.02791	-.00178	.0001	-.0017	-.00326	-.0080	-.00156
#2	.02474	-.00142	.0001	-.0015	-.00335	.0145	-.00241
#3	.02685	-.00114	.0001	-.0016	-.00573	-.0238	-.00335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL14023-001TCL(5) Acquired: 12/26/2019 14:05:51 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0003	-.0012	-.00011
Stddev	.0012	.0081	.00004
%RSD	458.9	682.4	34.474
#1	-.0010	-.0055	-.00015
#2	.0006	.0082	-.00010
#3	.0013	-.0062	-.00008
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2919.1	268980.	15126.
Stddev	7.3	3052.	130.
%RSD	.25176	1.1345	.86118
#1	2914.2	265780.	15015.
#2	2927.6	269330.	15094.
#3	2915.6	271850.	15269.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.48%	101.33%	91.804%
Range			

Sample Name: UL16044-002TC Acquired: 12/26/2019 14:11:23 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00075	-.01409	.00143	.0046	.01792	.00009	65.626
Stddev	.00025	.02096	.00072	.0007	.00015	.00005	.389
%RSD	33.779	148.80	50.069	14.19	.83477	49.666	.59304
#1	-.00050	-.03800	.00224	.0048	.01785	.00008	65.254
#2	-.00100	.00111	.00090	.0052	.01781	.00005	65.593
#3	-.00073	-.00537	.00115	.0039	.01809	.00014	66.030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00044	.00007	.00127	.00303	.13089	.1788
Stddev	.0003	.00017	.00018	.00121	.00233	.01776	.0093
%RSD	164.0	39.281	274.56	95.215	76.985	13.570	5.197
#1	.0003	-.00063	-.00014	.00130	.00528	.15068	.1737
#2	.0004	-.00040	.00019	.00246	.00063	.11633	.1895
#3	-.0002	-.00029	.00015	.00004	.00318	.12566	.1732
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL16044-002TC Acquired: 12/26/2019 14:11:23 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04705	.00030	172.14	.00104	.00041	.00039	.00164
Stddev	.00057	.00010	.21	.00034	.00246	.00179	.00090
%RSD	1.2199	33.439	.12077	32.635	594.26	461.40	55.192
#1	.04669	.00022	171.98	.00093	.00324	-.00149	.00062
#2	.04674	.00041	172.07	.00077	-.00071	.00209	.00235
#3	.04771	.00026	172.38	.00142	-.00128	.00056	.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.25060	-.00140	.1928	-.0025	-.00270	.0091	-.00205
Stddev	.00116	.00014	.0010	.0002	.00060	.0213	.00135
%RSD	.46209	9.6447	.5366	8.298	22.056	233.6	66.079
#1	.24946	-.00156	.1918	-.0027	-.00226	.0132	-.00295
#2	.25177	-.00133	.1939	-.0025	-.00247	.0281	-.00270
#3	.25058	-.00132	.1928	-.0023	-.00338	-.0139	-.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL16044-002TC Acquired: 12/26/2019 14:11:23 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0008	-.0039	.00269
Stddev	.0009	.0055	.00005
%RSD	122.8	142.9	2.0110
#1	-.0002	-.0013	.00272
#2	-.0018	-.0001	.00271
#3	-.0002	-.0102	.00262
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2745.3	263600.	15318.
Stddev	16.4	4846.	16.
%RSD	.59765	1.8385	.10287
#1	2764.1	265800.	15332.
#2	2738.2	266960.	15321.
#3	2733.7	258050.	15301.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.497%	99.300%	92.969%
Range			

Sample Name: UL11023-005(5) Acquired: 12/26/2019 14:16:54 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00100	-.00549	.00106	.0009	.00973	.00007	39.238
Stddev	.00034	.01262	.00032	.0010	.00037	.00009	.590
%RSD	34.186	229.81	29.887	114.7	3.8028	131.34	1.5024
#1	.00084	-.00271	.00072	.0015	.00931	-.00001	38.583
#2	.00139	-.01928	.00111	.0015	.01001	.00005	39.404
#3	.00076	.00551	.00135	-.0003	.00987	.00017	39.727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.09075	.00220	.00055	36.767	.38823	37.87
Stddev	.0001	.00167	.00017	.00096	.587	.05722	.61
%RSD	49.34	1.8419	7.6109	176.23	1.5954	14.739	1.618
#1	.0003	.08918	.00202	.00049	36.091	.36385	37.20
#2	.0003	.09057	.00234	.00153	37.141	.45360	38.02
#3	.0001	.09251	.00225	-.00039	37.069	.34723	38.40
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11023-005(5) Acquired: 12/26/2019 14:16:54 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.359	-.00236	28.542	.01055	.00195	-.00232	-.00098
Stddev	.225	.00021	.483	.00026	.00133	.00101	.00095
%RSD	1.9819	8.7198	1.6919	2.4764	67.941	43.725	96.268
#1	11.101	-.00212	27.987	.01042	.00176	-.00152	.00003
#2	11.463	-.00246	28.864	.01085	.00073	-.00198	-.00185
#3	11.513	-.00249	28.775	.01038	.00337	-.00346	-.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.94231	-.00136	.2331	-.0022	-.07487	-.0483	.00097
Stddev	.01276	.00072	.0034	.0002	.00346	.0125	.00120
%RSD	1.3543	53.079	1.472	6.987	4.6273	25.82	124.13
#1	.93088	-.00147	.2295	-.0021	-.07101	-.0476	-.00017
#2	.93996	-.00203	.2337	-.0024	-.07772	-.0362	.00085
#3	.95608	-.00059	.2363	-.0022	-.07587	-.0611	.00222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11023-005(5) Acquired: 12/26/2019 14:16:54 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0033	-.0189	.00150
Stddev	.0014	.0118	.00008
%RSD	43.73	62.69	5.6175
#1	-.0025	-.0054	.00142
#2	-.0024	-.0274	.00150
#3	-.0049	-.0240	.00159
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2806.0	265060.	15187.
Stddev	19.4	3428.	212.
%RSD	.69156	1.2931	1.3980
#1	2809.7	268840.	15250.
#2	2823.3	264170.	14951.
#3	2785.0	262160.	15361.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.587%	99.849%	92.175%
Range			

Sample Name: UL11023-007(10) Acquired: 12/26/2019 14:22:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00114	.27300	.00113	-.0020	.00251	.00048	26.734
Stddev	.00024	.00425	.00042	.0006	.00025	.00006	.362
%RSD	21.285	1.5554	36.875	32.17	9.9302	11.553	1.3528
#1	.00142	.26848	.00107	-.0018	.00242	.00053	26.400
#2	.00098	.27691	.00157	-.0027	.00232	.00050	26.683
#3	.00103	.27362	.00075	-.0015	.00279	.00042	27.118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.32025	.00213	.00074	41.315	.21319	33.40
Stddev	.0002	.00783	.00041	.00045	.522	.07426	.52
%RSD	14.72	2.4462	19.079	61.120	1.2639	34.832	1.565
#1	.0015	.31338	.00245	.00094	40.914	.28979	32.88
#2	.0011	.31859	.00167	.00022	41.125	.14152	33.38
#3	.0013	.32878	.00225	.00106	41.905	.20826	33.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11023-007(10) Acquired: 12/26/2019 14:22:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.427	-.00274	8.7877	.25285	.00098	-.00171	.00076
Stddev	.047	.00034	.1243	.00644	.00086	.00149	.00096
%RSD	.44663	12.242	1.4148	2.5468	87.652	87.386	126.72
#1	10.374	-.00254	8.7092	.24745	.00197	-.00020	.00112
#2	10.444	-.00255	8.7229	.25112	.00045	-.00319	-.00033
#3	10.462	-.00313	8.9311	.25997	.00052	-.00173	.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.60967	-.00175	.1078	-.0019	-.06863	-.0594	.00251
Stddev	.01501	.00047	.0016	.0003	.00192	.0115	.00138
%RSD	2.4615	26.781	1.472	16.94	2.7934	19.29	54.977
#1	.59648	-.00219	.1070	-.0023	-.06692	-.0510	.00371
#2	.60654	-.00179	.1069	-.0018	-.07070	-.0547	.00281
#3	.62600	-.00126	.1097	-.0017	-.06826	-.0725	.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL11023-007(10) Acquired: 12/26/2019 14:22:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0016	-.0201	.45010
Stddev	.0009	.0060	.01159
%RSD	55.05	29.82	2.5740
#1	-.0019	-.0146	.44096
#2	-.0006	-.0192	.44622
#3	-.0023	-.0266	.46313
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2809.6	259890.	14954.
Stddev	12.1	4977.	72.
%RSD	.42991	1.9152	.47953
#1	2801.6	256110.	14898.
#2	2823.5	258030.	15035.
#3	2803.6	265530.	14928.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.710%	97.901%	90.759%
Range			

Sample Name: UQ39713-001 Acquired: 12/26/2019 14:28:02 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00033	-.02408	.00136	-.0013	-.00085	.00007	-.49963
Stddev	.00026	.00477	.00095	.0013	.00024	.00005	.00320
%RSD	79.240	19.812	69.979	97.60	28.077	69.760	.63960
#1	-.00038	-.02039	.00065	-.0001	-.00066	.00003	-.49752
#2	-.00056	-.02238	.00244	-.0012	-.00078	.00006	-.49806
#3	-.00005	-.02946	.00098	-.0026	-.00112	.00012	-.50331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0000	-.00096	-.00061	.00022	-.00931	-.46221	-.5284
Stddev	.0001	.00010	.00067	.00154	.00516	.03722	.0050
%RSD	673.0	10.896	108.90	689.97	55.454	8.0515	.9553
#1	-.0002	-.00084	.00004	-.00044	-.00438	-.42340	-.5241
#2	.0001	-.00098	-.00129	.00199	-.00889	-.49760	-.5270
#3	.0000	-.00105	-.00059	-.00088	-.01468	-.46564	-.5339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39713-001 Acquired: 12/26/2019 14:28:02 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00003	-.00053	-.41159	-.00125	-.00066	.00034	.00044
Stddev	.00035	.00005	.08174	.00019	.00170	.00079	.00247
%RSD	1314.9	9.7967	19.860	15.283	257.22	231.85	557.39
#1	.00035	-.00059	-.34252	-.00147	-.00097	.00107	.00218
#2	.00008	-.00049	-.50184	-.00115	-.00219	.00046	-.00239
#3	-.00035	-.00051	-.39042	-.00113	.00117	-.00050	.00153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01877	-.00138	-.0006	-.0020	-.00452	-.0196	-.00263
Stddev	.00137	.00036	.0002	.0001	.00142	.0052	.00085
%RSD	7.2952	26.223	32.15	7.176	31.359	26.62	32.188
#1	.01801	-.00106	-.0004	-.0021	-.00316	-.0253	-.00322
#2	.02035	-.00132	-.0008	-.0022	-.00440	-.0187	-.00301
#3	.01795	-.00178	-.0006	-.0019	-.00599	-.0150	-.00166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39713-001 Acquired: 12/26/2019 14:28:02 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0031	-.0052	-.00054
Stddev	.0008	.0038	.00002
%RSD	26.99	73.62	3.3252
#1	-.0036	-.0054	-.00052
#2	-.0035	-.0088	-.00055
#3	-.0021	-.0012	-.00054
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3024.3	267820.	15536.
Stddev	1.5	3047.	148.
%RSD	.04907	1.1378	.95556
#1	3023.0	270590.	15444.
#2	3025.9	268310.	15707.
#3	3024.0	264560.	15456.

Sample Name: UQ39713-002 Acquired: 12/26/2019 14:33:33 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.42888	20.037	.41466	.3992	2.1032	2.1242	40.277
Stddev	.00064	.054	.00302	.0025	.0035	.0152	.063
%RSD	.14864	.26809	.72711	.6365	.16548	.71735	.15547
#1	.42948	20.027	.41128	.4021	2.1066	2.1383	40.217
#2	.42821	20.095	.41561	.3976	2.1036	2.1081	40.342
#3	.42894	19.989	.41708	.3979	2.0996	2.1264	40.271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3945	1.9869	2.0943	2.0173	19.407	45.181	41.19
Stddev	.0014	.0095	.0012	.0094	.050	.073	.13
%RSD	.3646	.47772	.05910	.46564	.25590	.16149	.3074
#1	.3932	1.9781	2.0929	2.0120	19.350	45.147	41.07
#2	.3942	1.9856	2.0951	2.0282	19.436	45.132	41.19
#3	.3960	1.9969	2.0950	2.0118	19.436	45.265	41.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39713-002 Acquired: 12/26/2019 14:33:33 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0936	1.9373	43.688	2.0184	.39398	.42024	.41133
Stddev	.0058	.0172	.069	.0083	.00648	.00139	.00348
%RSD	.27542	.88660	.15840	.40985	1.6452	.32975	.84573
#1	2.0897	1.9209	43.609	2.0098	.38997	.42085	.40738
#2	2.1003	1.9360	43.740	2.0188	.39050	.41865	.41392
#3	2.0910	1.9552	43.714	2.0264	.40145	.42122	.41270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9679	.39228	1.025	.4098	.83820	.0008	2.0205
Stddev	.0038	.00165	.003	.0031	.01005	.0058	.0065
%RSD	.19221	.42075	.2537	.7553	1.1986	750.6	.32363
#1	1.9651	.39162	1.026	.4067	.82738	.0058	2.0130
#2	1.9664	.39106	1.027	.4129	.83999	.0022	2.0252
#3	1.9722	.39416	1.022	.4099	.84724	-.0056	2.0232
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39713-002 Acquired: 12/26/2019 14:33:33 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0466	-.0163	2.0443
Stddev	.0011	.0100	.0086
%RSD	2.401	61.28	.42014
#1	-.0455	-.0167	2.0349
#2	-.0467	-.0262	2.0464
#3	-.0477	-.0062	2.0517
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2839.9	260540.	15449.
Stddev	11.9	2207.	86.
%RSD	.41864	.84700	.55746
#1	2847.8	258560.	15540.
#2	2845.7	262920.	15437.
#3	2826.3	260130.	15369.

Sample Name: CCV MW-12174 Acquired: 12/26/2019 14:39:00 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.53470	26.042	.51689	.5107	2.7371	2.6650	52.374
Stddev	.00555	.044	.00298	.0083	.0060	.0312	.037
%RSD	1.0372	.16758	.57746	1.625	.21877	1.1703	.07018
#1	.53275	26.036	.51588	.5048	2.7440	2.6548	52.388
#2	.54096	26.088	.51454	.5202	2.7338	2.7000	52.332
#3	.53040	26.001	.52025	.5071	2.7335	2.6401	52.401
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5107	2.6101	2.7019	2.5858	25.293	F 58.196	53.40
Stddev	.0035	.0143	.0219	.0176	.044	.100	.07
%RSD	.6860	.54799	.81076	.67950	.17303	.17114	.1291
#1	.5082	2.5997	2.6965	2.5727	25.270	58.305	53.32
#2	.5092	2.6042	2.7261	2.6058	25.344	58.110	53.40
#3	.5147	2.6264	2.6833	2.5789	25.266	58.173	53.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						50.000	
Range						10.400%	

Sample Name: CCV MW-12174 Acquired: 12/26/2019 14:39:00 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6848	2.6317	F 56.604	2.6604	.50987	.54606	.53104
Stddev	.0211	.0200	.059	.0148	.00152	.00551	.00200
%RSD	.78622	.76121	.10465	.55793	.29877	1.0095	.37750
#1	2.6743	2.6139	56.672	2.6506	.51135	.54419	.53243
#2	2.7091	2.6277	56.564	2.6530	.50995	.54171	.52875
#3	2.6710	2.6534	56.576	2.6775	.50831	.55226	.53196
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			50.000				
Range			10.400%				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5850	.51108	2.675	.5248	1.0712	2.693	2.6193
Stddev	.0198	.00244	.003	.0022	.0099	.011	.0157
%RSD	.76443	.47758	.1107	.4181	.92714	.4195	.59861
#1	2.5706	.50869	2.678	.5238	1.0654	2.680	2.6201
#2	2.5769	.51098	2.673	.5273	1.0656	2.698	2.6345
#3	2.6075	.51356	2.673	.5233	1.0827	2.700	2.6032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 14:39:00 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.552	F 2.214	2.6854
Stddev	.021	.057	.0116
%RSD	.8276	2.552	.43027
#1	2.537	2.160	2.6811
#2	2.542	2.273	2.6767
#3	2.576	2.211	2.6985
Check ?	Chk Pass	Chk Fail	Chk Pass
Value		2.500	
Range		-10.40%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2627.8	250800.	14349.
Stddev	12.4	4833.	70.
%RSD	.47302	1.9268	.49007
#1	2640.6	251320.	14268.
#2	2626.8	245730.	14382.
#3	2615.8	255360.	14396.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 14:44:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00034	-.01201	.00095	-.0003	-.00022	.00026	-.49842
Stddev	.00022	.00623	.00098	.0015	.00043	.00016	.00477
%RSD	62.949	51.874	103.31	487.5	190.73	62.007	.95631
#1	-.00043	-.01070	.00205	.0006	.00019	.00021	-.49306
#2	-.00050	-.00654	.00017	-.0021	-.00020	.00013	-.50000
#3	-.00010	-.01880	.00063	.0005	-.00067	.00044	-.50219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00090	-.00053	-.00001	-.01151	-.34951	-.5426
Stddev	.0002	.00024	.00021	.00134	.00175	.02474	.0077
%RSD	209.7	26.627	39.394	11807.	15.189	7.0772	1.411
#1	.0001	-.00112	-.00060	.00076	-.01353	-.36342	-.5515
#2	-.0001	-.00094	-.00069	.00077	-.01042	-.32095	-.5389
#3	.0003	-.00064	-.00030	-.00156	-.01058	-.36416	-.5376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 14:44:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00087	.00436	-.09708	-.00119	.00002	-.00039	.00145
Stddev	.00004	.00174	.01690	.00024	.00100	.00125	.00175
%RSD	4.1752	39.909	17.406	19.962	4718.4	317.15	121.11
#1	-.00088	.00633	-.08515	-.00092	-.00102	.00092	.00307
#2	-.00090	.00370	-.11641	-.00134	.00013	-.00054	.00168
#3	-.00083	.00305	-.08967	-.00131	.00096	-.00157	-.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01964	-.00159	-.0005	-.0018	-.00388	-.0094	.00069
Stddev	.00167	.00009	.0000	.0001	.00129	.0314	.00283
%RSD	8.4969	5.3571	3.144	6.711	33.323	334.2	409.91
#1	.01831	-.00158	-.0005	-.0016	-.00506	-.0191	-.00124
#2	.02151	-.00151	-.0005	-.0018	-.00250	.0257	-.00063
#3	.01910	-.00168	-.0005	-.0018	-.00410	-.0349	.00394
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 14:44:27 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0031	-.0146	-.00049
Stddev	.0030	.0137	.00001
%RSD	95.29	93.46	1.4353
#1	.0064	-.0222	-.00049
#2	.0020	.0012	-.00048
#3	.0009	-.0229	-.00049
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2911.2	261900.	14734.
Stddev	5.5	8964.	68.
%RSD	.18955	3.4228	.46292
#1	2917.6	267340.	14714.
#2	2908.5	266800.	14810.
#3	2907.6	251550.	14678.

Sample Name: UK05004-016 Acquired: 12/26/2019 14:50:00 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01012	.36542	.01545	.0492	.02497	.00523	4.5880
Stddev	.00033	.01674	.00032	.0013	.00020	.00009	.0325
%RSD	3.2802	4.5810	2.0824	2.572	.79812	1.6806	.70800
#1	.01012	.34653	.01518	.0503	.02475	.00533	4.5836
#2	.01045	.37130	.01537	.0495	.02502	.00523	4.5580
#3	.00979	.37842	.01581	.0478	.02513	.00515	4.6225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.02377	.01009	.01231	.08622	5.3317	4.763
Stddev	.0002	.00029	.00032	.00039	.00324	.0357	.033
%RSD	4.818	1.2203	3.1281	3.1404	3.7619	.66917	.7002
#1	.0043	.02372	.01045	.01227	.08975	5.3729	4.799
#2	.0046	.02350	.00992	.01272	.08336	5.3122	4.733
#3	.0047	.02408	.00988	.01195	.08555	5.3100	4.757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UK05004-016 Acquired: 12/26/2019 14:50:00 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01490	.03825	4.9920	.03904	.01032	.01829	.01901
Stddev	.00024	.00038	.0469	.00052	.00043	.00224	.00123
%RSD	1.5983	1.0034	.94000	1.3224	4.1789	12.247	6.4555
#1	.01507	.03869	4.9957	.03872	.00990	.01899	.02027
#2	.01499	.03797	4.9434	.03877	.01028	.01579	.01895
#3	.01463	.03809	5.0370	.03964	.01076	.02011	.01781
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.54925	.04699	.0097	.0478	.04797	.4991	.04303
Stddev	.00899	.00088	.0001	.0008	.00252	.0447	.00078
%RSD	1.6366	1.8626	1.421	1.711	5.2531	8.955	1.8044
#1	.54224	.04598	.0098	.0479	.04877	.4556	.04368
#2	.54612	.04741	.0097	.0486	.04515	.5449	.04323
#3	.55938	.04757	.0095	.0469	.05000	.4968	.04217
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UK05004-016 Acquired: 12/26/2019 14:50:00 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.4745	.3904	.01994
Stddev	.0053	.0253	.00019
%RSD	1.126	6.481	.95367
#1	.4700	.3658	.01991
#2	.4731	.4164	.01977
#3	.4804	.3891	.02014
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3028.3	279820.	15837.
Stddev	15.3	2334.	65.
%RSD	.50677	.83415	.41323
#1	3040.2	277130.	15828.
#2	3033.8	281060.	15907.
#3	3011.0	281260.	15777.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	104.24%	105.41%	96.119%
Range			

Sample Name: UL18027-001 Acquired: 12/26/2019 14:55:24 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00072	.15058	.00048	.0404	.02319	.00020	10.709
Stddev	.00037	.01486	.00118	.0012	.00038	.00007	.042
%RSD	51.919	9.8693	245.84	3.083	1.6230	37.150	.39353
#1	.00115	.16261	.00182	.0412	.02342	.00028	10.735
#2	.00054	.15516	-.00000	.0410	.02275	.00017	10.660
#3	.00047	.13397	-.00038	.0389	.02339	.00014	10.731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00069	.00187	.04556	.26937	39.616	3.197
Stddev	.0000	.00022	.00017	.00068	.00209	.064	.027
%RSD	13.02	31.904	9.2601	1.4983	.77528	.16046	.8559
#1	.0004	-.00072	.00167	.04479	.27080	39.602	3.194
#2	.0003	-.00046	.00193	.04580	.27033	39.685	3.226
#3	.0003	-.00090	.00201	.04609	.26697	39.560	3.171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL18027-001 Acquired: 12/26/2019 14:55:24 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02018	.02018	52.748	.00149	.00215	.00120	.00153
Stddev	.00011	.00041	.191	.00013	.00167	.00273	.00214
%RSD	.52109	2.0346	.36147	8.5580	77.398	227.33	140.02
#1	.02024	.02022	52.795	.00138	.00058	.00436	.00250
#2	.02024	.02057	52.538	.00163	.00390	-.00038	.00301
#3	.02006	.01975	52.910	.00145	.00199	-.00038	-.00093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.7702	.00027	.0397	.0003	-.00431	-.0096	-.00186
Stddev	.0267	.00025	.0001	.0001	.00270	.0017	.00080
%RSD	.56070	92.626	.3155	20.66	62.745	18.00	42.987
#1	4.7591	.00027	.0396	.0002	-.00214	-.0078	-.00152
#2	4.7508	.00051	.0398	.0002	-.00344	-.0112	-.00128
#3	4.8007	.00002	.0398	.0003	-.00734	-.0096	-.00277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL18027-001 Acquired: 12/26/2019 14:55:24 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0017	-.0080	.09394
Stddev	.0013	.0054	.00013
%RSD	76.27	67.64	.14131
#1	-.0003	-.0131	.09385
#2	-.0028	-.0085	.09387
#3	-.0021	-.0023	.09409
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2892.6	262280.	15459.
Stddev	14.0	4423.	160.
%RSD	.48226	1.6862	1.0379
#1	2891.7	258410.	15442.
#2	2906.9	261330.	15627.
#3	2879.1	267100.	15307.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.566%	98.802%	93.824%
Range			

Sample Name: UL18057-001 Acquired: 12/26/2019 15:00:52 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00107	128.71	.00355	.0279	.02528	.00134	12.676
Stddev	.00047	.87	.00123	.0016	.00062	.00005	.027
%RSD	44.461	.67470	34.593	5.621	2.4678	3.8739	.21195
#1	-.00069	127.89	.00341	.0266	.02492	.00139	12.652
#2	-.00092	129.62	.00240	.0296	.02600	.00135	12.705
#3	-.00160	128.61	.00484	.0275	.02491	.00129	12.671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.04130	1.3112	.28442	143.71	2.4095	23.17
Stddev	.0001	.00012	.0031	.00281	.89	.0907	.06
%RSD	32.81	.29011	.23409	.98755	.62159	3.7632	.2526
#1	-.0003	.04143	1.3148	.28493	142.96	2.5008	23.15
#2	-.0006	.04128	1.3097	.28140	144.70	2.3195	23.24
#3	-.0004	.04119	1.3093	.28694	143.46	2.4081	23.13
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL18057-001 Acquired: 12/26/2019 15:00:52 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.5261	.02924	16.528	.51743	.00958	.02909	-.00070
Stddev	.0426	.00016	.123	.00164	.00043	.00148	.00248
%RSD	.94205	.53741	.74135	.31725	4.5239	5.0927	352.68
#1	4.5475	.02906	16.402	.51865	.01007	.02745	-.00320
#2	4.4771	.02932	16.646	.51556	.00925	.03033	.00176
#3	4.5539	.02934	16.538	.51807	.00941	.02948	-.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 73.495	.00169	.0395	.8355	-.02625	-.1252	.10509
Stddev	.129	.00082	.0001	.0017	.00180	.0038	.00011
%RSD	.17597	48.206	.2219	.2063	6.8734	3.039	.10477
#1	73.572	.00236	.0396	.8340	-.02576	-.1289	.10511
#2	73.346	.00078	.0395	.8351	-.02475	-.1213	.10518
#3	73.569	.00194	.0394	.8374	-.02825	-.1254	.10497
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL18057-001 Acquired: 12/26/2019 15:00:52 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0668	-.0058	1.7417
Stddev	.0003	.0156	.0042
%RSD	.4401	268.9	.24002
#1	-.0670	.0122	1.7434
#2	-.0665	-.0147	1.7369
#3	-.0669	-.0149	1.7448
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2864.2	272710.	15842.
Stddev	3.5	1659.	170.
%RSD	.12251	.60846	1.0721
#1	2868.1	271160.	16038.
#2	2861.4	272510.	15738.
#3	2863.2	274460.	15749.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.591%	102.73%	96.147%
Range			

Sample Name: UL19006-001(100) Acquired: 12/26/2019 15:06:21 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Chem Mill Line

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00018	.00039	.00077	-.0011	-.00018	.00001	-.29935
Stddev	.00039	.02735	.00092	.0006	.00024	.00004	.00118
%RSD	217.94	6998.1	119.13	54.67	132.85	306.36	.39420
#1	.00010	.03109	.00135	-.0007	-.00002	-.00001	-.29873
#2	-.00001	-.02140	-.00029	-.0017	-.00007	-.00001	-.29861
#3	-.00062	-.00851	.00125	-.0008	-.00046	.00006	-.30071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.00076	.00090	17.216	.17661	50.187	.0604
Stddev	.0002	.00024	.00018	.239	.00338	.085	.0090
%RSD	432.1	31.425	20.504	1.3902	1.9125	.17014	14.91
#1	.0001	-.00049	.00070	17.001	.17991	50.286	.0558
#2	.0002	-.00095	.00093	17.173	.17316	50.134	.0546
#3	-.0002	-.00085	.00107	17.474	.17675	50.142	.0708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19006-001(100) Acquired: 12/26/2019 15:06:21 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Chem Mill Line

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00281	.00001	.41005	.00119	-.00286	.00232	.00187
Stddev	.00003	.00017	.06107	.00018	.00090	.00130	.00087
%RSD	1.0557	2382.3	14.892	15.320	31.455	55.950	46.564
#1	.00280	.00019	.43798	.00136	-.00249	.00136	.00149
#2	.00280	-.00002	.45217	.00120	-.00389	.00179	.00125
#3	.00285	-.00015	.34002	.00100	-.00221	.00379	.00286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09624	-.00013	-.0000	-.0013	-.00247	-.0179	-.00149
Stddev	.00100	.00062	.0001	.0002	.00270	.0118	.00118
%RSD	1.0434	489.61	993.6	11.82	109.08	65.76	79.464
#1	.09545	.00048	.0001	-.0012	-.00245	-.0147	-.00285
#2	.09591	-.00010	.0000	-.0012	.00021	-.0081	-.00093
#3	.09737	-.00076	-.0001	-.0015	-.00519	-.0310	-.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19006-001(100) Acquired: 12/26/2019 15:06:21 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Chem Mill Line

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0023	-.0049	.01971
Stddev	.0005	.0170	.00008
%RSD	20.08	346.4	.42912
#1	-.0020	-.0048	.01978
#2	-.0021	.0120	.01974
#3	-.0029	-.0220	.01962
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2887.3	269110.	14945.
Stddev	5.0	4230.	173.
%RSD	.17429	1.5717	1.1549
#1	2890.2	273910.	14832.
#2	2890.2	267500.	14859.
#3	2881.5	265930.	15143.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.384%	101.38%	90.703%
Range			

Sample Name: UL19006-002(100) Acquired: 12/26/2019 15:12:01 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Nickel Line

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00009	-.02061	.00066	-.0014	-.00003	-.00000	-.32521
Stddev	.00018	.01283	.00123	.0002	.00015	.00002	.00169
%RSD	198.76	62.242	187.65	11.07	488.84	461.92	.51831
#1	-.00018	-.02571	-.00074	-.0013	-.00020	.00002	-.32327
#2	.00011	-.03009	.00159	-.0015	.00006	-.00001	-.32614
#3	-.00019	-.00601	.00113	-.0012	.00005	-.00003	-.32623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00094	.00065	1.0196	.03789	246.36	2.033
Stddev	.0003	.00015	.00006	.0086	.00527	2.53	.009
%RSD	505.3	15.906	8.7758	.84235	13.907	1.0255	.4297
#1	.0002	-.00077	.00072	1.0162	.04291	248.81	2.024
#2	.0003	-.00104	.00063	1.0294	.03836	246.50	2.041
#3	-.0003	-.00102	.00061	1.0133	.03240	243.77	2.035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19006-002(100) Acquired: 12/26/2019 15:12:01 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Nickel Line

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01383	-.00040	.67671	.01297	-.00197	.00042	.00166
Stddev	.00014	.00048	.05857	.00015	.00063	.00197	.00051
%RSD	1.0316	121.06	8.6557	1.1360	32.143	469.69	30.557
#1	.01375	.00000	.62842	.01310	-.00172	.00259	.00214
#2	.01399	-.00026	.65984	.01281	-.00151	-.00009	.00113
#3	.01374	-.00093	.74186	.01301	-.00270	-.00124	.00171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07090	.00139	-.0000	-.0014	-.00196	-.0232	-.00140
Stddev	.00184	.00018	.0001	.0002	.00298	.0215	.00068
%RSD	2.6010	13.044	292.9	11.40	152.36	92.44	48.565
#1	.07297	.00119	.0000	-.0016	-.00540	-.0401	-.00216
#2	.06941	.00144	.0001	-.0013	-.00007	-.0307	-.00084
#3	.07034	.00155	-.0002	-.0015	-.00041	.0010	-.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19006-002(100) Acquired: 12/26/2019 15:12:01 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: Nickel Line

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0020	-.0072	.01923
Stddev	.0012	.0193	.00009
%RSD	62.05	267.4	.48399
#1	-.0006	.0109	.01917
#2	-.0023	-.0275	.01934
#3	-.0030	-.0051	.01919
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2828.3	268960.	15049.
Stddev	4.4	2373.	107.
%RSD	.15495	.88243	.71307
#1	2823.3	271340.	15139.
#2	2830.3	266600.	15077.
#3	2831.3	268950.	14930.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.354%	101.32%	91.335%
Range			

Sample Name: UQ39859-001 Acquired: 12/26/2019 15:17:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: PBW

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00047	-.02597	.00074	-.0013	-.00080	-.00003	-.49861
Stddev	.00042	.02061	.00093	.0003	.00032	.00003	.00290
%RSD	90.136	79.366	125.27	24.28	39.515	93.492	.58061
#1	.00002	-.01149	-.00020	-.0009	-.00057	-.00005	-.50154
#2	-.00074	-.04957	.00165	-.0015	-.00116	-.00005	-.49575
#3	-.00068	-.01686	.00076	-.0014	-.00067	.00000	-.49856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.00099	-.00035	.00194	-.00683	.01998	-.5457
Stddev	.0001	.00004	.00019	.00055	.00125	.06023	.0059
%RSD	201.1	3.8189	54.995	28.171	18.353	301.44	1.075
#1	.0001	-.00103	-.00019	.00150	-.00574	.07620	-.5478
#2	-.0000	-.00096	-.00056	.00256	-.00655	.02734	-.5502
#3	.0000	-.00096	-.00029	.00177	-.00820	-.04359	-.5390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39859-001 Acquired: 12/26/2019 15:17:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: PBW

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00105	-.00045	-.58000	-.00135	.00005	.00068	-.00238
Stddev	.00005	.00014	.05284	.00009	.00135	.00143	.00050
%RSD	4.8047	31.761	9.1096	6.7689	2580.2	211.85	20.866
#1	-.00099	-.00059	-.51989	-.00140	.00141	.00029	-.00217
#2	-.00108	-.00043	-.60103	-.00141	-.00130	.00226	-.00294
#3	-.00108	-.00031	-.61909	-.00125	.00004	-.00053	-.00202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01897	-.00137	-.0005	-.0017	-.00399	.0082	-.00628
Stddev	.00085	.00060	.0001	.0000	.00293	.0163	.00070
%RSD	4.4748	43.660	12.65	2.363	73.504	199.0	11.116
#1	.01992	-.00090	-.0005	-.0017	-.00726	.0020	-.00695
#2	.01828	-.00117	-.0005	-.0017	-.00313	.0267	-.00556
#3	.01870	-.00205	-.0006	-.0016	-.00158	-.0041	-.00633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39859-001 Acquired: 12/26/2019 15:17:32 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: PBW

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0038	-.0124	-.00006
Stddev	.0009	.0143	.00004
%RSD	24.57	115.7	77.027
#1	-.0047	.0036	-.00007
#2	-.0038	-.0168	-.00001
#3	-.0028	-.0240	-.00009
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3149.9	282110.	15971.
Stddev	24.0	1982.	63.
%RSD	.76139	.70245	.39699
#1	3174.2	284110.	15902.
#2	3149.3	280150.	15984.
#3	3126.2	282060.	16026.

Sample Name: UQ39859-002 Acquired: 12/26/2019 15:23:01 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: LCS

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41467	19.624	.40635	.3890	2.0595	2.0375	39.514
Stddev	.00401	.178	.00285	.0075	.0324	.0389	.188
%RSD	.96593	.90877	.70078	1.939	1.5730	1.9097	.47569
#1	.41338	19.585	.40354	.3855	2.0454	2.0179	39.373
#2	.41147	19.468	.40627	.3838	2.0367	2.0123	39.441
#3	.41917	19.818	.40923	.3976	2.0966	2.0823	39.727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3865	1.9492	2.0301	1.9702	19.016	44.455	40.34
Stddev	.0017	.0077	.0185	.0101	.163	.229	.23
%RSD	.4433	.39438	.90989	.51084	.85908	.51560	.5595
#1	.3861	1.9457	2.0207	1.9660	18.957	44.700	40.54
#2	.3850	1.9439	2.0182	1.9630	18.890	44.245	40.10
#3	.3884	1.9580	2.0514	1.9817	19.201	44.421	40.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39859-002 Acquired: 12/26/2019 15:23:01 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: LCS

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0374	1.9055	42.828	1.9802	.38901	.40988	.40177
Stddev	.0127	.0109	.373	.0038	.00250	.00244	.00324
%RSD	.62364	.57405	.87106	.18996	.64215	.59479	.80750
#1	2.0330	1.8993	42.716	1.9769	.38617	.41077	.39838
#2	2.0274	1.8991	42.524	1.9795	.39002	.41175	.40484
#3	2.0517	1.9181	43.245	1.9843	.39084	.40713	.40209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9334	.38670	1.007	.4005	.82205	-.0101	1.9600
Stddev	.0095	.00044	.007	.0011	.00532	.0080	.0203
%RSD	.49160	.11364	.6742	.2634	.64732	79.69	1.0358
#1	1.9284	.38662	1.005	.3996	.81617	-.0134	1.9414
#2	1.9275	.38630	1.003	.4003	.82344	-.0159	1.9570
#3	1.9444	.38717	1.015	.4016	.82654	-.0009	1.9817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39859-002 Acquired: 12/26/2019 15:23:01 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: LCS

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0449	-.0128	2.0054
Stddev	.0006	.0104	.0014
%RSD	1.359	81.05	.07227
#1	-.0445	-.0115	2.0044
#2	-.0456	-.0031	2.0047
#3	-.0446	-.0237	2.0070
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2901.7	270740.	15695.
Stddev	1.4	7254.	208.
%RSD	.04969	2.6792	1.3256
#1	2902.9	275320.	15743.
#2	2902.2	274510.	15876.
#3	2900.1	262370.	15468.

Sample Name: UL20113-001 Acquired: 12/26/2019 15:28:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00020	.04563	.00138	.0305	.01879	.00007	22.279
Stddev	.00051	.00821	.00083	.0002	.00051	.00005	.070
%RSD	253.80	17.999	59.886	.7423	2.7313	67.011	.31269
#1	-.00077	.04624	.00229	.0307	.01926	.00013	22.352
#2	-.00008	.05352	.00119	.0303	.01886	.00004	22.273
#3	.00024	.03713	.00067	.0306	.01824	.00005	22.213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	-.00009	.00067	.00653	1.1275	2.3978	2.274
Stddev	.0000	.00010	.00007	.00113	.0130	.0307	.024
%RSD	38.92	114.10	9.9235	17.356	1.1536	1.2794	1.058
#1	-.0001	-.00017	.00068	.00751	1.1419	2.3750	2.270
#2	-.0001	-.00013	.00059	.00529	1.1167	2.4327	2.300
#3	-.0001	.00003	.00072	.00678	1.1237	2.3858	2.253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001 Acquired: 12/26/2019 15:28:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.22940	.00352	7.4328	.00879	.00014	.00154	-.00005
Stddev	.00178	.00135	.0439	.00016	.00069	.00175	.00125
%RSD	.77451	38.270	.59060	1.8474	505.43	113.52	2563.3
#1	.23002	.00496	7.4767	.00861	.00074	.00215	-.00145
#2	.23079	.00330	7.4326	.00892	.00029	.00290	.00093
#3	.22740	.00229	7.3889	.00883	-.00061	-.00043	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.8628	-.00116	.0503	.0004	-.00346	-.0230	-.00455
Stddev	.0164	.00056	.0002	.0003	.00070	.0013	.00115
%RSD	.42323	48.750	.3705	69.02	20.160	5.497	25.159
#1	3.8696	-.00167	.0505	.0006	-.00265	-.0216	-.00329
#2	3.8442	-.00125	.0504	.0005	-.00386	-.0232	-.00552
#3	3.8747	-.00055	.0501	.0001	-.00386	-.0241	-.00485
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001 Acquired: 12/26/2019 15:28:30 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0045	-.0124	.00820
Stddev	.0017	.0202	.00008
%RSD	37.66	163.1	.95176
#1	-.0035	.0093	.00811
#2	-.0036	-.0158	.00821
#3	-.0065	-.0306	.00827
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3089.1	276770.	15811.
Stddev	11.1	2887.	41.
%RSD	.36047	1.0430	.25939
#1	3078.4	273450.	15785.
#2	3100.6	278730.	15791.
#3	3088.2	278120.	15859.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	106.33%	104.26%	95.963%
Range			

Sample Name: UL20113-001S Acquired: 12/26/2019 15:33:58 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901S

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41730	20.035	.41292	.4194	2.1270	2.0646	63.326
Stddev	.00515	.065	.00379	.0025	.0087	.0181	.118
%RSD	1.2345	.32197	.91822	.5974	.41018	.87553	.18711
#1	.41222	19.977	.41080	.4169	2.1187	2.0461	63.190
#2	.42252	20.023	.41067	.4219	2.1261	2.0823	63.380
#3	.41716	20.105	.41730	.4194	2.1361	2.0654	63.408
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3910	1.9637	2.0513	1.9860	20.398	47.412	43.25
Stddev	.0016	.0099	.0311	.0233	.088	.038	.03
%RSD	.4080	.50468	1.5154	1.1749	.43300	.07934	.0636
#1	.3909	1.9626	2.0195	1.9595	20.300	47.419	43.27
#2	.3895	1.9545	2.0817	2.0037	20.471	47.372	43.22
#3	.3927	1.9742	2.0527	1.9948	20.424	47.446	43.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001S Acquired: 12/26/2019 15:33:58 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901S

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2707	1.9218	51.283	1.9976	.39102	.41426	.40456
Stddev	.0280	.0165	.097	.0112	.00234	.00194	.00529
%RSD	1.2342	.85975	.18917	.55877	.59847	.46852	1.3085
#1	2.2401	1.9119	51.174	1.9996	.39115	.41649	.39845
#2	2.2950	1.9127	51.316	1.9856	.38862	.41329	.40779
#3	2.2772	1.9409	51.360	2.0076	.39330	.41298	.40745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.2049	.38878	1.071	.4065	.82630	-.0034	1.9856
Stddev	.0307	.00237	.003	.0057	.00745	.0234	.0316
%RSD	.49418	.61008	.2752	1.412	.90187	693.3	1.5894
#1	6.1766	.38866	1.067	.4006	.82232	.0164	1.9525
#2	6.2007	.38646	1.071	.4120	.82169	-.0292	2.0153
#3	6.2375	.39120	1.073	.4070	.83490	.0027	1.9890
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20113-001S Acquired: 12/26/2019 15:33:58 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901S

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0447	-.0120	2.0177
Stddev	.0005	.0106	.0086
%RSD	1.080	88.63	.42876
#1	-.0451	-.0106	2.0176
#2	-.0448	-.0021	2.0091
#3	-.0442	-.0232	2.0264
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2887.7	272280.	15715.
Stddev	10.8	3869.	48.
%RSD	.37262	1.4210	.30542
#1	2876.1	275810.	15760.
#2	2897.3	268140.	15664.
#3	2889.6	272890.	15722.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.397%	102.57%	95.380%
Range			

Sample Name: UL20113-001SD Acquired: 12/26/2019 15:39:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901SD

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41806	19.795	.40928	.4209	2.1019	2.0477	62.172
Stddev	.00941	.116	.00224	.0132	.0209	.0523	.124
%RSD	2.2514	.58682	.54634	3.141	.99613	2.5523	.19934
#1	.42700	19.666	.40966	.4330	2.0778	2.0951	62.095
#2	.40824	19.892	.41130	.4068	2.1155	1.9917	62.106
#3	.41894	19.826	.40687	.4230	2.1124	2.0564	62.315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3890	1.9531	2.0505	1.9845	20.158	46.886	42.75
Stddev	.0026	.0109	.0439	.0422	.109	.091	.21
%RSD	.6801	.55932	2.1387	2.1254	.54052	.19363	.5010
#1	.3901	1.9607	2.0901	2.0184	20.034	46.827	42.60
#2	.3909	1.9581	2.0033	1.9372	20.200	46.990	43.00
#3	.3860	1.9406	2.0581	1.9978	20.239	46.840	42.66
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001SD Acquired: 12/26/2019 15:39:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901SD

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2672	1.9159	50.563	1.9857	.38764	.40727	.40209
Stddev	.0471	.0120	.281	.0076	.00178	.00348	.00331
%RSD	2.0760	.62848	.55516	.38333	.45977	.85503	.82226
#1	2.3089	1.9238	50.246	1.9904	.38705	.41071	.40017
#2	2.2161	1.9220	50.778	1.9899	.38965	.40735	.40590
#3	2.2764	1.9021	50.665	1.9770	.38624	.40375	.40019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.0779	.38444	1.058	.4051	.82028	.0034	1.9860
Stddev	.0484	.00256	.007	.0069	.00741	.0105	.0427
%RSD	.79660	.66623	.6771	1.695	.90387	312.0	2.1476
#1	6.1015	.38613	1.050	.4097	.82106	.0154	2.0216
#2	6.1099	.38568	1.062	.3972	.82728	-.0013	1.9387
#3	6.0222	.38149	1.063	.4083	.81251	-.0040	1.9977
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20113-001SD Acquired: 12/26/2019 15:39:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: D12181901SD

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0439	-.0253	2.0067
Stddev	.0016	.0093	.0093
%RSD	3.731	36.76	.46157
#1	-.0422	-.0264	2.0134
#2	-.0455	-.0340	2.0106
#3	-.0441	-.0155	1.9962
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2871.6	267750.	15624.
Stddev	9.3	9273.	143.
%RSD	.32332	3.4635	.91679
#1	2867.4	258850.	15760.
#2	2865.1	277360.	15475.
#3	2882.2	267030.	15637.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.843%	100.86%	94.825%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 15:44:56 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.48823	23.847	.47902	.4735	2.5131	2.4211	48.376
Stddev	.00392	.168	.00061	.0054	.0182	.0404	.237
%RSD	.80372	.70474	.12678	1.148	.72598	1.6676	.48985
#1	.48695	23.671	.47857	.4701	2.4933	2.4055	48.117
#2	.48510	23.866	.47879	.4706	2.5166	2.3908	48.431
#3	.49263	24.005	.47971	.4798	2.5293	2.4669	48.581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4727	2.4129	2.4519	2.3736	23.253	54.110	49.08
Stddev	.0013	.0050	.0182	.0146	.197	.015	.34
%RSD	.2772	.20947	.74296	.61492	.84670	.02735	.6889
#1	.4728	2.4114	2.4360	2.3743	23.034	54.124	48.69
#2	.4714	2.4088	2.4478	2.3587	23.310	54.111	49.21
#3	.4740	2.4186	2.4718	2.3878	23.416	54.094	49.33
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 15:44:56 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4507	2.4370	52.017	2.4502	.47498	.50130	.49260
Stddev	.0102	.0048	.291	.0052	.00249	.00350	.00159
%RSD	.41458	.19614	.56022	.21179	.52486	.69865	.32293
#1	2.4446	2.4328	51.701	2.4547	.47376	.50503	.49309
#2	2.4451	2.4360	52.075	2.4445	.47334	.50079	.49082
#3	2.4624	2.4422	52.275	2.4512	.47785	.49809	.49389
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4012	.47541	2.471	.4771	.99141	2.465	2.3804
Stddev	.0078	.00197	.008	.0038	.00346	.038	.0259
%RSD	.32662	.41510	.3307	.8057	.34879	1.546	1.0893
#1	2.3924	.47352	2.461	.4734	.98910	2.506	2.3566
#2	2.4037	.47525	2.475	.4767	.98975	2.459	2.3765
#3	2.4075	.47745	2.475	.4811	.99539	2.431	2.4080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 15:44:56 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.369	F 2.014	2.4754
Stddev	.013	.018	.0048
%RSD	.5590	.8673	.19260
#1	2.354	1.996	2.4805
#2	2.374	2.015	2.4710
#3	2.379	2.031	2.4747
Check ?	Chk Pass	Chk Fail	Chk Pass
Value		2.500	
Range		-10.40%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2829.3	271290.	15369.
Stddev	10.3	5317.	198.
%RSD	.36397	1.9600	1.2889
#1	2822.4	275110.	15578.
#2	2841.1	273540.	15347.
#3	2824.4	265210.	15183.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 15:50:23 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	-.02623	-.00004	.0002	-.00037	.00019	-.49578
Stddev	.00044	.01244	.00092	.0005	.00027	.00004	.00078
%RSD	1383.9	47.434	2382.1	266.8	74.493	20.885	.15784
#1	-.00052	-.01660	.00092	-.0004	-.00017	.00016	-.49651
#2	.00008	-.02180	-.00091	.0004	-.00026	.00024	-.49495
#3	.00034	-.04028	-.00012	.0005	-.00068	.00018	-.49588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00078	-.00038	.00079	-.00529	-.28818	-.5236
Stddev	.0001	.00019	.00033	.00109	.00150	.04325	.0117
%RSD	105.3	24.863	87.860	138.53	28.426	15.009	2.229
#1	-.0000	-.00059	-.00060	.00070	-.00431	-.23829	-.5252
#2	.0002	-.00078	-.00055	-.00026	-.00702	-.31505	-.5112
#3	.0001	-.00098	.00000	.00192	-.00453	-.31121	-.5344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 15:50:23 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00084	.00475	-.24554	-.00115	-.00056	-.00083	.00125
Stddev	.00005	.00181	.05865	.00023	.00134	.00215	.00106
%RSD	5.9150	38.106	23.884	19.586	240.63	259.71	84.558
#1	-.00084	.00680	-.20957	-.00130	-.00189	-.00327	.00014
#2	-.00089	.00408	-.31322	-.00089	-.00058	.00002	.00137
#3	-.00079	.00337	-.21385	-.00127	.00080	.00077	.00224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01804	-.00143	-.0003	-.0015	-.00238	-.0196	-.00145
Stddev	.00265	.00072	.0001	.0002	.00183	.0132	.00113
%RSD	14.692	50.178	21.55	15.44	76.980	67.34	77.923
#1	.02099	-.00097	-.0003	-.0014	-.00447	-.0289	-.00162
#2	.01586	-.00107	-.0004	-.0014	-.00104	-.0045	-.00025
#3	.01728	-.00226	-.0003	-.0018	-.00163	-.0253	-.00249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 15:50:23 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0033	-.0158	-.00041
Stddev	.0024	.0217	.00010
%RSD	71.49	136.7	23.878
#1	.0055	.0066	-.00047
#2	.0035	-.0175	-.00046
#3	.0008	-.0366	-.00030
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2993.0	269990.	15059.
Stddev	5.8	3001.	103.
%RSD	.19466	1.1116	.68385
#1	2993.2	270680.	14991.
#2	2998.7	266700.	15177.
#3	2987.0	272580.	15007.

Sample Name: UL20113-001L(5) Acquired: 12/26/2019 15:55:56 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: 19121909L

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00064	-.00547	.00102	.0051	.00314	.00008	4.0406
Stddev	.00011	.01122	.00050	.0008	.00012	.00010	.1289
%RSD	16.967	205.31	48.914	14.81	3.8904	138.89	3.1910
#1	-.00074	-.00224	.00137	.0050	.00322	.00000	3.9424
#2	-.00064	-.01795	.00124	.0044	.00300	.00003	3.9928
#3	-.00052	.00379	.00045	.0059	.00320	.00020	4.1866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00089	-.00047	.00230	.21130	.16659	.0325
Stddev	.0003	.00027	.00019	.00152	.00831	.07683	.0128
%RSD	308.9	30.018	39.840	66.244	3.9342	46.121	39.26
#1	-.0001	-.00112	-.00027	.00305	.20469	.16680	.0277
#2	-.0001	-.00095	-.00064	.00330	.20859	.24332	.0229
#3	.0004	-.00060	-.00050	.00055	.22063	.08965	.0470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001L(5) Acquired: 12/26/2019 15:55:56 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: 19121909L

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04525	.00073	1.2109	.00062	-.00061	-.00035	-.00079
Stddev	.00197	.00013	.0281	.00020	.00133	.00137	.00165
%RSD	4.3449	17.259	2.3193	32.763	216.83	386.70	208.87
#1	.04327	.00066	1.2363	.00039	.00091	.00019	.00111
#2	.04529	.00088	1.1807	.00067	-.00156	.00066	-.00169
#3	.04720	.00066	1.2156	.00079	-.00118	-.00191	-.00179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.77673	-.00125	.0096	-.0012	-.00231	-.0254	-.00238
Stddev	.02156	.00026	.0001	.0004	.00220	.0014	.00220
%RSD	2.7753	20.598	1.502	36.74	95.175	5.547	92.591
#1	.75587	-.00145	.0094	-.0010	-.00084	-.0270	-.00461
#2	.77539	-.00133	.0096	-.0008	-.00484	-.0249	-.00232
#3	.79893	-.00096	.0097	-.0016	-.00126	-.0243	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001L(5) Acquired: 12/26/2019 15:55:56 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: 19121909L

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0000	-.0071	.00119
Stddev	.0009	.0090	.00008
%RSD	12910.	127.4	6.8320
#1	-.0004	-.0025	.00115
#2	.0011	-.0174	.00114
#3	-.0006	-.0013	.00129
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3039.3	271930.	15371.
Stddev	8.2	7118.	107.
%RSD	.26975	2.6176	.69386
#1	3047.2	278830.	15249.
#2	3039.9	272350.	15419.
#3	3030.8	264610.	15445.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	104.62%	102.44%	93.290%
Range			

Sample Name: UL20113-001A Acquired: 12/26/2019 16:01:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: 19121909A

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40937	19.237	.40175	.4141	2.0269	2.0183	60.329
Stddev	.00311	.090	.00122	.0015	.0079	.0225	.076
%RSD	.75856	.46699	.30423	.3510	.39015	1.1159	.12676
#1	.41120	19.298	.40224	.4124	2.0348	2.0314	60.285
#2	.40578	19.280	.40265	.4150	2.0271	1.9923	60.285
#3	.41112	19.134	.40036	.4148	2.0189	2.0313	60.417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3815	1.9146	2.0040	1.9511	19.574	46.482	42.09
Stddev	.0009	.0053	.0099	.0125	.051	.050	.32
%RSD	.2428	.27861	.49183	.63875	.25859	.10749	.7684
#1	.3818	1.9124	2.0082	1.9433	19.633	46.524	41.99
#2	.3804	1.9107	1.9928	1.9444	19.545	46.495	42.45
#3	.3822	1.9207	2.0111	1.9654	19.545	46.427	41.83
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20113-001A Acquired: 12/26/2019 16:01:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: 19121909A

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2222	1.8832	49.287	1.9558	.38005	.40621	.39573
Stddev	.0076	.0025	.107	.0021	.00396	.00191	.00067
%RSD	.34237	.13180	.21645	.10932	1.0415	.47047	.17012
#1	2.2224	1.8803	49.350	1.9581	.37910	.40814	.39554
#2	2.2146	1.8845	49.347	1.9540	.37666	.40618	.39647
#3	2.2298	1.8847	49.164	1.9553	.38440	.40432	.39516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.8004	.37873	1.035	.3948	.80770	-.0119	1.9260
Stddev	.0270	.00168	.001	.0022	.00088	.0375	.0102
%RSD	.46620	.44340	.0772	.5683	.10865	316.1	.52726
#1	5.7863	.37761	1.035	.3940	.80687	.0312	1.9261
#2	5.7833	.37792	1.036	.3931	.80862	-.0296	1.9158
#3	5.8316	.38066	1.034	.3974	.80763	-.0373	1.9361
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20113-001A Acquired: 12/26/2019 16:01:26 Type: Unk
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 200.7 PREP/2 Custom ID2: Custom ID3:
Comment: 19121909A

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0446	-.0126	1.9776
Stddev	.0001	.0077	.0071
%RSD	.1507	60.77	.35900
#1	-.0447	-.0209	1.9857
#2	-.0446	-.0111	1.9747
#3	-.0446	-.0059	1.9724
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2877.4	269080.	15744.
Stddev	8.2	1225.	178.
%RSD	.28567	.45516	1.1323
#1	2874.1	268480.	15588.
#2	2871.3	270490.	15706.
#3	2886.7	268280.	15938.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.043%	101.37%	95.555%
Range			

Sample Name: CCV MW-12174 Acquired: 12/26/2019 16:06:55 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49657	24.044	.47899	.4769	2.5427	2.4595	48.632
Stddev	.00648	.084	.00139	.0068	.0049	.0239	.021
%RSD	1.3051	.34827	.28978	1.436	.19391	.97062	.04367
#1	.50120	23.995	.47967	.4843	2.5453	2.4836	48.636
#2	.49935	24.141	.47739	.4755	2.5457	2.4590	48.609
#3	.48916	23.997	.47990	.4708	2.5370	2.4359	48.650
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4740	2.4202	2.4981	2.4008	23.453	54.294	49.28
Stddev	.0020	.0126	.0300	.0306	.011	.072	.02
%RSD	.4261	.52026	1.1998	1.2749	.04834	.13284	.0504
#1	.4742	2.4194	2.5076	2.4146	23.458	54.377	49.26
#2	.4719	2.4080	2.5222	2.4221	23.461	54.247	49.31
#3	.4759	2.4332	2.4646	2.3657	23.440	54.258	49.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 16:06:55 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4880	2.4371	52.402	2.4610	.47388	.50631	.49445
Stddev	.0289	.0140	.037	.0104	.00768	.00169	.00206
%RSD	1.1627	.57427	.07035	.42449	1.6206	.33360	.41661
#1	2.5030	2.4343	52.442	2.4603	.47162	.50625	.49479
#2	2.5062	2.4247	52.369	2.4509	.46758	.50465	.49224
#3	2.4546	2.4523	52.394	2.4717	.48243	.50802	.49631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4030	.47676	2.489	.4859	.98390	2.476	2.4227
Stddev	.0092	.00155	.006	.0062	.00649	.029	.0277
%RSD	.38331	.32601	.2281	1.278	.66010	1.162	1.1428
#1	2.4024	.47555	2.494	.4886	.98420	2.507	2.4328
#2	2.3941	.47621	2.483	.4903	.97726	2.469	2.4439
#3	2.4125	.47851	2.489	.4788	.99024	2.451	2.3914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/26/2019 16:06:55 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.374	F 2.036	2.4854
Stddev	.014	.041	.0124
%RSD	.5867	2.024	.49844
#1	2.370	2.071	2.4837
#2	2.363	2.046	2.4740
#3	2.390	1.991	2.4986
Check ?	Chk Pass	Chk Fail	Chk Pass
Value		2.500	
Range		-10.40%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2818.0	268010.	15203.
Stddev	10.0	4658.	21.
%RSD	.35653	1.7379	.14064
#1	2822.0	263800.	15223.
#2	2825.5	267200.	15206.
#3	2806.6	273010.	15181.

Sample Name: CCB IM-9779 Acquired: 12/26/2019 16:12:25 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00026	-.02157	-.00011	-.0003	-.00033	.00032	-.49546
Stddev	.00060	.00533	.00104	.0008	.00055	.00002	.00244
%RSD	229.66	24.718	943.86	228.2	166.47	7.2773	.49174
#1	-.00036	-.02114	.00037	.0002	-.00013	.00033	-.49299
#2	.00031	-.02711	.00061	-.0000	-.00096	.00035	-.49786
#3	.00083	-.01647	-.00130	-.0012	.00009	.00030	-.49553
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00061	-.00019	.00061	-.00333	-.32963	-.5458
Stddev	.0001	.00016	.00017	.00135	.00072	.04188	.0218
%RSD	106.2	25.385	89.127	222.72	21.739	12.707	3.997
#1	.0001	-.00066	-.00025	-.00091	-.00417	-.28131	-.5213
#2	.0000	-.00044	.00000	.00105	-.00293	-.35203	-.5632
#3	.0002	-.00074	-.00032	.00168	-.00290	-.35555	-.5529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/26/2019 16:12:25 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00078	.00467	-.30460	-.00133	-.00184	-.00001	.00209
Stddev	.00004	.00180	.03831	.00017	.00129	.00183	.00258
%RSD	4.9632	38.616	12.576	13.082	69.987	14544.	123.21
#1	-.00076	.00668	-.33152	-.00140	-.00320	-.00166	.00254
#2	-.00075	.00414	-.32153	-.00113	-.00168	-.00035	-.00068
#3	-.00082	.00319	-.26074	-.00145	-.00064	.00197	.00442
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01718	-.00150	-.0004	-.0017	-.00194	-.0116	-.00098
Stddev	.00088	.00058	.0001	.0002	.00200	.0073	.00050
%RSD	5.1084	38.574	31.39	10.21	102.89	62.72	50.638
#1	.01686	-.00159	-.0003	-.0018	-.00224	-.0183	-.00154
#2	.01817	-.00088	-.0005	-.0015	.00019	-.0038	-.00057
#3	.01651	-.00203	-.0003	-.0019	-.00377	-.0127	-.00084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

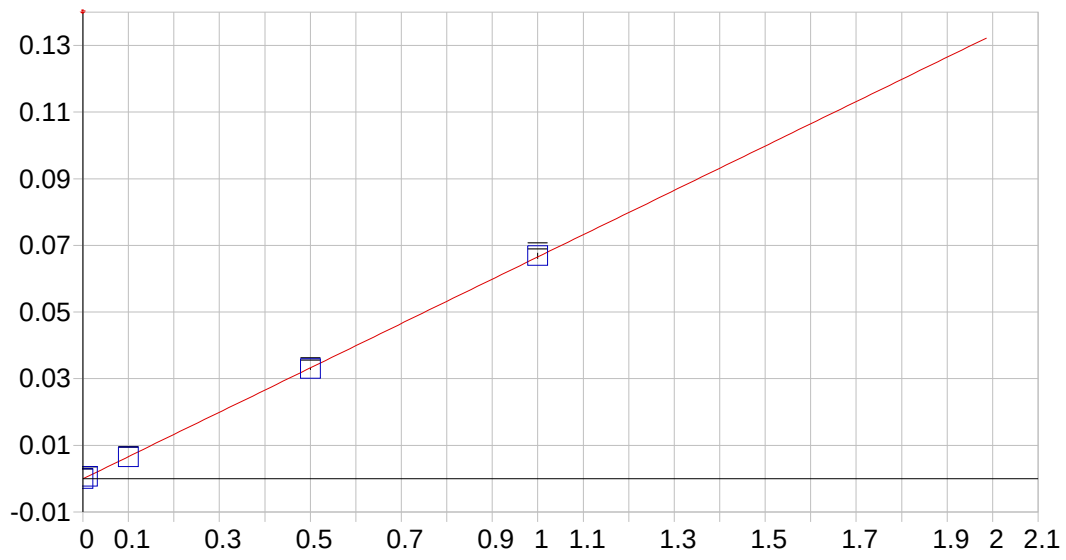
Sample Name: CCB IM-9779 Acquired: 12/26/2019 16:12:25 Type: QC
Method: 6010D 200.7 - 070219(v213) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0026	-.0044	-.00033
Stddev	.0003	.0054	.00004
%RSD	11.76	122.3	12.549
#1	.0023	-.0086	-.00036
#2	.0029	.0017	-.00028
#3	.0026	-.0063	-.00034
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2990.3	267550.	15168.
Stddev	22.3	1893.	69.
%RSD	.74628	.70752	.45651
#1	3006.6	269730.	15229.
#2	2999.6	266320.	15184.
#3	2964.9	266610.	15093.

Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
Ag 328.068 {103}	☒	None				
Al 308.215 {109}	☒	2	Mo	0.024571	0.000000	No
			V	0.014939	0.000000	No
As 189.042 {478}	☒	4	Cr	0.002793	0.000000	No
			Fe	-0.000047	0.000000	No
			Mo	0.001442	0.000000	No
			W	0.001377	0.000000	No
B 249.678 {135}	☒	3	Fe	-0.000858	0.000000	No
			Co	0.002781	0.000000	No
			Mo	-0.003410	0.000000	No
Ba 455.403 { 74}	☒	None				
Be 313.042 {108}	☒	1	V	0.000460	0.000000	No
Ca 317.933 {106}	☒	None				
Cd 228.802 {447}	☒	3	Fe	-0.000010	0.000000	No
			As	0.013594	0.000000	No
			Ba	-0.000120	0.000000	No
Co 228.616 {447}	☒	1	Ti	0.002153	0.000000	No
Cr 267.716 {126}	☒	None				
Cu 327.396 {103}	☒	2	Ca	0.000023	0.000000	No
			Co	0.000299	0.000000	No
Fe 261.187 {129}	☒	None				
K 766.490 { 44}	☒	None				
Mg 279.079 {121}	☒	None				
Mn 257.610 {131}	☒	None				
Mo 202.030 {467}	☒	None				
Na 589.592 { 57}	☒	None				
Ni 231.604 {445}	☒	1	Fe	0.000038	0.000000	No
Pb 220.353 {453}	☒	5	Al	-0.000138	0.000000	No
			Fe	0.000039	0.000000	No
			Cu	0.000163	0.000000	No
			Mo	-0.000924	0.000000	No
			W	-0.008890	0.000000	No
Sb 206.833 {463}	☒	5	Cr	0.007199	0.000000	No
			Ni	-0.000800	0.000000	No
			Mo	-0.000401	0.000000	No
			Sn	-0.003745	0.000000	No
			W	-0.011141	0.000000	No
Sc 227.318 {448}*	☒	None				
Sc 361.384 { 93}*	☒	None				
Sc 361.384 { 93}2*	☒	None				
Se 196.090 {472}	☒	3	Mn	0.000610	0.000000	No
			Fe	-0.000136	0.000000	No
			W	0.011103	0.000000	No
Si 212.412 {459}	☒	None				
Sn 189.989 {477}	☒	None				
Sr 407.771 { 83}	☒	None				
Ti 337.280 {100}	☒	None				
Tl 190.856 {477}	☒	2	Co	0.003326	0.000000	No
			Fe	-0.000026	0.000000	No
U 385.466 { 87}	☒	1	Cr	-0.020066	0.000000	No
V 292.402 {115}	☒	1	Fe	0.000027	0.000000	No
W 224.875 {450}	☒	None				
W 239.709 {140}	☒	None				

	Element, Wavelength and Order	Use?	# IECs	IEC	k1	k2	Calc-in-fit?
	Zn 206.200 {463}	☒	None				

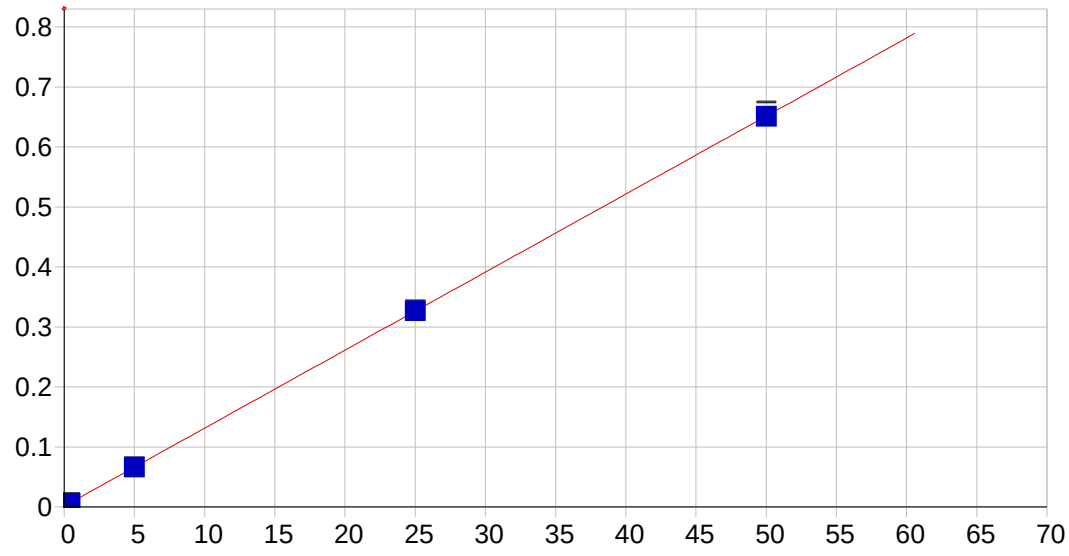


Ag 328.068 {103}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000052	Re-Slope:	1.000000
A1 (Gain):	0.066594	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.000459		
Predicted MQL:	0.001529		

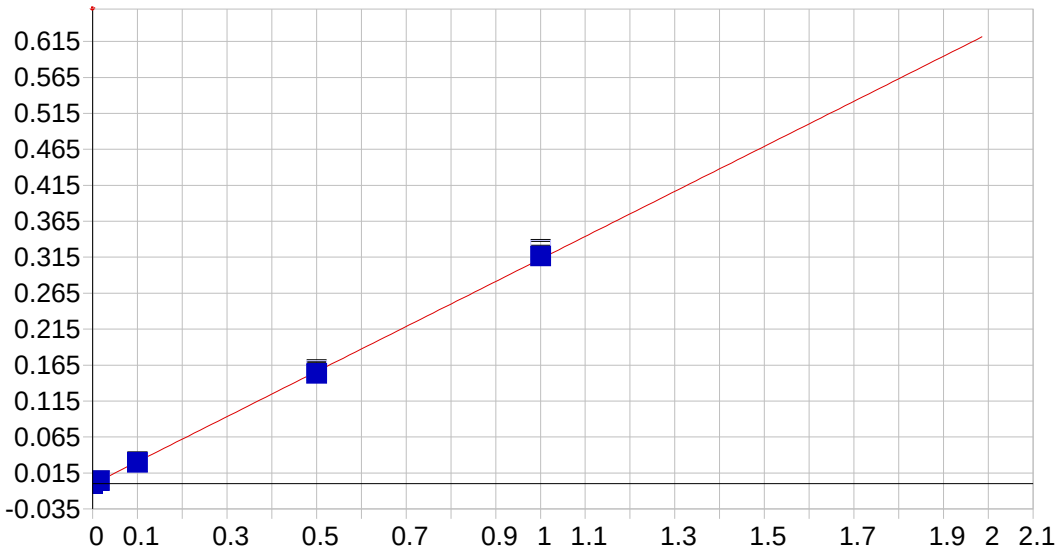
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00016	.000	.000	-.00004	.000	1
CAL1 MW 12	.01000	.00998	-.000	-.228	.00061	.000	1
CAL2 MW12	.10000	.09892	-.001	-1.08	.00654	.000	1
CAL3 MW12	.50000	.49613	-.004	-.774	.03299	.000	1
CAL4 MW12	1.0000	1.0050	.005	.497	.06687	.001	1



Al 308.215 {109}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.001244		Re-Slope:	1.000000		
A1 (Gain):	0.013005		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999998		Status:	OK.		
Std Error of Est:	0.000118					
Predicted MDL:	0.017159					
Predicted MQL:	0.057196					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00080	-.001	.000	.00123	.000	1
CAL1 MW 12	.40000	.39960	-.000	-.101	.00646	.000	1
CAL2 MW12	5.0000	5.0101	.010	.202	.06666	.000	1
CAL3 MW12	25.000	25.059	.059	.238	.32842	.001	1
CAL4 MW12	50.000	49.931	-.069	-.138	.65315	.007	1

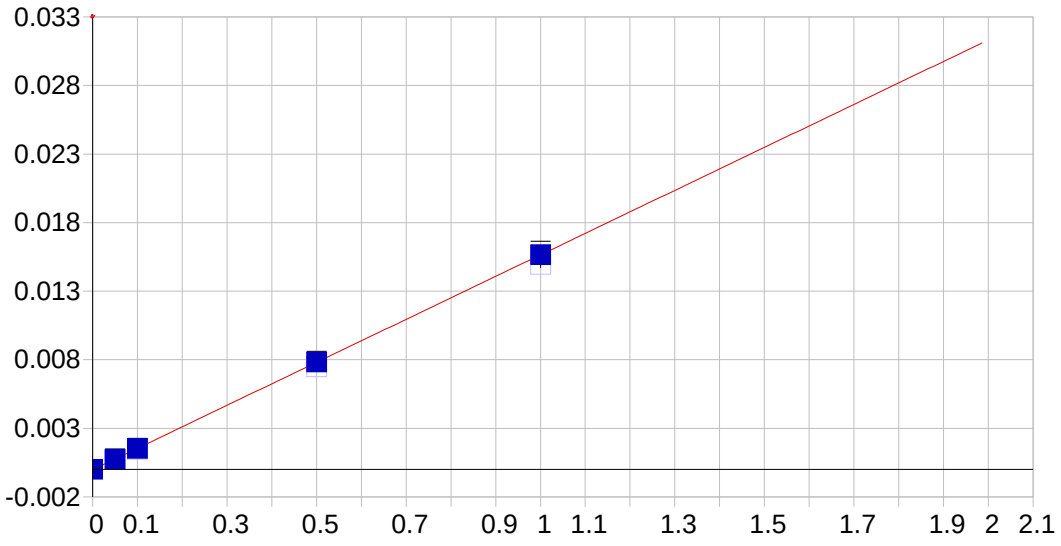


As 189.042 {478}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000648	Re-Slope:	1.000000
A1 (Gain):	0.313199	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999830	Status:	OK.
Std Error of Est:	0.000775		
Predicted MDL:	0.001055		
Predicted MQL:	0.003515		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00098	.001	.000	-.00034	.000	1
CAL1 MW 12	.01500	.01470	-.000	-2.00	.00398	.000	1
CAL2 MW12	.10000	.09581	-.004	-4.19	.03016	.000	1
CAL3 MW12	.50000	.49187	-.008	-1.63	.15743	.001	1
CAL4 MW12	1.0000	1.0126	.013	1.26	.32455	.001	1

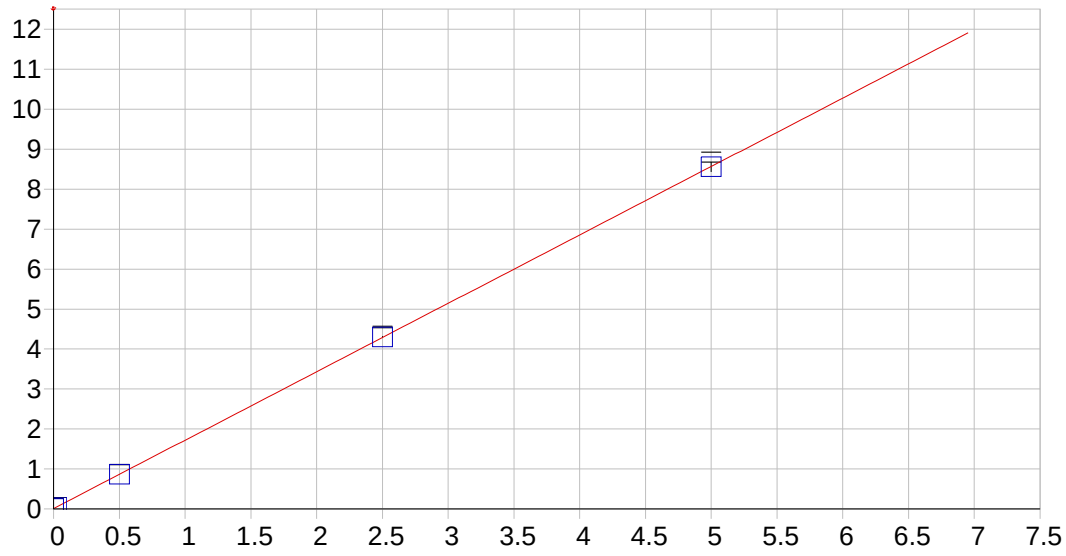


B 249.678 {135}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000023	Re-Slope:	1.000000
A1 (Gain):	0.015672	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999971	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.001000		
Predicted MQL:	0.003334		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00138	.001	.000	-.00000	.000	1
CAL1 MW 12	.05000	.04888	-.001	-2.25	.00074	.000	1
CAL2 MW12	.10000	.09922	-.001	-.780	.00146	.000	1
CAL3 MW12	.50000	.50081	.001	.162	.00746	.000	1
CAL4 MW12	1.0000	1.0011	.001	.115	.01495	.000	1

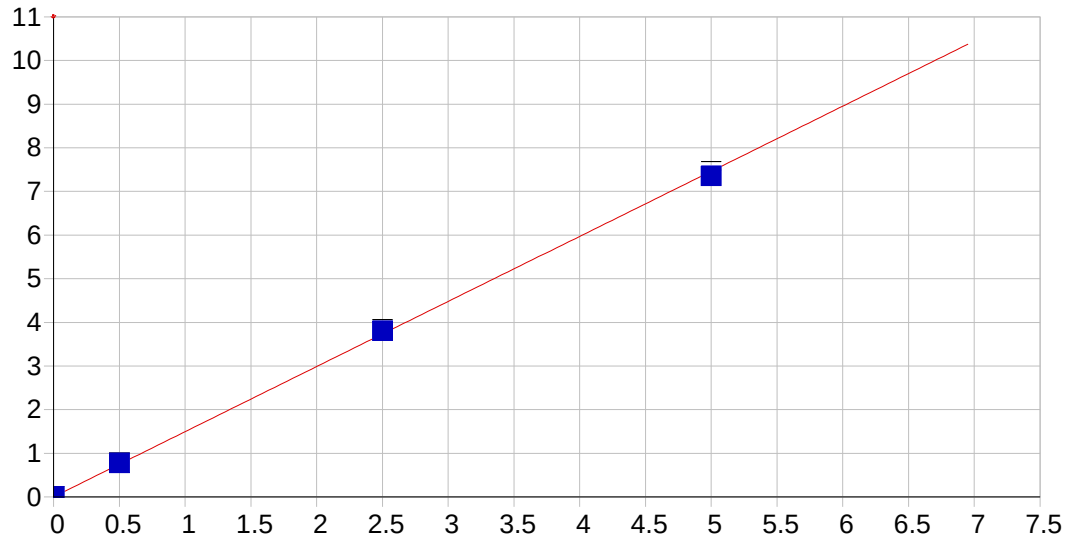


Ba 455.403 { 74}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007722	Re-Slope:	1.000000
A1 (Gain):	1.712148	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.001628		
Predicted MDL:	0.000310		
Predicted MQL:	0.001034		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00033	-.000	.000	.00716	.000	1
CAL1 MW 12	.02500	.02534	.000	1.35	.05110	.000	1
CAL2 MW12	.50000	.49895	-.001	-.210	.86200	.003	1
CAL3 MW12	2.5000	2.5077	.008	.309	4.3013	.019	1
CAL4 MW12	5.0000	4.9930	-.007	-.140	8.5565	.126	1

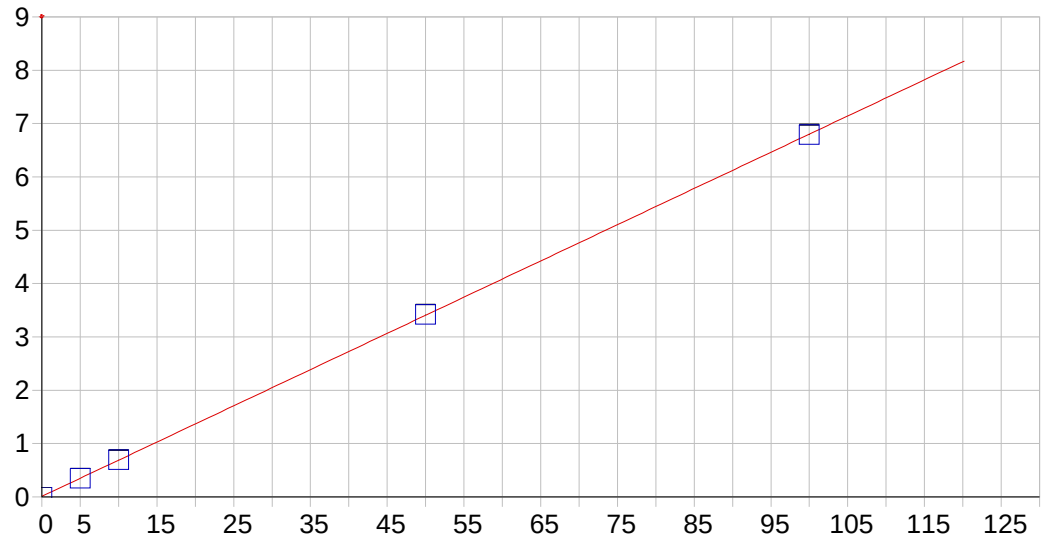


Be 313.042 {108}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002057	Re-Slope:	1.000000
A1 (Gain):	1.492308	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999821	Status:	OK.
Std Error of Est:	0.000230		
Predicted MDL:	0.000016		
Predicted MQL:	0.000055		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00000	-.000	.000	.00206	.000	1
CAL1 MW 12	.00500	.00503	.000	.540	.00959	.000	1
CAL2 MW12	.50000	.52125	.021	4.25	.78027	.003	1
CAL3 MW12	2.5000	2.5492	.049	1.97	3.8080	.028	1
CAL4 MW12	5.0000	4.9295	-.070	-1.41	7.3619	.098	1

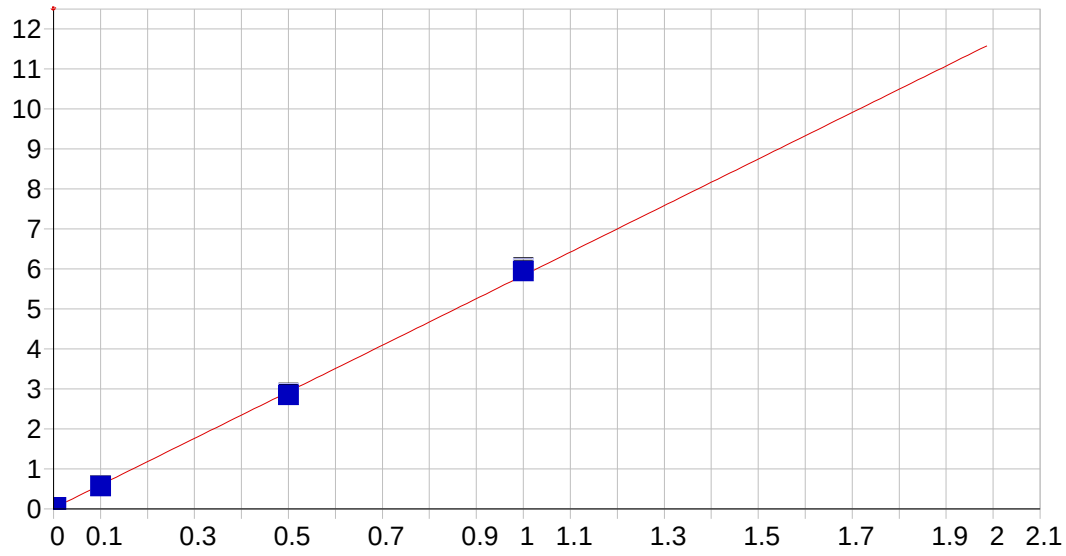


Ca 317.933 {106}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.009684	Re-Slope:	1.000000
A1 (Gain):	0.067926	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.010918		
Predicted MDL:	0.003749		
Predicted MQL:	0.012497		

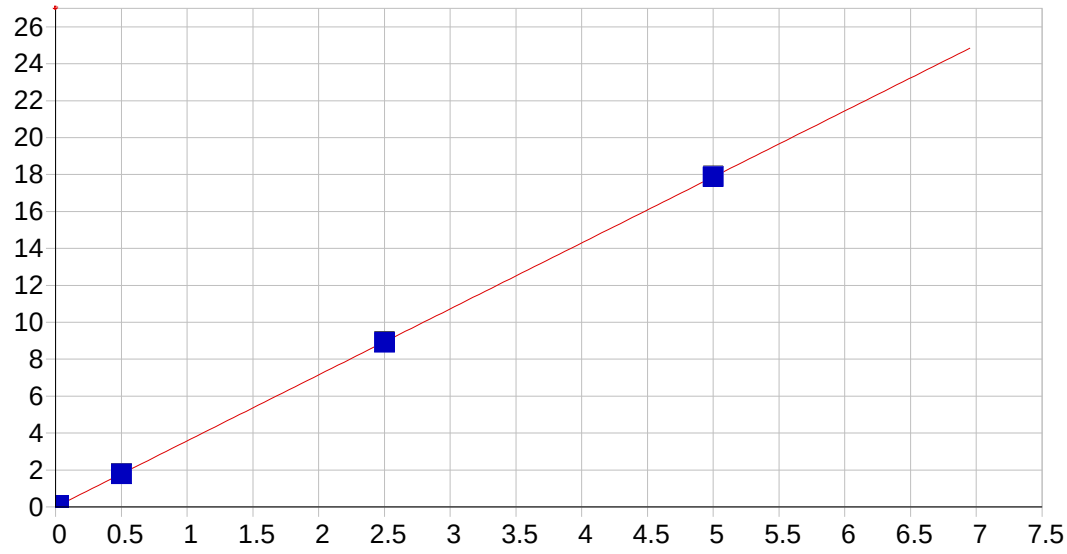
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.13318	-.133	.000	.00064	.000	1
CAL1 MW 12	5.0000	4.9734	-.027	-.532	.34751	.002	1
CAL2 MW12	10.000	10.060	.060	.601	.69303	.001	1
CAL3 MW12	50.000	50.209	.209	.417	3.4202	.003	1
CAL4 MW12	100.00	99.891	-.109	-.109	6.7949	.007	1



Cd 228.802 {447}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.018195		Re-Slope:	1.000000		
A1 (Gain):	5.820859		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999679		Status:	OK.		
Std Error of Est:	0.011881					
Predicted MDL:	0.000166					
Predicted MQL:	0.000554					

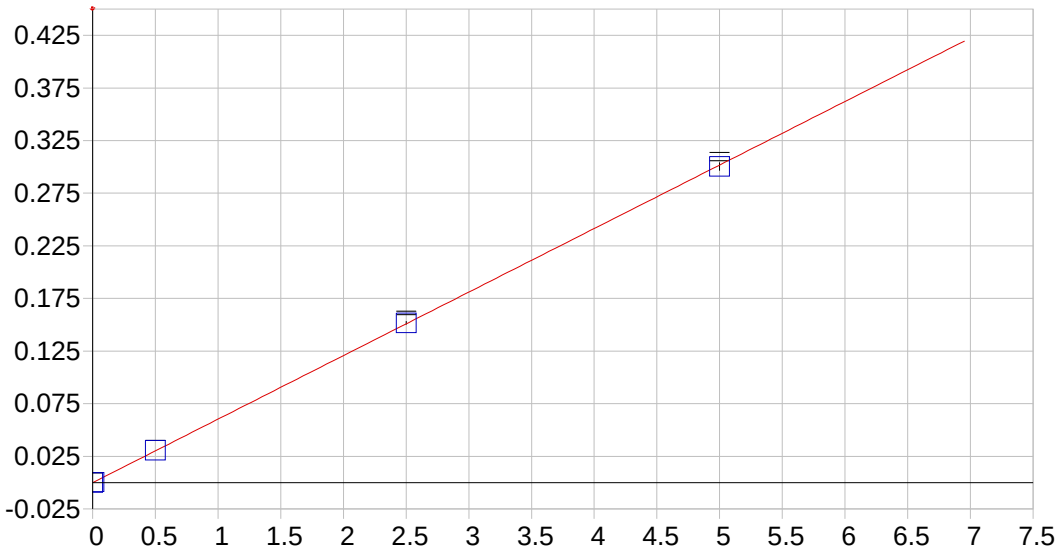
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00043	.000	.000	.02072	.001	1
CAL1 MW 12	.00500	.00486	-.000	-2.76	.04766	.001	1
CAL2 MW12	.10000	.09493	-.005	-5.07	.57806	.002	1
CAL3 MW12	.50000	.48629	-.014	-2.74	2.8852	.015	1
CAL4 MW12	1.0000	1.0189	.019	1.89	6.0219	.008	1



Co 228.616 {447}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.002195		Re-Slope:	1.000000		
A1 (Gain):	3.573696		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999998		Status:	OK.		
Std Error of Est:	0.002633					
Predicted MDL:	0.000201					
Predicted MQL:	0.000668					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00013	.000	.000	.00267	.000	1
CAL1 MW 12	.02500	.02486	-.000	-.565	.09142	.001	1
CAL2 MW12	.50000	.50091	.001	.181	1.7931	.005	1
CAL3 MW12	2.5000	2.4935	-.007	-.261	8.9169	.026	1
CAL4 MW12	5.0000	5.0058	.006	.115	17.899	.018	1

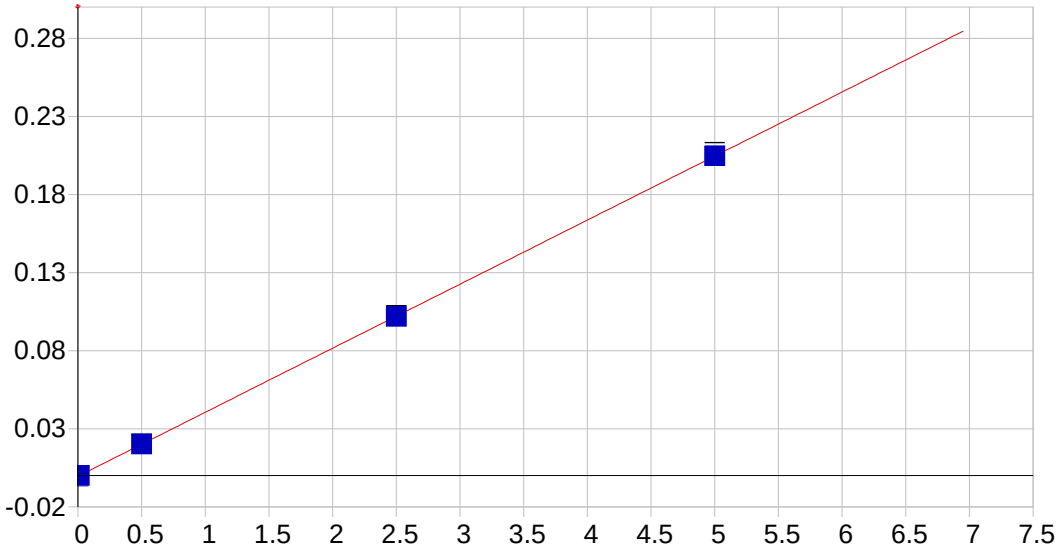


Cr 267.716 {126}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000051	Re-Slope:	1.000000
A1 (Gain):	0.060370	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000105		
Predicted MDL:	0.000327		
Predicted MQL:	0.001091		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00032	-.000	.000	-.00007	.000	1
CAL1 MW 12	.01000	.01014	.000	1.40	.00056	.000	1
CAL2 MW12	.50000	.50842	.008	1.68	.03064	.000	1
CAL3 MW12	2.5000	2.5156	.016	.624	.15182	.002	1
CAL4 MW12	5.0000	4.9758	-.024	-.483	.30034	.004	1

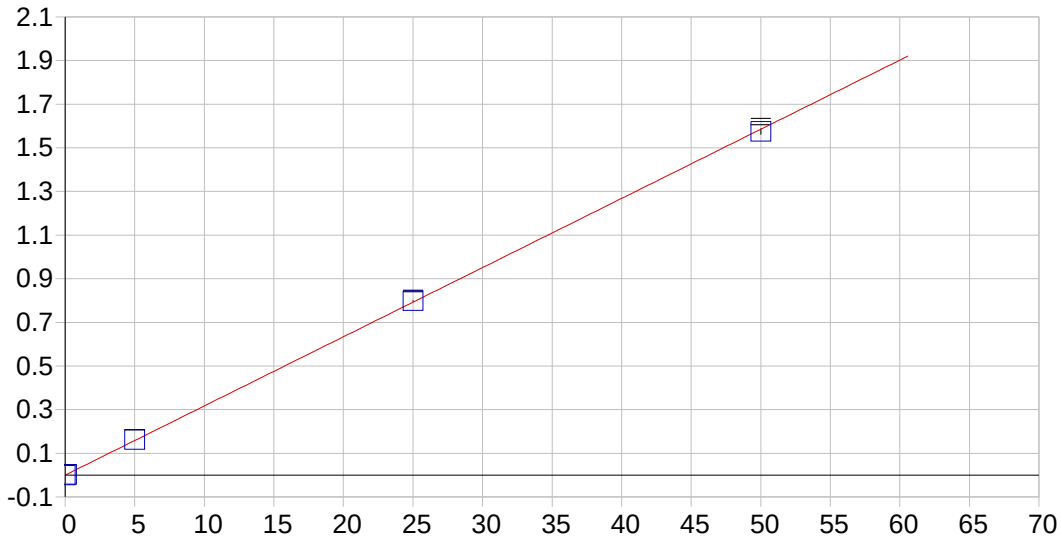


Cu 327.396 {103}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000407	Re-Slope:	1.000000
A1 (Gain):	0.041003	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000033		
Predicted MDL:	0.000786		
Predicted MQL:	0.002619		

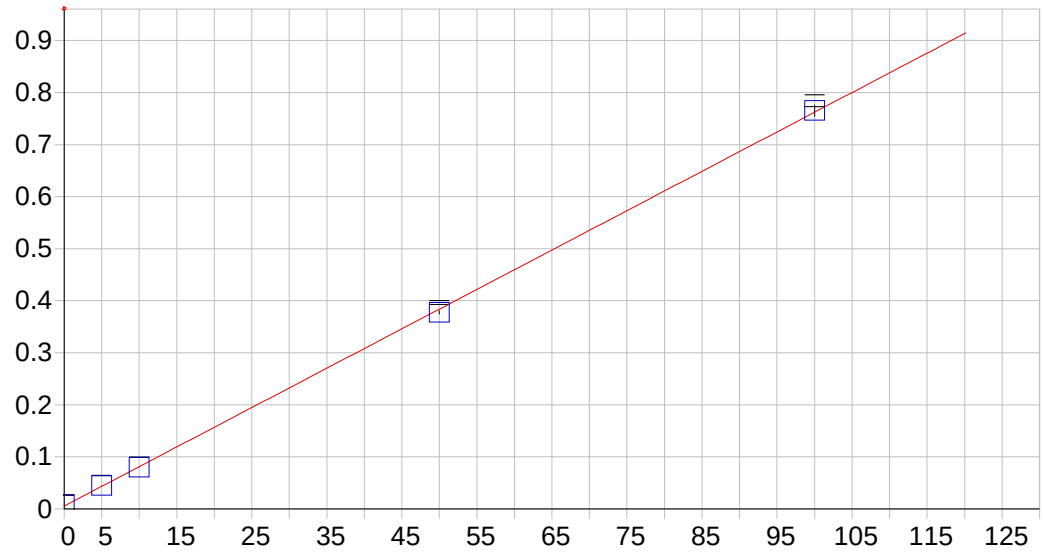
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00047	-.000	.000	-.00043	.000	1
CAL1 MW 12	.01000	.01041	.000	4.10	.00002	.000	1
CAL2 MW12	.50000	.50377	.004	.755	.02026	.000	1
CAL3 MW12	2.5000	2.4949	-.005	-.205	.10197	.001	1
CAL4 MW12	5.0000	5.0009	.001	.018	.20480	.002	1



Fe 261.187 {129}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000078		Re-Slope:	1.000000		
A1 (Gain):	0.031699		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999956		Status:	OK.		
Std Error of Est:	0.000756					
Predicted MDL:	0.004281					
Predicted MQL:	0.014271					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00574	-.006	.000	-.00010	.000	1
CAL1 MW 12	.10000	.10323	.003	3.23	.00335	.000	1
CAL2 MW12	5.0000	5.1178	.118	2.36	.16231	.000	1
CAL3 MW12	25.000	25.201	.201	.805	.79894	.004	1
CAL4 MW12	50.000	49.678	-.322	-.645	1.5748	.015	1

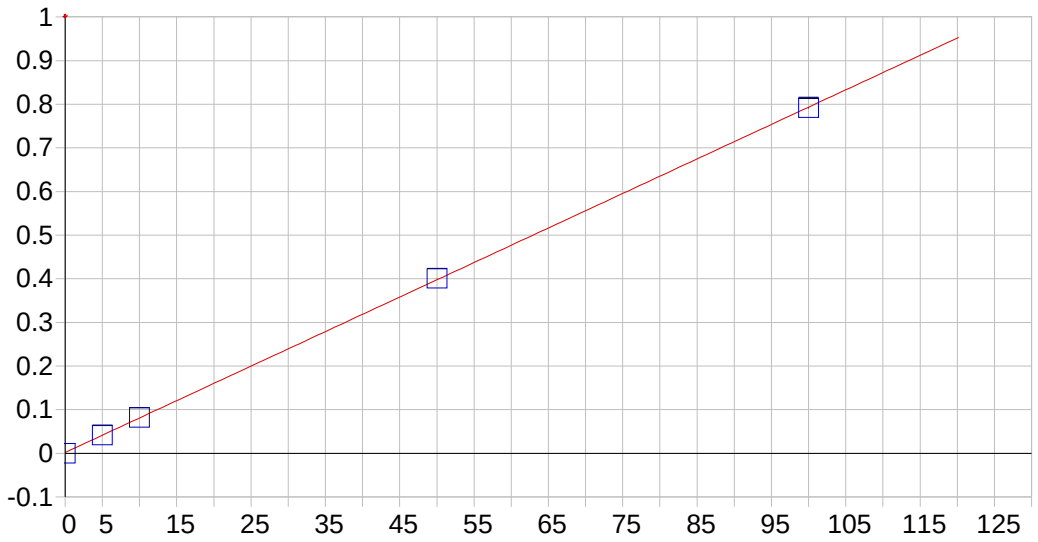


K 766.490 { 44}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.005520	Re-Slope:	1.000000
A1 (Gain):	0.007567	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.004332		
Predicted MDL:	0.117038		
Predicted MQL:	0.390125		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.31753	.318	.000	.00792	.000	1
CAL1 MW 12	5.0000	5.2250	.225	4.50	.04506	.000	1
CAL2 MW12	10.000	9.8566	-.143	-1.43	.08010	.000	1
CAL3 MW12	50.000	49.196	-.804	-1.61	.37776	.004	1
CAL4 MW12	100.00	100.41	.405	.405	.76524	.011	1

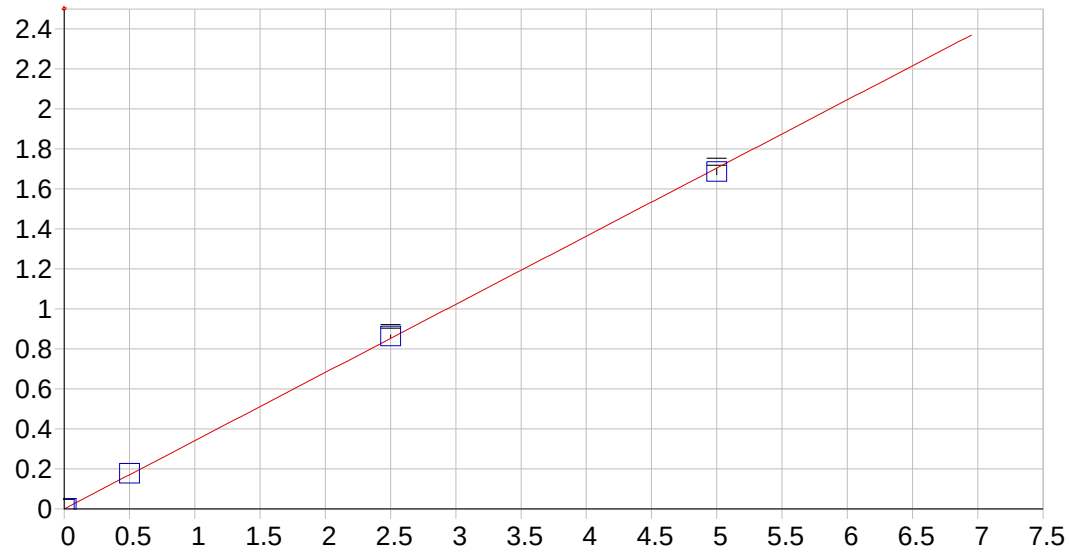


Mg 279.079 {121}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.001925	Re-Slope:	1.000000
A1 (Gain):	0.007915	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.002266		
Predicted MDL:	0.017495		
Predicted MQL:	0.058316		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.24711	-.247	.000	-.00003	.000	1
CAL1 MW 12	5.0000	4.9758	-.024	-.484	.04131	.000	1
CAL2 MW12	10.000	10.094	.094	.939	.08181	.000	1
CAL3 MW12	50.000	50.371	.371	.743	.40059	.001	1
CAL4 MW12	100.00	99.806	-.194	-.194	.79185	.002	1

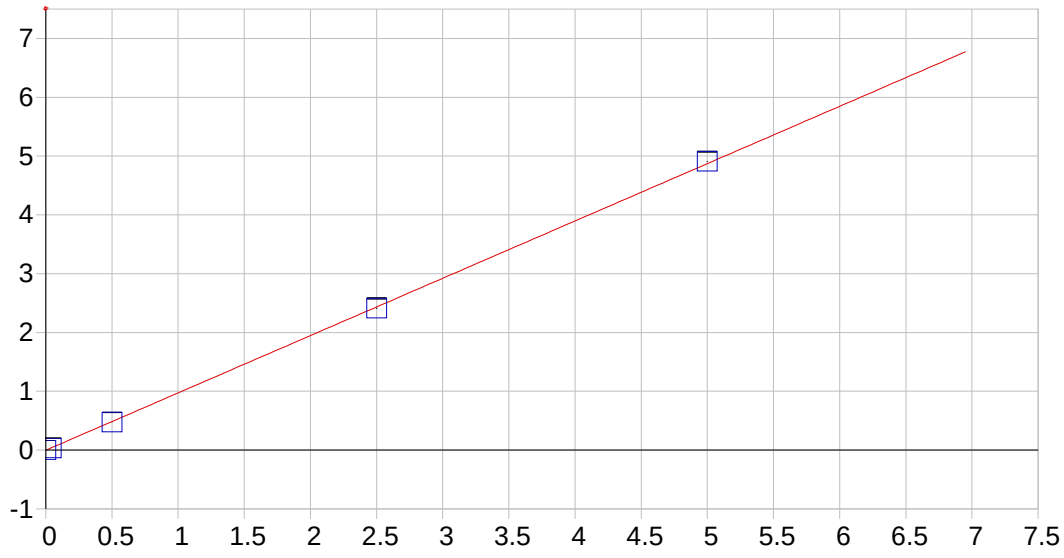


Mn 257.610 {131}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000222	Re-Slope:	1.000000
A1 (Gain):	0.340963	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	0.001561		
Predicted MDL:	0.000052		
Predicted MQL:	0.000172		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00049	-.000	.000	.00005	.000	1
CAL1 MW 12	.01500	.01488	-.000	-.810	.00530	.000	1
CAL2 MW12	.50000	.51903	.019	3.81	.17719	.000	1
CAL3 MW12	2.5000	2.5329	.033	1.32	.86384	.009	1
CAL4 MW12	5.0000	4.9482	-.052	-1.04	1.6874	.018	1

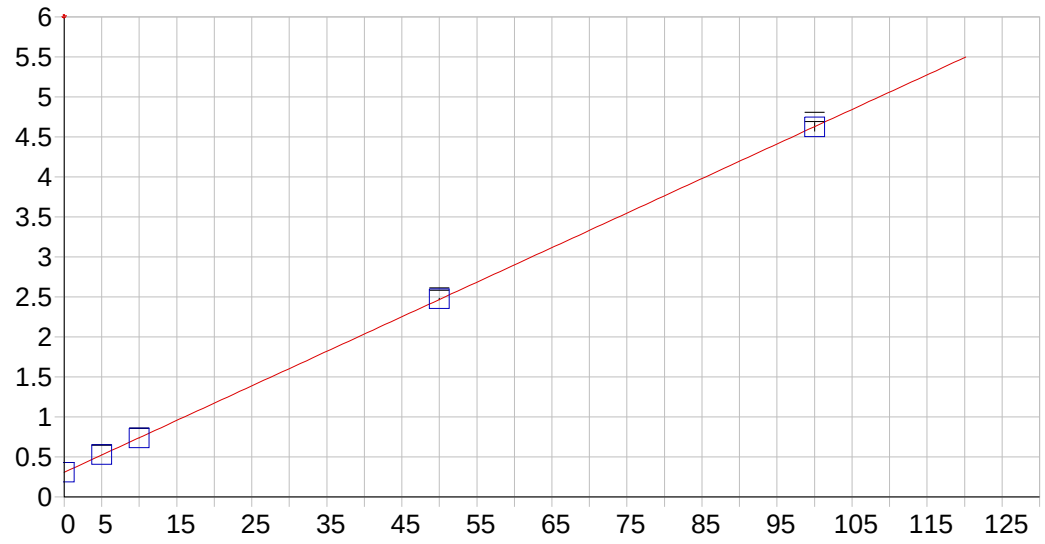


Mo 202.030 {467}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002122	Re-Slope:	1.000000
A1 (Gain):	0.974732	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.005216		
Predicted MDL:	0.000329		
Predicted MQL:	0.001097		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00161	.002	.000	-.00055	.000	1
CAL1 MW 12	.04000	.03951	-.000	-1.23	.03639	.000	1
CAL2 MW12	.50000	.48702	-.013	-2.60	.47260	.004	1
CAL3 MW12	2.5000	2.4764	-.024	-.942	2.4117	.013	1
CAL4 MW12	5.0000	5.0370	.037	.741	4.9076	.008	1

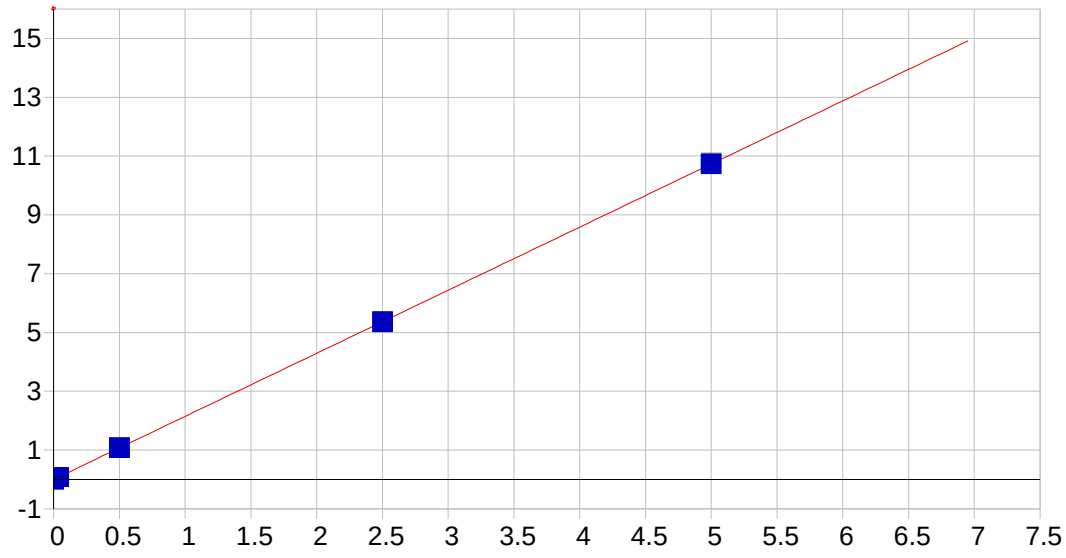


Na 589.592 { 57}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	0.308183	Re-Slope:	1.000000
A1 (Gain):	0.043196	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.005303		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.01815	-.018	.000	.30740	.003	1
CAL1 MW 12	5.0000	5.0623	.062	1.25	.52685	.003	1
CAL2 MW12	10.000	9.8737	-.126	-1.26	.73469	.002	1
CAL3 MW12	50.000	50.145	.145	.290	2.4742	.014	1
CAL4 MW12	100.00	99.937	-.063	-.063	4.6250	.059	1

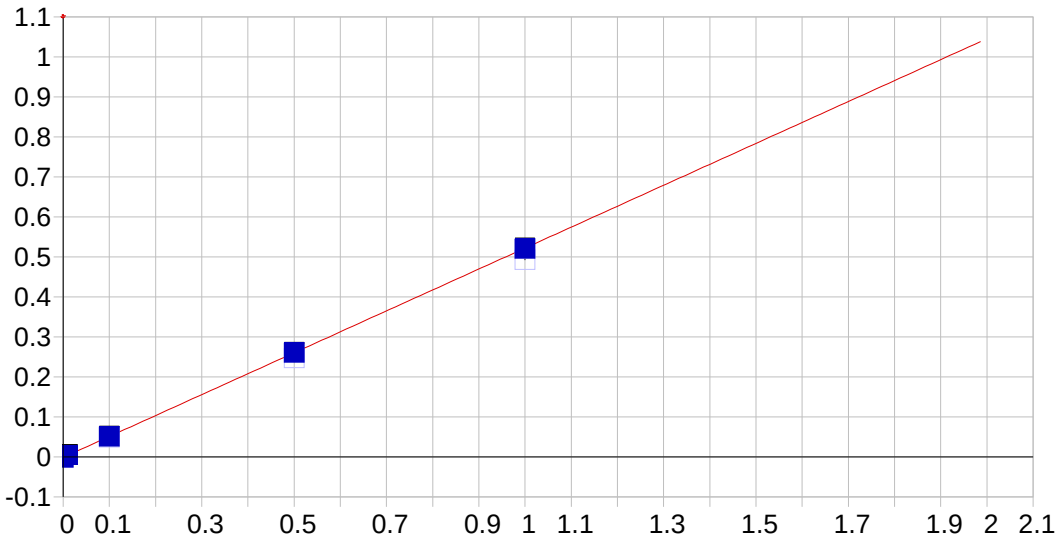


Ni 231.604 {445}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000011	Re-Slope:	1.000000
A1 (Gain):	2.146154	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999997	Status:	OK.
Std Error of Est:	0.002567		
Predicted MDL:	0.000276		
Predicted MQL:	0.000921		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00014	.000	.000	.00030	.000	1
CAL1 MW 12	.04000	.03964	-.000	-.909	.08506	.000	1
CAL2 MW12	.50000	.50367	.004	.733	1.0813	.001	1
CAL3 MW12	2.5000	2.4942	-.006	-.230	5.3551	.017	1
CAL4 MW12	5.0000	5.0025	.002	.049	10.740	.015	1

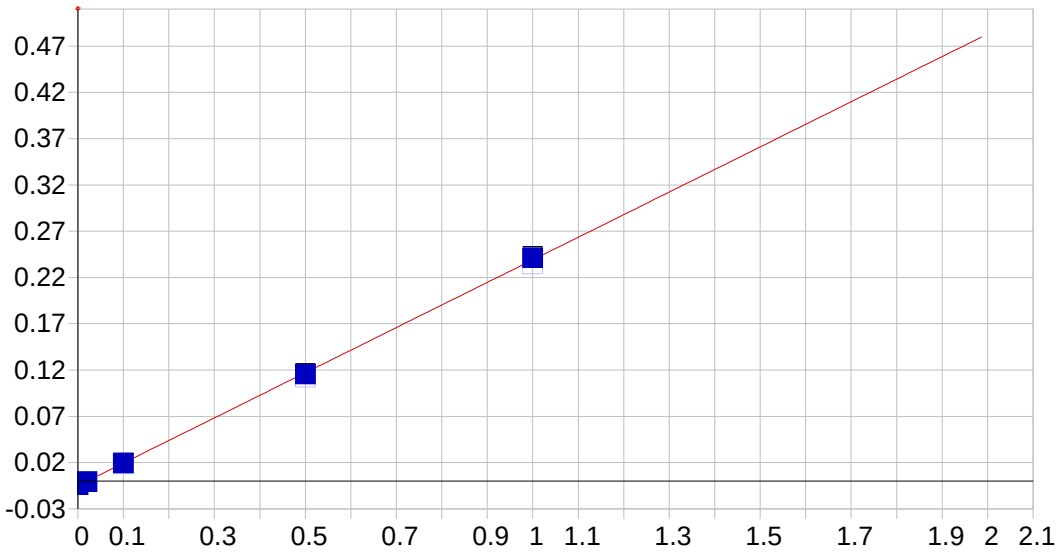


Pb 220.353 {453}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001335	Re-Slope:	1.000000
A1 (Gain):	0.523425	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999914	Status:	OK.
Std Error of Est:	0.000714		
Predicted MDL:	0.001562		
Predicted MQL:	0.005208		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00109	-.001	.000	-.00190	.001	1
CAL1 MW 12	.01000	.01106	.001	10.6	.00441	.001	1
CAL2 MW12	.10000	.10040	.000	.400	.04843	.000	1
CAL3 MW12	.50000	.50068	.001	.136	.24682	.001	1
CAL4 MW12	1.0000	.99781	-.002	-.219	.49311	.001	1

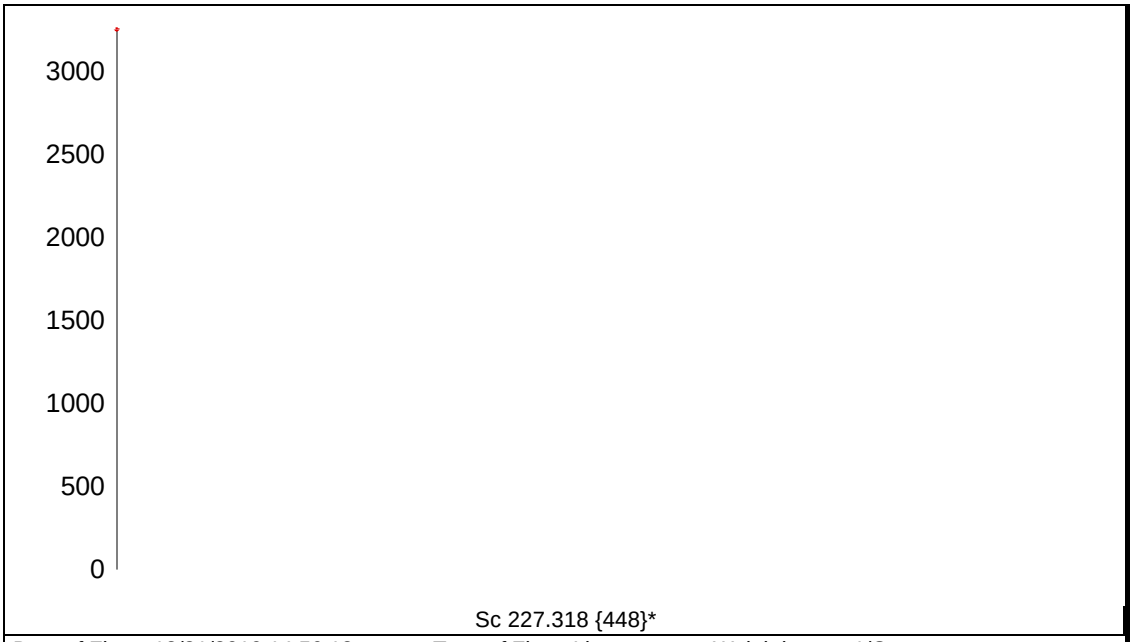


Sb 206.833 {463}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

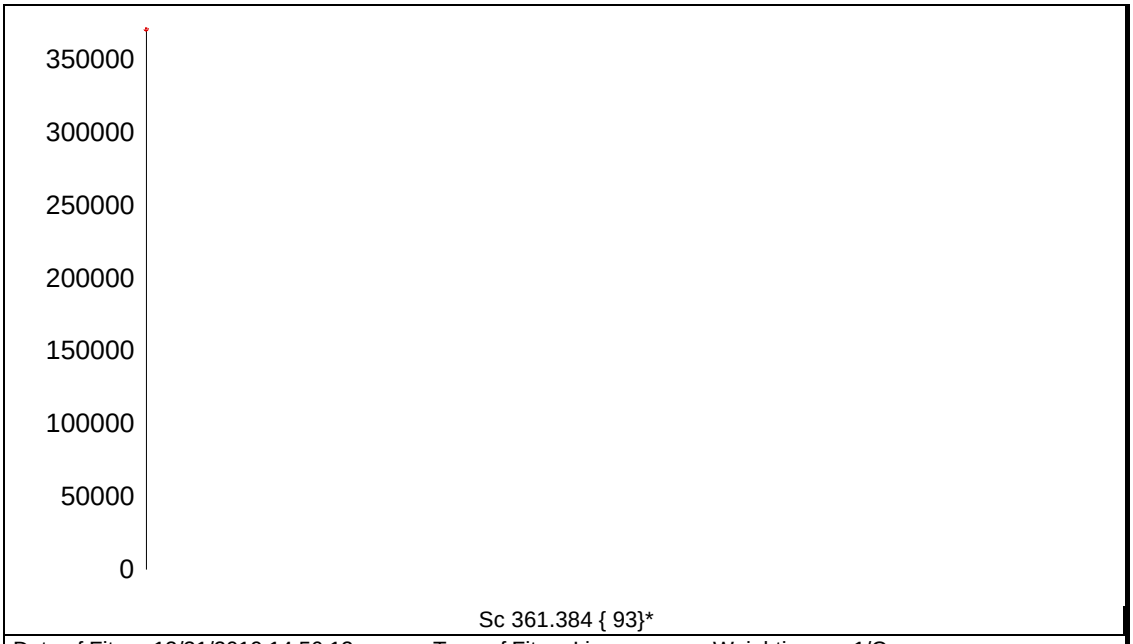
A0 (Offset):	-0.004885	Re-Slope:	1.000000
A1 (Gain):	0.243979	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999659	Status:	OK.
Std Error of Est:	0.000913		
Predicted MDL:	0.001877		
Predicted MQL:	0.006256		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00289	.003	.000	-.00418	.000	1
CAL1 MW 12	.02000	.01736	-.003	-13.2	-.00069	.000	1
CAL2 MW12	.10000	.09902	-.001	-.983	.01855	.000	1
CAL3 MW12	.50000	.49383	-.006	-1.23	.11201	.001	1
CAL4 MW12	1.0000	1.0099	.010	.985	.23431	.001	1



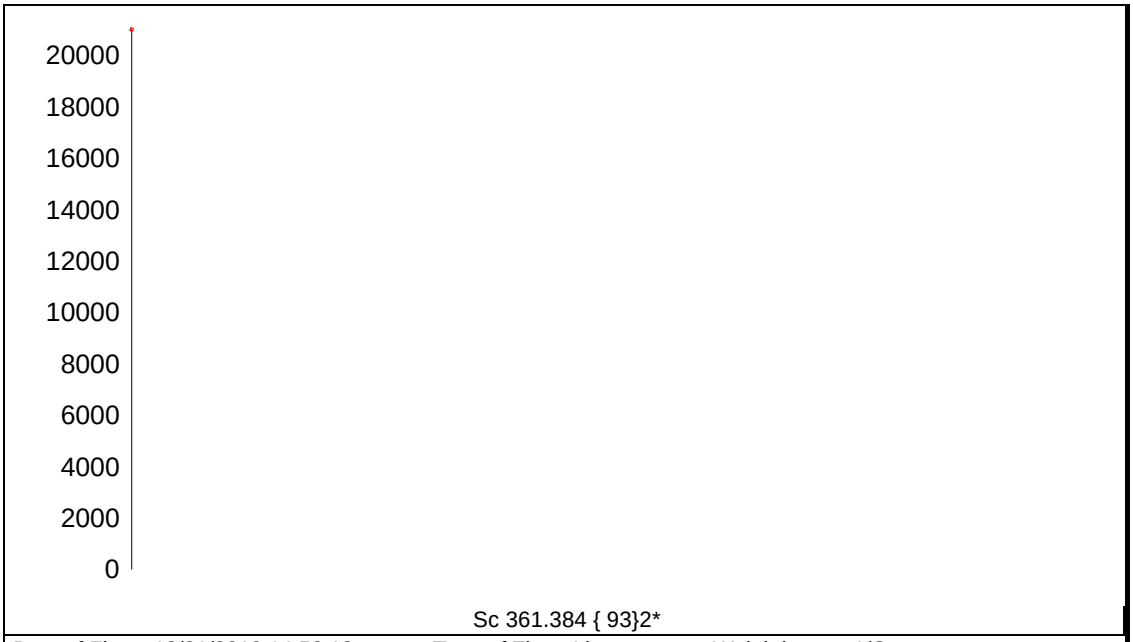
Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	3052.0	7.41	1
CAL1 MW 12	.00000	.00000	.000	.000	3085.1	4.42	1
CAL2 MW12	.00000	.00000	.000	.000	3046.7	10.9	1
CAL3 MW12	.00000	.00000	.000	.000	2903.1	7.36	1
CAL4 MW12	.00000	.00000	.000	.000	2714.5	2.99	1



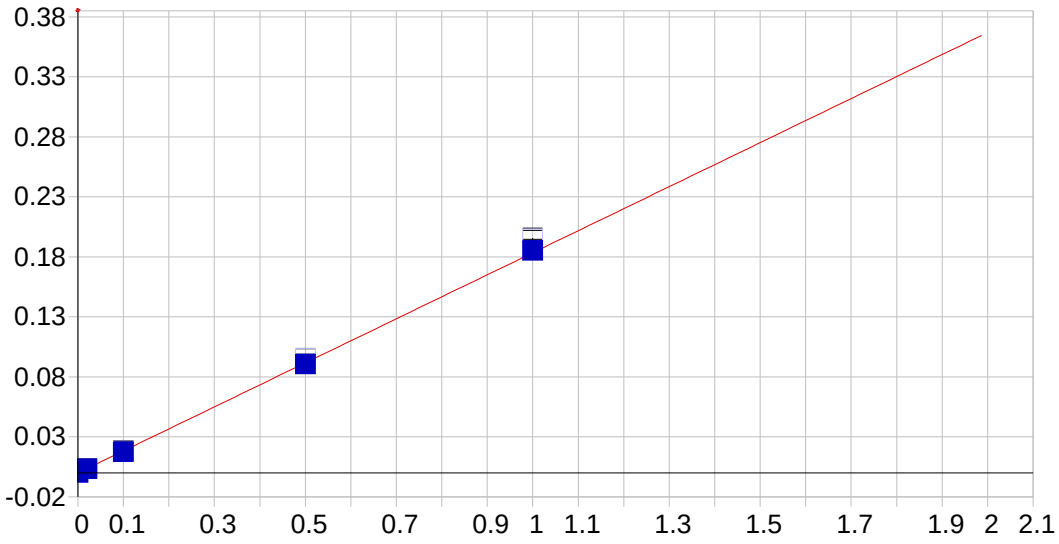
Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	0.000000		Re-Slope:	1.000000		
A1 (Gain):	0.000000		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	339710.	4980.	1
CAL1 MW 12	.00000	.00000	.000	.000	342520.	3580.	1
CAL2 MW12	.00000	.00000	.000	.000	342420.	698.	1
CAL3 MW12	.00000	.00000	.000	.000	329430.	1930.	1
CAL4 MW12	.00000	.00000	.000	.000	313850.	4120.	1



Date of Fit:	12/31/2019 14:56:12		Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):		0.000000		Re-Slope:	1.000000		
A1 (Gain):		0.000000		Y-int:	0.000000		
A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.000000		Status:	Warning	Zero Gain	
Std Error of Est:		0.000000					
Predicted MDL:		n/a					
Predicted MQL:		n/a					

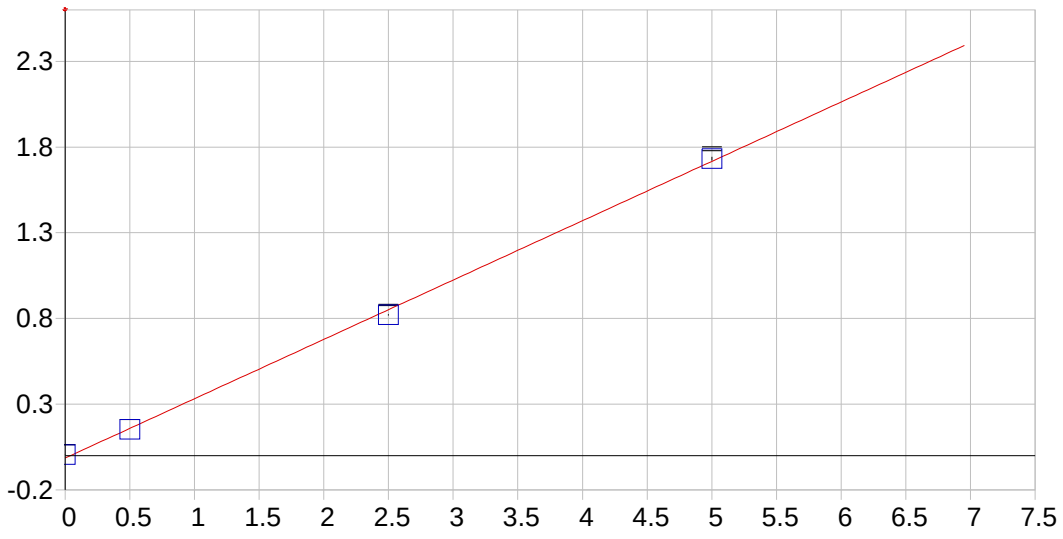
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00000	.000	.000	18454.	214.	1
CAL1 MW 12	.00000	.00000	.000	.000	18779.	116.	1
CAL2 MW12	.00000	.00000	.000	.000	19059.	76.5	1
CAL3 MW12	.00000	.00000	.000	.000	18791.	23.2	1
CAL4 MW12	.00000	.00000	.000	.000	18256.	118.	1



Se 196.090 {472}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	-0.000055		Re-Slope:	1.000000		
A1 (Gain):	0.183489		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999860		Status:	OK.		
Std Error of Est:	0.000477					
Predicted MDL:	0.001829					
Predicted MQL:	0.006097					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00123	.001	.000	.00017	.000	1
CAL1 MW 12	.02000	.01968	-.000	-1.61	.00355	.000	1
CAL2 MW12	.10000	.09561	-.004	-4.39	.01844	.000	1
CAL3 MW12	.50000	.49403	-.006	-1.19	.09534	.000	1
CAL4 MW12	1.0000	1.0107	.011	1.07	.19489	.001	1

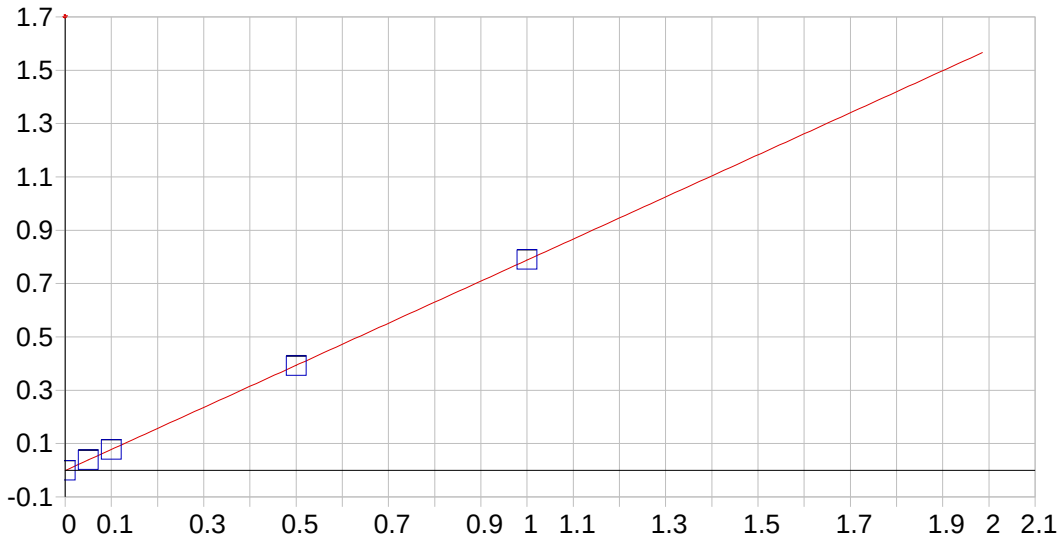


Si 212.412 {459}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	None

A0 (Offset):	-0.014081	Re-Slope:	1.000000
A1 (Gain):	0.346125	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999577	Status:	OK.
Std Error of Est:	0.028046		
Predicted MDL:	0.001319		
Predicted MQL:	0.004398		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.05839	.058	.000	.00613	.000	1
CAL1 MW 12	.50000	.48300	-.017	-3.40	.15310	.000	1
CAL3 MW12	2.5000	2.4138	-.086	-3.45	.82140	.004	1
CAL4 MW12	5.0000	5.0448	.045	.896	1.7320	.011	1

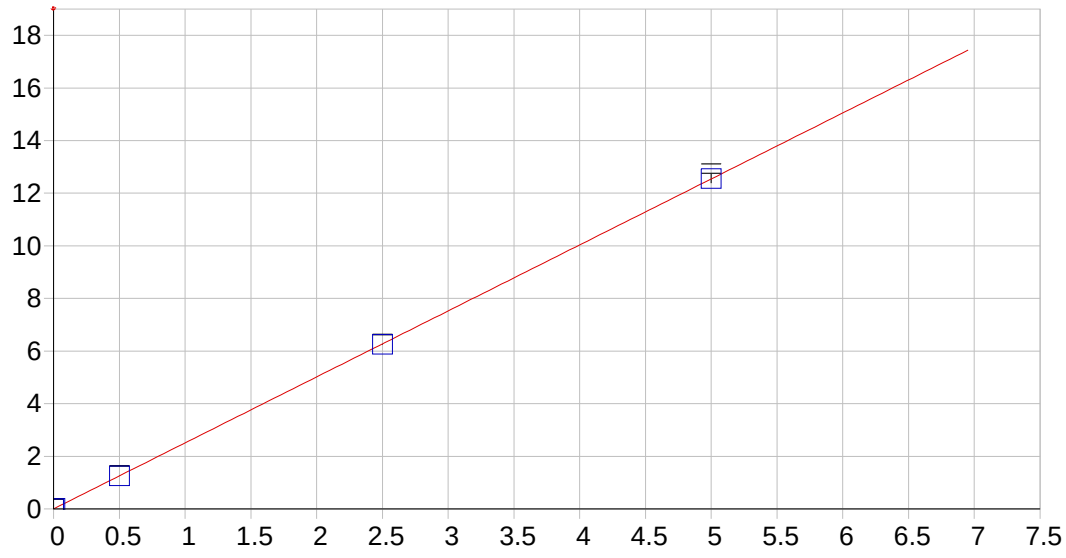


Sn 189.989 {477}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001007	Re-Slope:	1.000000
A1 (Gain):	0.789129	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000560		
Predicted MDL:	0.000516		
Predicted MQL:	0.001720		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00012	.000	.000	-.00092	.000	1
CAL1 MW 12	.05000	.05021	.000	.415	.03861	.000	1
CAL2 MW12	.10000	.09952	-.000	-.481	.07753	.000	1
CAL3 MW12	.50000	.49805	-.002	-.390	.39202	.001	1
CAL4 MW12	1.0000	1.0022	.002	.222	.78988	.000	1

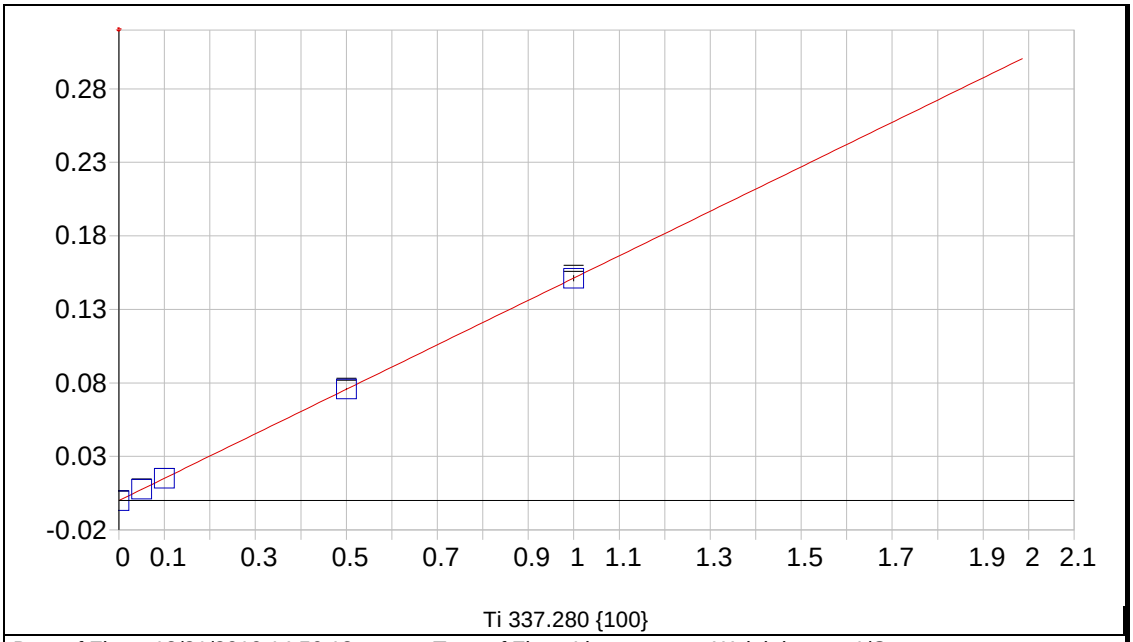


Sr 407.771 { 83}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000720	Re-Slope:	1.000000
A1 (Gain):	2.508638	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.001194		
Predicted MDL:	0.000106		
Predicted MQL:	0.000354		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
CAL1 MW 12	.01000	.00992	-.000	-.835	.02560	.000	1
CAL2 MW12	.50000	.50141	.001	.283	1.2586	.001	1
CAL3 MW12	2.5000	2.4935	-.007	-.261	6.2560	.011	1
CAL4 MW12	5.0000	5.0052	.005	.104	12.557	.174	1
Blank	.00000	.00007	.000	.000	.00090	.000	1

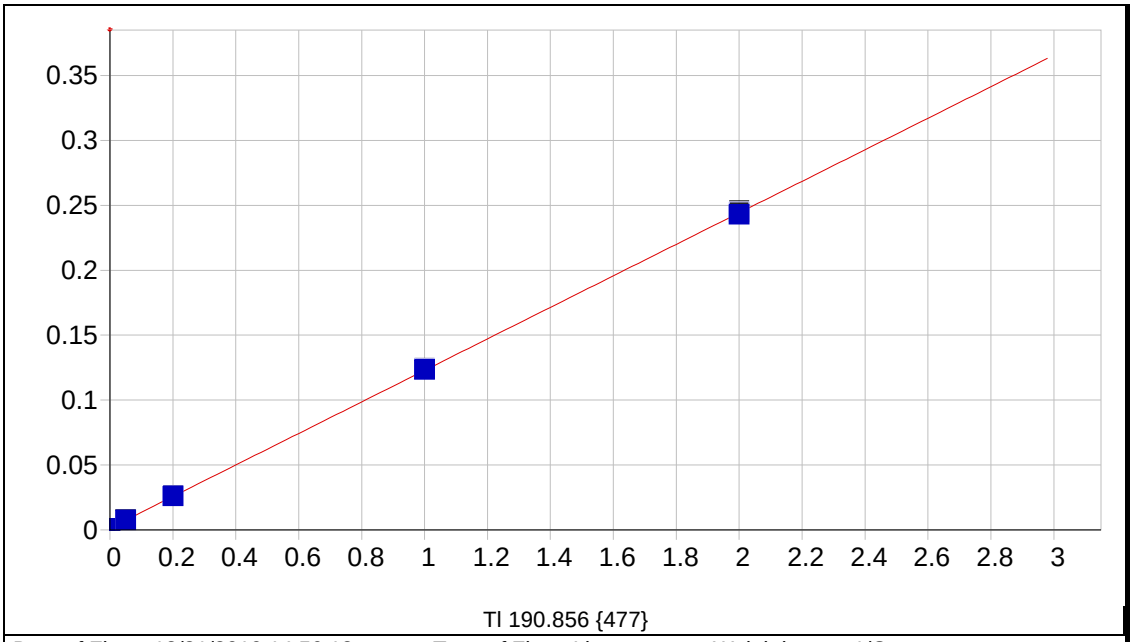


Ti 337.280 {100}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000029	Re-Slope:	1.000000
A1 (Gain):	0.151342	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000209		
Predicted MDL:	0.000232		
Predicted MQL:	0.000775		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00091	-.001	.000	-.00017	.000	1
CAL1 MW 12	.05000	.05133	.001	2.66	.00774	.000	1
CAL2 MW12	.10000	.09916	-.001	-.844	.01498	.000	1
CAL3 MW12	.50000	.50056	.001	.112	.07573	.001	1
CAL4 MW12	1.0000	.99896	-.001	-.104	.15116	.002	1

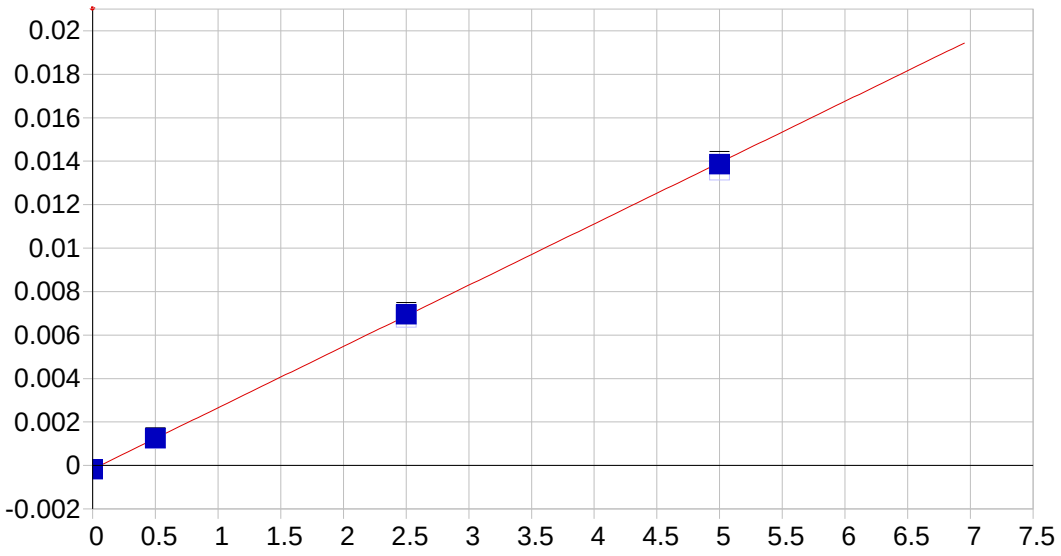


Tl 190.856 {477}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001474	Re-Slope:	1.000000
A1 (Gain):	0.121390	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000329		
Predicted MDL:	0.002388		
Predicted MQL:	0.007960		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00177	-.002	.000	.00126	.000	1
CAL1 MW 12	.05000	.05088	.001	1.76	.00766	.000	1
CAL2 MW12	.20000	.20351	.004	1.76	.02636	.000	1
CAL3 MW12	1.0000	1.0048	.005	.476	.12437	.000	1
CAL4 MW12	2.0000	1.9908	-.009	-.458	.24501	.001	1

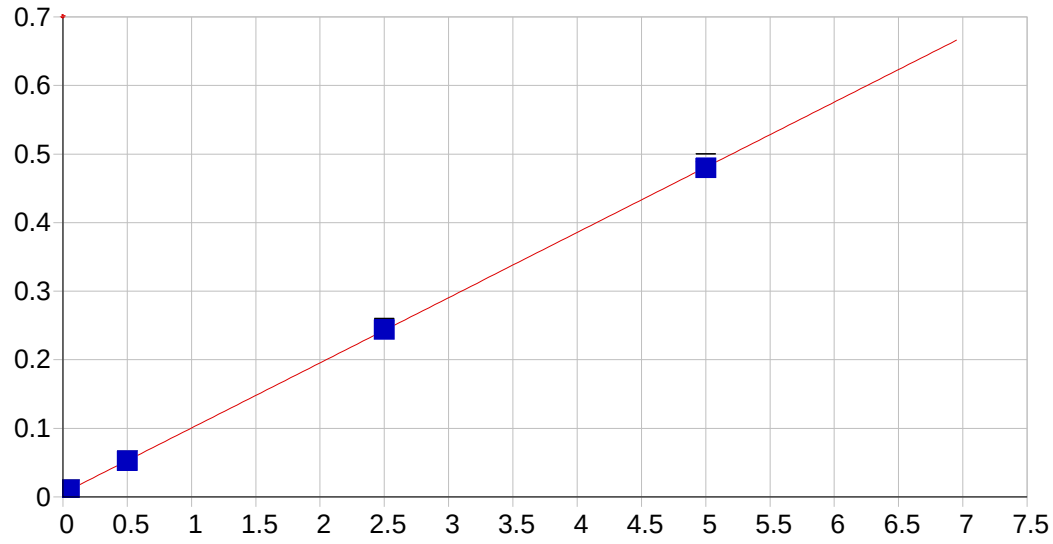


U 385.466 { 87}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000166	Re-Slope:	1.000000
A1 (Gain):	0.002820	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.013676		
Predicted MQL:	0.045585		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00430	-.004	.000	-.00018	.000	1
CAL2 MW12	.50000	.50212	.002	.423	.00122	.000	1
CAL3 MW12	2.5000	2.5239	.024	.958	.00681	.000	1
CAL4 MW12	5.0000	4.9739	-.026	-.521	.01358	.000	1

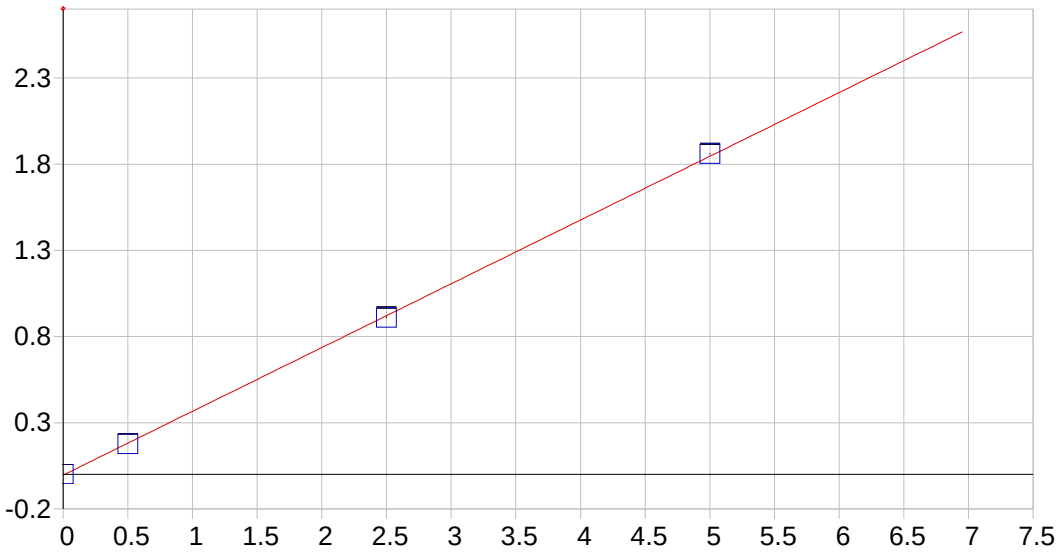


V 292.402 {115}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005424	Re-Slope:	1.000000
A1 (Gain):	0.095054	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000155		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	-.00030	-.000	.000	.00540	.000	1
CAL1 MW 12	.05000	.05041	.000	.823	.01022	.000	1
CAL2 MW12	.50000	.49774	-.002	-.452	.05275	.000	1
CAL3 MW12	2.5000	2.5099	.010	.398	.24407	.002	1
CAL4 MW12	5.0000	4.9919	-.008	-.162	.48005	.006	1

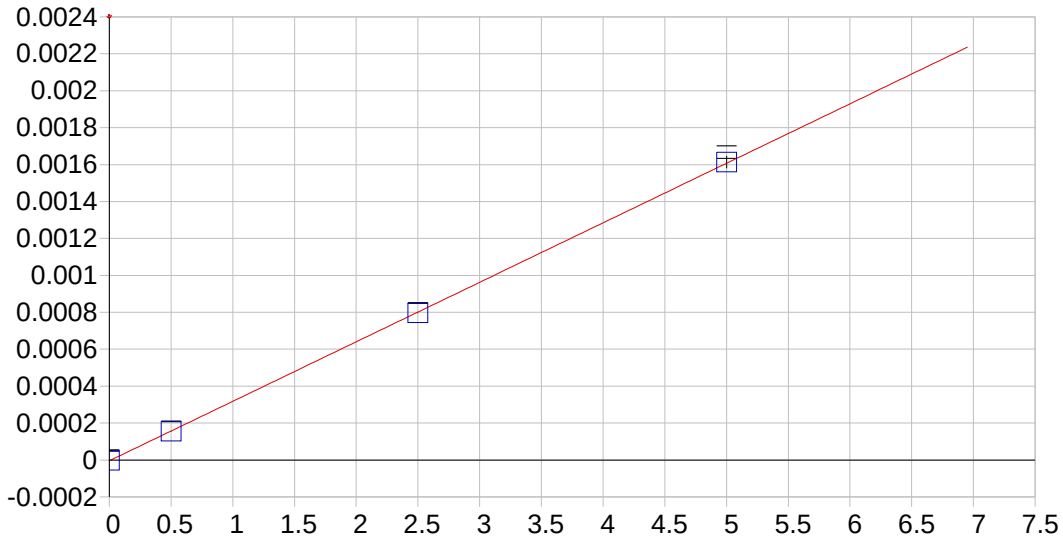


W 224.875 {450}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003385	Re-Slope:	1.000000
A1 (Gain):	0.369815	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999899	Status:	OK.
Std Error of Est:	0.008517		
Predicted MDL:	0.001365		
Predicted MQL:	0.004550		

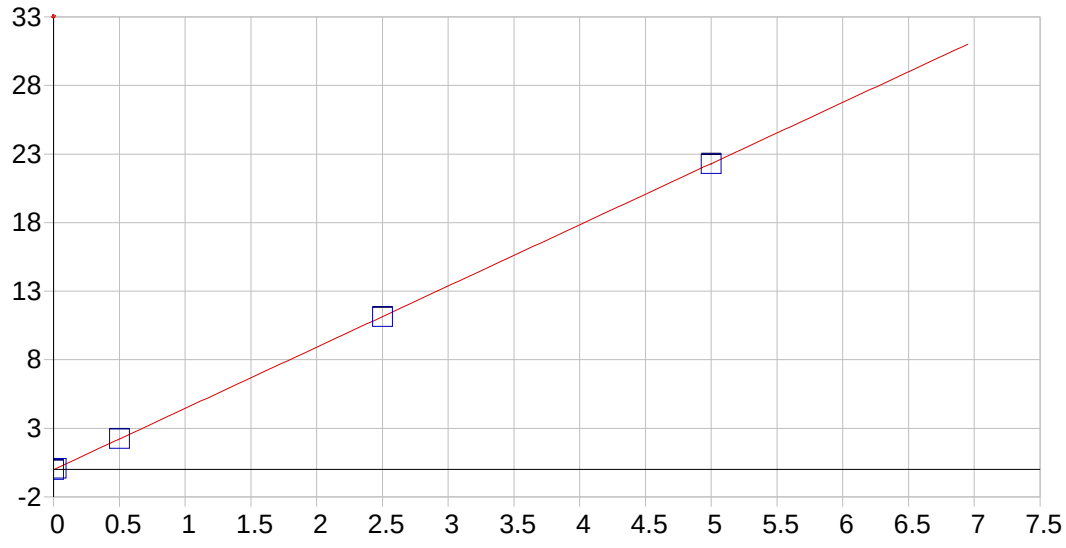
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.01305	.013	.000	.00144	.000	1
CAL2 MW12	.50000	.48859	-.011	-2.28	.17730	.001	1
CAL3 MW12	2.5000	2.4721	-.028	-1.11	.91085	.005	1
CAL4 MW12	5.0000	5.0393	.039	.785	1.8602	.004	1



W 239.709 {140}

Date of Fit:	12/31/2019 14:56:12	Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):	-0.000004		Re-Slope:	1.000000		
A1 (Gain):	0.000322		Y-int:	0.000000		
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.999974		Status:	OK.		
Std Error of Est:	0.000004					
Predicted MDL:	0.017256					
Predicted MQL:	0.057522					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00633	.006	.000	-.00000	.000	1
CAL2 MW12	.50000	.49468	-.005	-1.06	.00016	.000	1
CAL3 MW12	2.5000	2.4847	-.015	-.614	.00080	.000	1
CAL4 MW12	5.0000	5.0207	.021	.413	.00161	.000	1



Zn 206.200 {463}

Date of Fit:	12/31/2019 14:56:12		Type of Fit:	Linear	Weighting:	1/Conc	
A0 (Offset):		-0.010315		Re-Slope:	1.000000		
A1 (Gain):		4.463428		Y-int:	0.000000		
A2 (Curvature):		0.000000					
n (Exponent):		1.000000					
Correlation:		0.999992		Status:	OK.		
Std Error of Est:		0.006358					
Predicted MDL:		0.000120					
Predicted MQL:		0.000401					

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
Blank	.00000	.00020	.000	.000	-.00944	.001	1
CAL1 MW 12	.02000	.01955	-.000	-2.25	.07695	.000	1
CAL2 MW12	.50000	.50730	.007	1.46	2.2540	.009	1
CAL3 MW12	2.5000	2.4972	-.003	-.112	11.136	.022	1
CAL4 MW12	5.0000	4.9959	-.004	-.081	22.289	.042	1

Sample Name: Blank Acquired: 12/31/2019 05:27:40 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00004	.00123	-.00034	-.0000	.00716	.00206	.00064
Stddev	.00001	.00018	.00021	.0000	.00014	.00004	.00011
%RSD	16.528	14.241	60.746	252.2	2.0056	2.0115	17.837
#1	-.00005	.00109	-.00017	-.0000	.00700	.00209	.00072
#2	-.00003	.00143	-.00028	.0000	.00720	.00201	.00068
#3	-.00004	.00118	-.00057	-.0000	.00728	.00207	.00051

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0207	.00267	-.00007	-.00043	-.00010	.00792	-.0000
Stddev	.0007	.00035	.00000	.00002	.00008	.00037	.0001
%RSD	3.165	13.250	4.4510	4.0172	76.168	4.6154	229.0
#1	.0214	.00286	-.00007	-.00041	-.00002	.00809	.0000
#2	.0201	.00226	-.00007	-.00043	-.00011	.00750	.0000
#3	.0207	.00288	-.00007	-.00044	-.00018	.00818	-.0001

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00005	-.00055	.30740	.00030	-.00190	-.00418	.00017
Stddev	.00000	.00015	.00318	.00020	.00075	.00004	.00035
%RSD	1.1495	26.679	1.0330	66.919	39.162	.88480	206.98
#1	.00005	-.00061	.30436	.00007	-.00112	-.00414	-.00001
#2	.00006	-.00038	.30715	.00037	-.00260	-.00419	-.00005
#3	.00005	-.00066	.31069	.00044	-.00200	-.00421	.00057

Sample Name: Blank Acquired: 12/31/2019 05:27:40 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00613	-.00092	.0009	-.0002	.00126	-.0002	.00540
Stddev	.00018	.00022	.0004	.0000	.00034	.0000	.00014
%RSD	2.9640	24.260	39.17	17.38	26.996	10.48	2.5181
#1	.00634	-.00080	.0005	-.0001	.00165	-.0002	.00524
#2	.00606	-.00077	.0010	-.0002	.00108	-.0002	.00545
#3	.00599	-.00117	.0012	-.0002	.00104	-.0002	.00549

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S
Avg	.0014	-.0000	-.00944
Stddev	.0001	.0000	.00050
%RSD	9.987	167.5	5.3305
#1	.0013	.0000	-.00912
#2	.0016	-.0000	-.00918
#3	.0015	-.0000	-.01002

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3052.0	339710.	18454.
Stddev	7.4	4977.	214.
%RSD	.24285	1.4651	1.1611
#1	3050.8	345320.	18653.
#2	3045.2	337970.	18483.
#3	3059.9	335840.	18227.

Sample Name: CAL1 MW 12154 Acquired: 12/31/2019 05:33:13 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00061	.00646	.00398	.0007	.05110	.00959	.34751
Stddev	.00001	.00021	.00023	.0000	.00042	.00008	.00154
%RSD	1.3578	3.2495	5.8639	2.679	.82557	.79376	.44395
#1	.00062	.00623	.00378	.0007	.05084	.00959	.34719
#2	.00061	.00664	.00392	.0007	.05088	.00952	.34919
#3	.00061	.00652	.00424	.0008	.05159	.00967	.34615

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0477	.09142	.00056	.00002	.00335	.04506	.0413
Stddev	.0010	.00063	.00001	.00002	.00004	.00035	.0005
%RSD	2.160	.68710	1.7159	91.884	1.2867	.78517	1.099
#1	.0482	.09214	.00056	.00004	.00330	.04467	.0410
#2	.0483	.09099	.00055	-.00000	.00339	.04513	.0411
#3	.0465	.09112	.00057	.00003	.00336	.04536	.0418

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00530	.03639	.52685	.08506	.00441	-.00069	.00355
Stddev	.00007	.00032	.00269	.00026	.00091	.00024	.00032
%RSD	1.3507	.87822	.51087	.30297	20.549	34.575	8.9980
#1	.00528	.03661	.52380	.08536	.00516	-.00086	.00372
#2	.00523	.03653	.52789	.08493	.00340	-.00042	.00319
#3	.00537	.03602	.52887	.08490	.00466	-.00079	.00376

Sample Name: CAL1 MW 12154 Acquired: 12/31/2019 05:33:13 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	V_2924	Zn2062
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.15310	.03861	.0256	.0077	.00766	.01022	.07695
Stddev	.00043	.00013	.0001	.0001	.00020	.00011	.00016
%RSD	.28049	.34499	.2782	1.132	2.6322	1.1068	.21159
#1	.15306	.03849	.0255	.0077	.00751	.01013	.07695
#2	.15269	.03876	.0257	.0077	.00758	.01017	.07678
#3	.15354	.03859	.0256	.0078	.00789	.01034	.07711

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3085.1	342520.	18779.
Stddev	4.4	3581.	116.
%RSD	.14340	1.0456	.61521
#1	3084.1	343730.	18839.
#2	3089.9	345340.	18853.
#3	3081.3	338490.	18646.

Sample Name: CAL2 MW12155 Acquired: 12/31/2019 05:38:38 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00654	.06666	.03016	.0015	.86200	.78027	.69303
Stddev	.00005	.00027	.00039	.0000	.00304	.00327	.00114
%RSD	.71799	.40984	1.3012	.6140	.35277	.41932	.16420
#1	.00656	.06697	.03004	.0015	.86287	.77749	.69181
#2	.00657	.06651	.02985	.0015	.85861	.77944	.69406
#3	.00648	.06649	.03060	.0015	.86450	.78388	.69321

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.5781	1.7931	.03064	.02026	.16231	.08010	.0818
Stddev	.0017	.0051	.00007	.00007	.00044	.00022	.0002
%RSD	.3013	.28667	.22696	.34988	.27392	.27169	.2724
#1	.5767	1.7889	.03061	.02025	.16281	.08003	.0821
#2	.5775	1.7914	.03060	.02034	.16199	.07993	.0817
#3	.5800	1.7988	.03072	.02020	.16212	.08034	.0817

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.17719	.47260	.73469	1.0813	.04843	.01855	.01844
Stddev	.00012	.00390	.00250	.0013	.00043	.00028	.00034
%RSD	.06514	.82482	.34016	.12174	.88137	1.5146	1.8428
#1	.17706	.46922	.73318	1.0808	.04821	.01823	.01882
#2	.17724	.47170	.73757	1.0804	.04816	.01867	.01816
#3	.17727	.47686	.73331	1.0828	.04893	.01876	.01834

Sample Name: CAL2 MW12155 Acquired: 12/31/2019 05:38:38 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924	W_2248
IS Ref	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.07753	1.259	.0150	.02636	.0012	.05275	.1773
Stddev	.00034	.001	.0000	.00006	.0000	.00019	.0013
%RSD	.43990	.0916	.2340	.24566	1.009	.36404	.7357
#1	.07746	1.260	.0149	.02641	.0012	.05257	.1765
#2	.07723	1.257	.0150	.02639	.0012	.05273	.1766
#3	.07790	1.259	.0150	.02629	.0012	.05295	.1788

Elem	W_2397	Zn2062
IS Ref	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S
Avg	.0002	2.2540
Stddev	.0000	.0088
%RSD	.9797	.39159
#1	.0002	2.2634
#2	.0002	2.2459
#3	.0002	2.2527

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3046.7	342420.	19059.
Stddev	10.9	698.	76.
%RSD	.35814	.20389	.40118
#1	3037.1	341650.	19078.
#2	3058.6	343010.	18974.
#3	3044.4	342610.	19123.

Sample Name: CAL3 MW12174 Acquired: 12/31/2019 05:44:08 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03299	.32842	.15743	.0075	4.3013	3.8080	3.4202
Stddev	.00036	.00093	.00103	.0001	.0189	.0279	.0029
%RSD	1.0970	.28385	.65614	.7781	.43981	.73312	.08582
#1	.03270	.32946	.15752	.0074	4.3232	3.7949	3.4231
#2	.03339	.32814	.15635	.0075	4.2903	3.8400	3.4201
#3	.03287	.32766	.15841	.0074	4.2905	3.7890	3.4173

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.885	8.9169	.15182	.10197	.79894	.37776	.4006
Stddev	.015	.0265	.00163	.00061	.00376	.00373	.0006
%RSD	.5095	.29666	1.0749	.59819	.47023	.98750	.1504
#1	2.878	8.9172	.15069	.10143	.80326	.38189	.4012
#2	2.875	8.8903	.15369	.10263	.79716	.37678	.4006
#3	2.902	8.9432	.15107	.10184	.79640	.37462	.4000

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.86384	2.4117	2.4742	5.3551	.24682	.11201	.09534
Stddev	.00858	.0128	.0145	.0166	.00108	.00059	.00010
%RSD	.99269	.52901	.58440	.31005	.43743	.52867	.10287
#1	.85711	2.4034	2.4908	5.3538	.24806	.11133	.09524
#2	.87350	2.4054	2.4678	5.3391	.24612	.11229	.09543
#3	.86093	2.4264	2.4642	5.3723	.24626	.11240	.09536

Sample Name: CAL3 MW12174 Acquired: 12/31/2019 05:44:08 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.82140	.39202	6.256	.0757	.12437	.0068	.24407
Stddev	.00401	.00133	.011	.0006	.00014	.0001	.00171
%RSD	.48792	.34035	.1763	.8521	.11122	1.228	.70242
#1	.81971	.39247	6.267	.0753	.12448	.0067	.24291
#2	.81852	.39052	6.256	.0765	.12422	.0069	.24604
#3	.82598	.39306	6.245	.0754	.12442	.0068	.24326

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S
Avg	.9108	.0008	11.136
Stddev	.0051	.0000	.022
%RSD	.5573	.2390	.20191
#1	.9069	.0008	11.126
#2	.9091	.0008	11.120
#3	.9166	.0008	11.162

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2903.1	329430.	18791.
Stddev	7.4	1935.	23.
%RSD	.25361	.58732	.12366
#1	2904.4	330670.	18773.
#2	2909.7	327200.	18783.
#3	2895.1	330430.	18817.

Sample Name: CAL4 MW12156 Acquired: 12/31/2019 05:49:36 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.06687	.65315	.32455	.0149	8.5565	7.3619	6.7949
Stddev	.00091	.00660	.00143	.0002	.1260	.0978	.0073
%RSD	1.3632	1.0111	.43934	1.616	1.4722	1.3291	.10728
#1	.06617	.64556	.32291	.0147	8.4141	7.3226	6.7876
#2	.06655	.65628	.32525	.0149	8.6019	7.2898	6.7950
#3	.06790	.65761	.32549	.0152	8.6534	7.4732	6.8021

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.022	17.899	.30034	.20480	1.5748	.76524	.7918
Stddev	.008	.018	.00395	.00213	.0147	.01114	.0017
%RSD	.1366	.10282	1.3142	1.0397	.93571	1.4554	.2118
#1	6.014	17.883	.29743	.20332	1.5578	.75239	.7912
#2	6.022	17.894	.29876	.20384	1.5826	.77191	.7906
#3	6.030	17.919	.30483	.20724	1.5840	.77143	.7937

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.6874	4.9076	4.6250	10.740	.49311	.23431	.19489
Stddev	.0180	.0076	.0590	.015	.00114	.00130	.00094
%RSD	1.0643	.15479	1.2750	.13749	.23170	.55513	.48239
#1	1.6744	4.9043	4.5570	10.749	.49351	.23415	.19425
#2	1.6799	4.9023	4.6623	10.723	.49182	.23310	.19444
#3	1.7079	4.9163	4.6558	10.748	.49400	.23569	.19597

Sample Name: CAL4 MW12156 Acquired: 12/31/2019 05:49:36 Type: Cal
Method: 6010D 200.7 - 070219(v220) Mode: IR Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.7320	.78988	12.56	.1512	.24501	.0136	.48005
Stddev	.0107	.00047	.17	.0020	.00079	.0001	.00592
%RSD	.62080	.05982	1.385	1.349	.32424	.8969	1.2326
#1	1.7212	.79010	12.37	.1495	.24506	.0135	.47497
#2	1.7321	.78933	12.72	.1505	.24418	.0135	.47864
#3	1.7428	.79020	12.57	.1534	.24577	.0137	.48655

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	Cts/S	Cts/S	Cts/S
Avg	1.860	.0016	22.289
Stddev	.004	.0000	.042
%RSD	.2050	2.080	.18764
#1	1.857	.0016	22.270
#2	1.860	.0016	22.260
#3	1.864	.0016	22.337

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2714.5	313850.	18256.
Stddev	3.0	4124.	118.
%RSD	.11016	1.3138	.64571
#1	2717.9	316310.	18356.
#2	2712.4	316150.	18287.
#3	2713.2	309090.	18126.

Sample Name: ICV MW-12218 Acquired: 12/31/2019 05:55:25 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51263	25.495	.52250	.5137	2.5631	2.5898	51.013
Stddev	.00563	.080	.00541	.0056	.0182	.0168	.119
%RSD	1.0974	.31293	1.0362	1.089	.70849	.64767	.23245
#1	.50832	25.460	.51756	.5098	2.5582	2.5793	50.959
#2	.51058	25.438	.52165	.5112	2.5479	2.5810	50.930
#3	.51900	25.586	.52829	.5201	2.5832	2.6092	51.149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4964	2.5271	2.5698	2.5484	25.380	50.247	51.18
Stddev	.0029	.0148	.0350	.0221	.136	.307	.26
%RSD	.5876	.58453	1.3620	.86740	.53406	.61177	.5106
#1	.4935	2.5128	2.5479	2.5345	25.337	50.545	51.05
#2	.4962	2.5262	2.5512	2.5368	25.271	49.931	51.02
#3	.4994	2.5423	2.6101	2.5739	25.532	50.265	51.48
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICV MW-12218 Acquired: 12/31/2019 05:55:25 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5819	2.4650	51.219	2.5207	.50995	.49079	.49742
Stddev	.0291	.0184	.274	.0188	.00426	.00366	.00669
%RSD	1.1289	.74606	.53577	.74429	.83504	.74653	1.3453
#1	2.5638	2.4482	51.312	2.5042	.50571	.48678	.49290
#2	2.5664	2.4622	50.911	2.5166	.50991	.49165	.49426
#3	2.6155	2.4846	51.436	2.5411	.51423	.49395	.50511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4942	.50670	2.564	.5159	1.0245	2.615	2.5558
Stddev	.0193	.00418	.012	.0063	.0058	.015	.0348
%RSD	.77286	.82539	.4622	1.226	.56850	.5903	1.3595
#1	2.4769	.50308	2.559	.5122	1.0189	2.599	2.5372
#2	2.4906	.50575	2.555	.5123	1.0241	2.617	2.5342
#3	2.5150	.51128	2.577	.5232	1.0305	2.629	2.5958
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICV MW-12218 Acquired: 12/31/2019 05:55:25 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.666	W 2.670	2.5479
Stddev	.021	.015	.0170
%RSD	.8003	.5510	.66826
#1	2.650	2.656	2.5341
#2	2.659	2.669	2.5426
#3	2.690	2.686	2.5669
Check ?	None	Chk Warn	Chk Pass
Value		2.500	
Range		5.400%	
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2850.3	322900.	18635.
Stddev	15.8	2914.	93.
%RSD	.55278	.90254	.49884
#1	2864.3	325030.	18721.
#2	2853.4	324100.	18649.
#3	2833.2	319580.	18536.

Sample Name: ICB IM-9779 Acquired: 12/31/2019 06:00:49 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.00258	.00066	.0022	.00022	.00005	-.12967
Stddev	.00060	.01044	.00151	.0006	.00035	.00003	.00232
%RSD	6861.7	405.25	227.31	28.08	153.73	57.714	1.7859
#1	-.00007	.01462	.00032	.0026	.00037	.00007	-.13228
#2	-.00055	-.00383	.00232	.0015	.00047	.00002	-.12887
#3	.00064	-.00306	-.00064	.0024	-.00017	.00006	-.12786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00021	-.00027	-.00022	-.00231	.25862	-.2412
Stddev	.0001	.00015	.00004	.00054	.00467	.03637	.0100
%RSD	26.59	71.786	14.084	246.28	202.60	14.062	4.126
#1	.0003	.00004	-.00023	.00002	.00173	.29956	-.2299
#2	.0003	.00025	-.00029	.00016	-.00122	.24622	-.2488
#3	.0002	.00033	-.00029	-.00083	-.00743	.23006	-.2449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB IM-9779 Acquired: 12/31/2019 06:00:49 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00042	.00702	-.03234	-.00003	-.00054	.00120	.00228
Stddev	.00004	.00171	.09653	.00014	.00173	.00093	.00098
%RSD	9.2047	24.319	298.44	483.82	323.24	77.284	43.038
#1	-.00038	.00886	-.13672	.00010	-.00063	.00222	.00331
#2	-.00046	.00672	-.01403	-.00017	-.00222	.00042	.00217
#3	-.00043	.00548	.05371	-.00002	.00124	.00096	.00136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06753	.00021	-.0000	-.0007	-.00118	-.0139	.00025
Stddev	.00243	.00051	.0002	.0001	.00050	.0049	.00091
%RSD	3.6027	245.68	1614.	9.162	42.349	34.80	359.48
#1	.06905	-.00017	-.0001	-.0007	-.00069	-.0104	-.00025
#2	.06882	.00079	-.0001	-.0007	-.00169	-.0120	-.00029
#3	.06473	.00000	.0002	-.0006	-.00116	-.0195	.00130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICB IM-9779 Acquired: 12/31/2019 06:00:49 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0212	.0281	.00025
Stddev	.0021	.0160	.00017
%RSD	9.935	57.08	67.724
#1	.0233	.0466	.00042
#2	.0214	.0182	.00025
#3	.0191	.0195	.00008
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3053.8	340340.	18738.
Stddev	1.4	4886.	249.
%RSD	.04672	1.4356	1.3284
#1	3053.3	343850.	19015.
#2	3055.4	342410.	18666.
#3	3052.7	334760.	18533.

Sample Name: ICSA ~~MW-12413~~ Acquired: 12/31/2019 06:06:23 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00205	516.14	-.00175	-.0218	.00049	-.00016	484.64
Stddev	.00037	2.88	.00150	.0053	.00019	.00002	3.46
%RSD	18.230	.55882	85.580	24.27	39.958	14.595	.71311
#1	-.00227	514.37	-.00053	-.0167	.00051	-.00013	487.35
#2	-.00162	514.58	-.00130	-.0216	.00028	-.00017	485.82
#3	-.00226	519.47	-.00342	-.0272	.00067	-.00018	480.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	-.00243	.00025	.00039	481.26	.29249	502.2
Stddev	.0004	.00031	.00025	.00061	2.76	.09385	2.0
%RSD	49.35	12.927	99.355	155.00	.57369	32.086	.4016
#1	-.0003	-.00212	.00054	-.00011	483.27	.36038	504.3
#2	-.0008	-.00241	.00012	.00021	478.11	.33169	502.1
#3	-.0011	-.00275	.00009	.00107	482.41	.18540	500.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSA ~~MW-12413~~ Acquired: 12/31/2019 06:06:23 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00511	-.00357	-.66864	-.00939	.00482	-.00680	-.00087
Stddev	.00004	.00011	.01888	.00072	.00465	.00420	.00288
%RSD	.79729	3.0206	2.8243	7.6735	96.342	61.766	330.25
#1	-.00515	-.00355	-.64700	-.01018	.00869	-.00476	-.00364
#2	-.00511	-.00347	-.68177	-.00923	-.00033	-.01163	-.00110
#3	-.00507	-.00369	-.67715	-.00877	.00612	-.00401	.00212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.11343	.00028	.0038	-.0023	.00976	-.2334	.01825
Stddev	.00159	.00069	.0001	.0004	.00138	.0098	.00075
%RSD	1.4052	248.64	1.568	17.08	14.096	4.200	4.0987
#1	.11410	.00020	.0038	-.0025	.01101	-.2390	.01772
#2	.11457	-.00037	.0037	-.0019	.00828	-.2221	.01792
#3	.11161	.00101	.0039	-.0026	.00997	-.2391	.01910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSA ~~MW-12413~~ Acquired: 12/31/2019 06:06:23 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0065	-.0180	-.00635
Stddev	.0022	.0045	.00008
%RSD	33.73	24.90	1.3256
#1	-.0089	-.0204	-.00636
#2	-.0048	-.0207	-.00642
#3	-.0056	-.0128	-.00625
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2379.2	291660.	17724.
Stddev	9.3	2045.	64.
%RSD	.39089	.70103	.36238
#1	2382.8	292970.	17754.
#2	2386.2	292710.	17768.
#3	2368.7	289310.	17650.

Sample Name: CCV MW-12174 Acquired: 12/31/2019 06:12:05 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49893	25.142	.49678	.5070	2.5261	2.5632	50.453
Stddev	.00407	.094	.00129	.0056	.0168	.0083	.056
%RSD	.81648	.37299	.26031	1.107	.66530	.32386	.11029
#1	.49552	25.040	.49536	.5023	2.5078	2.5705	50.437
#2	.49783	25.162	.49709	.5054	2.5295	2.5651	50.514
#3	.50344	25.224	.49788	.5132	2.5409	2.5542	50.406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4896	2.5052	2.5379	2.5086	25.139	49.386	50.30
Stddev	.0009	.0044	.0269	.0087	.067	.305	.13
%RSD	.1739	.17570	1.0582	.34652	.26573	.61841	.2561
#1	.4895	2.5021	2.5169	2.5045	25.064	49.033	50.21
#2	.4888	2.5033	2.5285	2.5185	25.193	49.556	50.45
#3	.4905	2.5103	2.5681	2.5026	25.159	49.568	50.25
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 06:12:05 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5480	2.4959	50.163	2.5054	.50458	.49372	.49692
Stddev	.0141	.0103	.306	.0052	.00267	.00222	.00036
%RSD	.55234	.41252	.60990	.20557	.52900	.44980	.07303
#1	2.5355	2.4868	49.831	2.5065	.50156	.49433	.49701
#2	2.5453	2.4938	50.225	2.4998	.50664	.49126	.49652
#3	2.5632	2.5071	50.434	2.5099	.50552	.49558	.49722
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4286	.50234	2.512	.5046	1.0105	2.519	2.5315
Stddev	.0063	.00183	.006	.0046	.0069	.013	.0243
%RSD	.25849	.36410	.2605	.9143	.68752	.5115	.95866
#1	2.4232	.50091	2.505	.5012	1.0044	2.510	2.5134
#2	2.4272	.50170	2.513	.5028	1.0090	2.534	2.5220
#3	2.4355	.50440	2.518	.5099	1.0181	2.513	2.5591
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 06:12:05 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.494	2.481	2.5081
Stddev	.014	.002	.0055
%RSD	.5404	.0728	.21807
#1	2.481	2.483	2.5050
#2	2.491	2.479	2.5049
#3	2.508	2.482	2.5144
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2894.0	328530.	18833.
Stddev	4.3	1751.	99.
%RSD	.14837	.53307	.52370
#1	2896.4	330010.	18945.
#2	2896.6	328990.	18797.
#3	2889.1	326600.	18758.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 06:17:30 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	.00762	.00111	.0020	-.00010	.00007	-.13176
Stddev	.00031	.01049	.00012	.0013	.00026	.00000	.00213
%RSD	1831.2	137.72	10.848	64.89	256.77	6.0587	1.6149
#1	.00032	-.00330	.00123	.0035	.00019	.00007	-.13303
#2	-.00008	.01763	.00099	.0011	-.00018	.00006	-.13294
#3	-.00029	.00853	.00111	.0014	-.00031	.00007	-.12930
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00035	-.00020	.00059	.00251	.33165	-.2446
Stddev	.0001	.00001	.00014	.00054	.00370	.13440	.0285
%RSD	30.25	1.7258	68.171	91.728	147.71	40.525	11.64
#1	.0003	.00036	-.00031	.00023	.00674	.29618	-.2118
#2	.0002	.00035	-.00005	.00120	-.00014	.21854	-.2595
#3	.0003	.00035	-.00024	.00032	.00092	.48023	-.2626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 06:17:30 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00045	.00600	-.08780	-.00013	-.00033	.00297	.00093
Stddev	.00001	.00157	.01236	.00021	.00054	.00177	.00070
%RSD	3.0938	26.161	14.080	158.22	165.90	59.770	74.990
#1	-.00047	.00774	-.07534	.00008	-.00093	.00143	.00022
#2	-.00044	.00559	-.08801	-.00013	-.00017	.00257	.00096
#3	-.00044	.00468	-.10006	-.00033	.00012	.00491	.00161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06520	.00015	.0001	-.0008	-.00034	-.0185	-.00046
Stddev	.00064	.00003	.0001	.0003	.00123	.0117	.00101
%RSD	.98140	17.068	81.33	38.71	364.08	63.52	216.79
#1	.06585	.00012	.0002	-.0005	-.00148	-.0058	-.00155
#2	.06518	.00017	.0001	-.0011	-.00050	-.0206	-.00028
#3	.06457	.00016	.0001	-.0007	.00097	-.0289	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 06:17:30 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0200	.0341	.00033
Stddev	.0012	.0306	.00009
%RSD	6.057	89.65	28.683
#1	.0214	.0004	.00043
#2	.0193	.0602	.00027
#3	.0194	.0418	.00028
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3050.1	343760.	18710.
Stddev	23.8	5877.	69.
%RSD	.77901	1.7097	.36779
#1	3022.9	350360.	18785.
#2	3067.0	341830.	18694.
#3	3060.3	339090.	18651.

Sample Name: LR Acquired: 12/31/2019 06:23:03 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4960	.03713	10.206	19.82	19.641	.02485	-.11851
Stddev	.0139	.00527	.086	.19	.071	.00010	.00142
%RSD	.55540	14.198	.84663	.9440	.36137	.39212	1.1992
#1	2.4806	.04321	10.154	19.61	19.713	.02496	-.11903
#2	2.5000	.03436	10.159	19.86	19.571	.02481	-.11691
#3	2.5075	.03382	10.306	19.98	19.639	.02477	-.11960
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.986	19.283	19.964	48.675	-.00544	463.82	-.4006
Stddev	.065	.117	.101	1.084	.00258	1.66	.0192
%RSD	.6533	.60437	.50446	2.2264	47.445	.35693	4.793
#1	9.937	19.193	19.867	47.434	-.00435	462.60	-.4196
#2	9.961	19.241	20.068	49.159	-.00358	465.71	-.4011
#3	10.06	19.415	19.958	49.433	-.00838	463.17	-.3812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None
Value							
Range							

Sample Name: LR Acquired: 12/31/2019 06:23:03 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.698	9.5279	431.13	19.379	20.065	4.9314	5.0298
Stddev	.233	.0622	5.71	.081	.171	.0198	.0212
%RSD	1.2460	.65255	1.3239	.41877	.85167	.40224	.42091
#1	18.451	9.4838	431.20	19.294	19.959	4.9103	5.0084
#2	18.726	9.5009	425.38	19.389	19.974	4.9497	5.0302
#3	18.915	9.5990	436.80	19.455	20.262	4.9342	5.0507
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 44.520	9.6304	9.717	46.60	9.4412	.5826	20.109
Stddev	.368	.0873	.068	.54	.0802	.0148	.182
%RSD	.82646	.90668	.7030	1.148	.84922	2.542	.90305
#1	44.222	9.5855	9.641	46.00	9.3727	.5862	19.925
#2	44.407	9.5747	9.740	46.79	9.4215	.5953	20.113
#3	44.931	9.7310	9.772	47.02	9.5294	.5664	20.288
Check ?	Chk Fail	Chk Pass	Chk Pass	None	Chk Pass	None	None
Value	50.000						
Range	-10.000%						

Sample Name: LR Acquired: 12/31/2019 06:23:03 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.5535	.0032	27.822
Stddev	.0029	.0116	.078
%RSD	.5222	368.6	.28207
#1	-.5514	.0037	27.732
#2	-.5568	.0145	27.877
#3	-.5522	-.0087	27.856
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2742.2	298690.	18358.
Stddev	11.1	3578.	78.
%RSD	.40367	1.1979	.42659
#1	2754.7	302820.	18304.
#2	2738.0	296460.	18448.
#3	2733.8	296790.	18323.

Sample Name: 2X LR Acquired: 12/31/2019 06:29:38 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.2234	.00615	5.0844	9.914	9.9507	.01250	-.12780
Stddev	.0135	.02017	.0446	.155	.3199	.00023	.00264
%RSD	1.1030	327.71	.87639	1.559	3.2152	1.8737	2.0683
#1	1.2090	.00718	5.0329	9.739	9.9394	.01255	-.12862
#2	1.2358	.02579	5.1087	9.968	10.276	.01271	-.12994
#3	1.2255	-.01451	5.1114	10.03	9.6365	.01225	-.12484
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.024	9.8429	10.145	24.741	-.00468	239.14	-.3205
Stddev	.046	.0838	.125	.087	.00205	3.21	.0062
%RSD	.9142	.85139	1.2287	.35259	43.885	1.3403	1.947
#1	4.971	9.7462	10.002	24.682	-.00393	235.79	-.3148
#2	5.049	9.8941	10.234	24.842	-.00701	239.46	-.3272
#3	5.052	9.8885	10.198	24.701	-.00311	242.18	-.3196
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None	None
Value							
Range							

Sample Name: 2X LR Acquired: 12/31/2019 06:29:38 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.8252	4.8288	226.25	9.8906	10.074	2.4142	2.5008
Stddev	.0883	.0458	5.66	.0892	.097	.0236	.0247
%RSD	.89888	.94777	2.5001	.90176	.95827	.97729	.98598
#1	9.7234	4.7765	219.78	9.7901	9.9665	2.3901	2.4728
#2	9.8708	4.8481	230.27	9.9603	10.103	2.4373	2.5195
#3	9.8814	4.8617	228.69	9.9214	10.153	2.4152	2.5100
Check ?	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 22.140	F 4.9065	4.853	24.45	4.8860	.2867	10.078
Stddev	.204	.0444	.092	.22	.0427	.0079	.219
%RSD	.92244	.90552	1.892	.9182	.87307	2.749	2.1702
#1	21.906	4.8559	4.794	24.19	4.8368	.2892	9.8266
#2	22.233	4.9245	4.959	24.54	4.9080	.2778	10.221
#3	22.281	4.9392	4.806	24.61	4.9132	.2930	10.187
Check ?	Chk Fail	Chk Fail	Chk Pass	None	Chk Pass	None	None
Value	25.000	50.000					
Range	-10.000%	-10.000%					

Sample Name: 2X LR Acquired: 12/31/2019 06:29:38 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12203

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.2716	.0060	14.562
Stddev	.0031	.0163	.130
%RSD	1.157	270.2	.89467
#1	-.2691	.0229	14.420
#2	-.2752	.0049	14.676
#3	-.2706	-.0097	14.589
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2842.9	313320.	18980.
Stddev	21.5	4704.	213.
%RSD	.75592	1.5012	1.1229
#1	2867.7	318720.	19211.
#2	2829.8	310100.	18791.
#3	2831.2	311150.	18937.

Sample Name: LR Pb Ti Acquired: 12/31/2019 06:36:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12202

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00093	.01349	.00376	.0170	-.00047	-.00187	-.12341
Stddev	.00022	.01365	.00156	.0020	.00019	.00001	.00114
%RSD	23.347	101.22	41.485	11.57	40.737	.59986	.92637
#1	-.00086	-.00164	.00550	.0191	-.00069	-.00186	-.12215
#2	-.00076	.02490	.00325	.0169	-.00034	-.00188	-.12373
#3	-.00118	.01721	.00251	.0151	-.00038	-.00189	-.12437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00274	.00033	.00195	-.00513	.53608	-.2589
Stddev	.0000	.00034	.00015	.00032	.00564	.07017	.0159
%RSD	4.953	12.289	46.306	16.214	109.84	13.090	6.142
#1	.0002	-.00284	.00020	.00178	-.00375	.52777	-.2714
#2	.0002	-.00237	.00030	.00231	-.01134	.61004	-.2410
#3	.0002	-.00302	.00050	.00175	-.00032	.47044	-.2642
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: LR Pb Ti Acquired: 12/31/2019 06:36:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12202

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00053	.00928	-.37605	-.00017	F 5.3166	.00868	.00306
Stddev	.00002	.00261	.01716	.00016	.0228	.00320	.00021
%RSD	2.9305	28.109	4.5622	95.507	.42880	36.862	6.9731
#1	-.00052	.01208	-.36214	-.00026	5.3180	.01235	.00330
#2	-.00052	.00887	-.39522	.00002	5.2931	.00725	.00297
#3	-.00054	.00691	-.37077	-.00026	5.3387	.00644	.00290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09190	.00055	-.0000	F 8.124	.00027	.0457	.00615
Stddev	.00353	.00021	.0001	.113	.00153	.0146	.00018
%RSD	3.8467	38.133	239.2	1.387	564.43	31.83	2.9985
#1	.09573	.00048	-.0000	8.165	-.00084	.0519	.00602
#2	.09119	.00038	.0000	7.997	.00201	.0291	.00636
#3	.08877	.00078	-.0001	8.211	-.00036	.0562	.00606
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				8.000			
Low Limit				-8.000			

Sample Name: LR Pb Ti Acquired: 12/31/2019 06:36:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12202

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0135	.0281	.00009
Stddev	.0001	.0135	.00009
%RSD	.3995	48.17	97.478
#1	.0136	.0281	.00012
#2	.0135	.0417	-.00001
#3	.0135	.0146	.00016
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3090.8	349930.	19311.
Stddev	8.2	1927.	53.
%RSD	.26404	.55059	.27191
#1	3090.5	349790.	19346.
#2	3099.1	351930.	19337.
#3	3082.8	348080.	19251.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.27%	103.01%	104.64%
Range			

Sample Name: Fe 500 PPM Acquired: 12/31/2019 06:41:43 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12045

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00160	.00460	.00165	.0112	.00006	-.00020	-.16802
Stddev	.00022	.00640	.00046	.0044	.00008	.00002	.00340
%RSD	13.743	139.17	27.640	39.53	117.94	10.060	2.0210
#1	-.00178	.00968	.00186	.0162	.00012	-.00020	-.17186
#2	-.00166	-.00259	.00197	.0083	.00010	-.00023	-.16539
#3	-.00136	.00671	.00113	.0090	-.00002	-.00019	-.16683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	-.00261	.00038	-.00336	485.72	.33799	-.2715
Stddev	.0003	.00012	.00043	.00064	3.44	.06032	.0122
%RSD	33.13	4.5448	112.13	19.050	.70761	17.848	4.497
#1	-.0005	-.00265	-.00010	-.00265	486.15	.40545	-.2588
#2	-.0011	-.00248	.00054	-.00355	482.09	.31927	-.2832
#3	-.0010	-.00271	.00071	-.00389	488.93	.28924	-.2726
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: Fe 500 PPM Acquired: 12/31/2019 06:41:43 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12045

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00391	-.00004	-.57148	-.01155	.00475	-.00446	.00845
Stddev	.00011	.00067	.02562	.00035	.00193	.00110	.00268
%RSD	2.9264	1600.4	4.4834	3.0687	40.571	24.594	31.698
#1	-.00398	.00029	-.54589	-.01187	.00679	-.00555	.01139
#2	-.00398	.00039	-.59714	-.01162	.00297	-.00448	.00784
#3	-.00378	-.00081	-.57141	-.01117	.00448	-.00335	.00614
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07074	.00147	-.0003	.0016	-.01253	.0626	.00288
Stddev	.00032	.00032	.0001	.0003	.00084	.0070	.00050
%RSD	.45154	21.873	26.42	18.55	6.7076	11.12	17.216
#1	.07109	.00172	-.0003	.0019	-.01350	.0616	.00271
#2	.07068	.00111	-.0002	.0014	-.01203	.0562	.00249
#3	.07046	.00159	-.0002	.0014	-.01206	.0700	.00344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: Fe 500 PPM Acquired: 12/31/2019 06:41:43 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment: MW-12045

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0099	.0063	-.00000
Stddev	.0006	.0207	.00013
%RSD	5.699	326.7	2614.3
#1	-.0106	.0268	-.00012
#2	-.0095	.0067	.00013
#3	-.0098	-.0145	-.00003
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2853.6	341150.	19214.
Stddev	46.9	2695.	118.
%RSD	1.6450	.79005	.61205
#1	2875.5	342340.	19201.
#2	2885.7	343050.	19337.
#3	2799.8	338070.	19102.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.502%	100.42%	104.11%
Range			

Sample Name: UQ40381-001 Acquired: 12/31/2019 06:47:19 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00018	.00269	.00060	.0077	-.00052	-.00024	-.13964
Stddev	.00029	.00271	.00076	.0002	.00029	.00002	.00294
%RSD	159.28	101.09	125.56	2.597	55.632	7.2748	2.1090
#1	-.00011	.00306	.00120	.0080	-.00042	-.00023	-.14303
#2	.00018	.00519	-.00025	.0076	-.00084	-.00026	-.13812
#3	.00047	-.00020	.00087	.0076	-.00029	-.00024	-.13776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00024	-.00007	.00006	.00603	.43183	-.2506
Stddev	.0002	.00007	.00024	.00030	.00333	.03845	.0227
%RSD	92.52	28.915	359.15	463.77	55.261	8.9045	9.044
#1	.0004	-.00020	.00011	-.00028	.00794	.47550	-.2579
#2	.0004	-.00032	-.00035	.00027	.00796	.41696	-.2688
#3	-.0000	-.00020	.00004	.00021	.00218	.40303	-.2252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ40381-001 Acquired: 12/31/2019 06:47:19 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00067	.00419	-.51646	-.00022	-.00006	.00223	.00195
Stddev	.00003	.00082	.05947	.00030	.00119	.00213	.00072
%RSD	4.6897	19.604	11.515	139.49	2090.2	95.385	36.740
#1	-.00064	.00496	-.57923	-.00003	.00019	.00452	.00227
#2	-.00071	.00429	-.46094	-.00006	-.00136	.00030	.00113
#3	-.00066	.00332	-.50922	-.00056	.00099	.00188	.00245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07591	W .02538	-.0003	.0006	-.00260	-.0132	-.00447
Stddev	.00231	.00062	.0000	.0002	.00160	.0031	.00025
%RSD	3.0413	2.4348	14.19	30.11	61.644	23.76	5.5629
#1	.07733	.02600	-.0003	.0008	-.00318	-.0134	-.00418
#2	.07715	.02538	-.0002	.0006	-.00079	-.0163	-.00460
#3	.07325	.02477	-.0002	.0004	-.00383	-.0100	-.00462
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.02500					
Low Limit		-.02500					

Sample Name: UQ40381-001 Acquired: 12/31/2019 06:47:19 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0193	.0043	.00017
Stddev	.0003	.0059	.00012
%RSD	1.717	137.7	72.147
#1	.0197	.0086	.00031
#2	.0192	-.0025	.00009
#3	.0191	.0068	.00010
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3021.2	356540.	19313.
Stddev	20.5	3365.	81.
%RSD	.67968	.94391	.41728
#1	3018.8	352890.	19384.
#2	3002.0	359520.	19225.
#3	3042.9	357210.	19331.

Sample Name: UQ40381-002 Acquired: 12/31/2019 06:52:51 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.97682	20.062	5.1619	.9436	10.147	2.0957	40.142
Stddev	.00064	.106	.0131	.0045	.059	.0047	.128
%RSD	.06540	.52972	.25422	.4788	.57827	.22450	.31923
#1	.97612	19.940	5.1770	.9415	10.081	2.0997	39.998
#2	.97738	20.107	5.1553	.9487	10.192	2.0969	40.185
#3	.97695	20.138	5.1533	.9405	10.168	2.0905	40.243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9432	1.9981	5.1079	2.0413	20.009	39.272	40.00
Stddev	.0026	.0046	.0068	.0119	.140	.456	.21
%RSD	.2781	.22927	.13260	.58204	.69908	1.1622	.5310
#1	.9461	2.0034	5.1052	2.0534	19.854	38.752	39.84
#2	.9410	1.9947	5.1156	2.0408	20.046	39.459	39.92
#3	.9424	1.9964	5.1029	2.0296	20.126	39.606	40.24
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ40381-002 Acquired: 12/31/2019 06:52:51 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0330	1.9696	40.019	1.9820	5.0591	.96453	.98677
Stddev	.0063	.0052	.419	.0072	.0098	.00218	.00627
%RSD	.30880	.26585	1.0479	.36447	.19344	.22595	.63591
#1	2.0395	1.9755	39.552	1.9902	5.0685	.96594	.99388
#2	2.0327	1.9654	40.141	1.9765	5.0597	.96563	.98200
#3	2.0270	1.9681	40.364	1.9795	5.0490	.96202	.98443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.1706	1.0124	.9999	1.037	.81554	2.087	2.0377
Stddev	.0033	.0034	.0020	.005	.00075	.021	.0086
%RSD	.15042	.34011	.1991	.5095	.09233	.9984	.42436
#1	2.1743	1.0163	.9976	1.040	.81516	2.107	2.0408
#2	2.1682	1.0097	1.001	1.040	.81505	2.086	2.0443
#3	2.1694	1.0112	1.001	1.031	.81641	2.066	2.0279
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	4.0000						
Range	-20.500%						

Sample Name: UQ40381-002 Acquired: 12/31/2019 06:52:51 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0926	.0151	1.9805
Stddev	.0001	.0096	.0051
%RSD	.0975	63.40	.25882
#1	-.0925	.0040	1.9839
#2	-.0927	.0205	1.9746
#3	-.0926	.0207	1.9829
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2902.8	329430.	18793.
Stddev	9.4	904.	108.
%RSD	.32393	.27434	.57227
#1	2893.9	329030.	18889.
#2	2912.7	328800.	18815.
#3	2901.8	330470.	18677.

Sample Name: UL20021-001 Acquired: 12/31/2019 06:58:24 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00029	342.47	.22378	.2478	3.6936	.01608	267.98
Stddev	.00027	3.43	.00063	.0028	.0466	.00017	1.83
%RSD	91.289	1.0009	.28368	1.129	1.2610	1.0858	.68270
#1	.00008	338.57	.22383	.2480	3.6419	.01588	265.86
#2	.00021	345.00	.22439	.2505	3.7323	.01614	268.97
#3	.00059	343.85	.22313	.2449	3.7065	.01622	269.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	.24052	.44726	.43173	431.24	53.074	178.4
Stddev	.0002	.00088	.00548	.00448	3.26	.610	1.2
%RSD	2.129	.36419	1.2248	1.0367	.75573	1.1487	.6517
#1	.0077	.23956	.44094	.42687	428.39	52.792	177.2
#2	.0079	.24072	.45016	.43264	434.79	53.773	178.6
#3	.0076	.24128	.45069	.43568	430.55	52.655	179.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001 Acquired: 12/31/2019 06:58:24 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 25.051	.05414	2.1854	.55198	.44446	-.00019	.01142
Stddev	.312	.00049	.0499	.00295	.00160	.00474	.00590
%RSD	1.2437	.91376	2.2835	.53458	.35926	2534.1	51.675
#1	24.716	.05460	2.1879	.54891	.44494	-.00317	.01561
#2	25.108	.05362	2.2340	.55223	.44267	.00527	.01397
#3	25.331	.05420	2.1343	.55480	.44575	-.00266	.00467
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.912	.03292	.3460	3.973	-.14785	-.8846	.75899
Stddev	.056	.00044	.0020	.045	.00423	.0108	.00810
%RSD	.50921	1.3318	.5647	1.139	2.8626	1.224	1.0670
#1	10.849	.03242	.3438	3.921	-.14616	-.8756	.74969
#2	10.956	.03322	.3475	3.999	-.14473	-.8966	.76446
#3	10.929	.03312	.3467	4.000	-.15267	-.8816	.76283
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001 Acquired: 12/31/2019 06:58:24 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0228	-.0180	1.6236
Stddev	.0007	.0080	.0085
%RSD	3.198	44.81	.52089
#1	-.0222	-.0129	1.6158
#2	-.0236	-.0137	1.6223
#3	-.0226	-.0272	1.6326
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2652.7	320750.	19494.
Stddev	4.9	1971.	51.
%RSD	.18442	.61438	.26177
#1	2650.0	323010.	19482.
#2	2658.3	319420.	19450.
#3	2649.8	319810.	19550.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	86.918%	94.418%	105.63%
Range			

Sample Name: UL20021-001S Acquired: 12/31/2019 07:04:11 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719S

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0273	458.42	5.6131	1.331	12.908	2.1329	206.51
Stddev	.0069	6.18	.0533	.026	.260	.0206	2.58
%RSD	.67533	1.3483	.95011	1.962	2.0164	.96529	1.2486
#1	1.0201	452.63	5.5701	1.309	12.743	2.1093	203.54
#2	1.0279	457.70	5.5965	1.323	12.774	2.1430	208.12
#3	1.0339	464.93	5.6728	1.360	13.208	2.1466	207.88
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.016	2.1783	5.4398	2.5040	427.79	120.02	165.4
Stddev	.010	.0162	.0650	.0218	8.92	2.85	.6
%RSD	.9531	.74310	1.1950	.87050	2.0844	2.3769	.3673
#1	1.008	2.1624	5.3698	2.4795	424.18	117.13	164.7
#2	1.013	2.1778	5.4512	2.5112	421.25	120.08	165.8
#3	1.026	2.1948	5.4983	2.5212	437.95	122.84	165.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001S Acquired: 12/31/2019 07:04:11 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719S

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.574	1.9905	43.761	2.3710	F 5.3930	.42442	1.0357
Stddev	.101	.0182	.973	.0018	.0959	.00422	.0064
%RSD	.74535	.91503	2.2232	.07518	1.7785	.99352	.62157
#1	13.526	1.9738	42.815	2.3698	5.2892	.42463	1.0310
#2	13.690	1.9879	43.709	2.3730	5.4112	.42853	1.0331
#3	13.505	2.0099	44.759	2.3701	5.4785	.42011	1.0431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.702	.93494	1.380	7.226	.73366	1.202	2.9034
Stddev	.079	.01388	.011	.093	.00530	.026	.0533
%RSD	.74026	1.4848	.8025	1.282	.72261	2.163	1.8357
#1	10.634	.92070	1.367	7.121	.72762	1.223	2.8448
#2	10.684	.93568	1.383	7.295	.73755	1.210	2.9167
#3	10.789	.94844	1.388	7.262	.73581	1.173	2.9489
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001S Acquired: 12/31/2019 07:04:11 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719S

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1398	.0125	3.4542
Stddev	.0068	.0094	.0022
%RSD	4.857	74.95	.06453
#1	-.1465	.0213	3.4516
#2	-.1399	.0134	3.4553
#3	-.1330	.0027	3.4557
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2632.8	311950.	18835.
Stddev	10.5	2532.	230.
%RSD	.40015	.81184	1.2217
#1	2642.1	314800.	19026.
#2	2635.0	311080.	18900.
#3	2621.4	309960.	18580.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	86.266%	91.827%	102.07%
Range			

Sample Name: UL20021-001SD Acquired: 12/31/2019 07:10:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719SD

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0261	473.09	5.6189	1.342	12.742	2.1213	217.99
Stddev	.0071	1.12	.0099	.009	.167	.0093	.88
%RSD	.68777	.23683	.17633	.6874	1.3074	.43876	.40467
#1	1.0335	471.80	5.6082	1.350	12.892	2.1266	218.73
#2	1.0254	473.82	5.6278	1.343	12.772	2.1269	218.23
#3	1.0194	473.66	5.6208	1.332	12.563	2.1106	217.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.017	2.1787	5.4565	2.5057	435.06	124.58	170.6
Stddev	.003	.0048	.0461	.0192	.79	1.19	.3
%RSD	.3263	.22206	.84525	.76500	.18141	.95879	.1730
#1	1.014	2.1750	5.5058	2.5224	434.70	123.30	170.4
#2	1.017	2.1769	5.4493	2.5100	434.51	125.67	170.4
#3	1.021	2.1841	5.4144	2.4848	435.96	124.77	170.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001SD Acquired: 12/31/2019 07:10:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719SD

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.384	1.9871	44.602	2.3876	F 5.3646	.42131	1.0356
Stddev	.074	.0051	.279	.0091	.0079	.00079	.0088
%RSD	.59493	.25736	.62582	.38302	.14739	.18792	.84988
#1	12.460	1.9846	44.294	2.3776	5.3666	.42216	1.0254
#2	12.379	1.9837	44.838	2.3896	5.3559	.42119	1.0406
#3	12.313	1.9930	44.674	2.3956	5.3713	.42059	1.0407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					5.0000		
Low Limit					-5.0000		

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 11.918	.96257	1.399	7.420	.74054	1.187	2.9265
Stddev	.057	.00133	.003	.057	.00644	.003	.0293
%RSD	.47914	.13832	.1810	.7619	.87003	.2733	1.0004
#1	11.947	.96174	1.396	7.466	.73514	1.189	2.9591
#2	11.852	.96186	1.400	7.437	.73881	1.190	2.9178
#3	11.954	.96410	1.400	7.357	.74767	1.184	2.9025
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001SD Acquired: 12/31/2019 07:10:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-09-121719SD

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.1423	.0004	3.5268
Stddev	.0041	.0171	.0164
%RSD	2.848	4806.	.46611
#1	-.1382	-.0181	3.5088
#2	-.1425	.0035	3.5304
#3	-.1463	.0157	3.5410
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2622.7	312120.	18699.
Stddev	3.8	2659.	55.
%RSD	.14574	.85202	.29276
#1	2622.4	309400.	18733.
#2	2626.7	312230.	18636.
#3	2619.0	314720.	18728.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	85.935%	91.877%	101.33%
Range			

Sample Name: UL20021-001L(5) Acquired: 12/31/2019 07:16:15 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00011	70.764	.04725	.0616	.75988	.00321	59.017
Stddev	.00041	.022	.00042	.0012	.00158	.00004	.114
%RSD	381.08	.03131	.88620	1.876	.20822	1.1073	.19335
#1	-.00007	70.739	.04677	.0626	.75807	.00324	59.142
#2	-.00054	70.781	.04752	.0603	.76062	.00317	58.918
#3	.00028	70.771	.04746	.0618	.76096	.00322	58.990
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.04993	.09568	.08812	94.661	11.162	38.02
Stddev	.0001	.00010	.00069	.00128	.146	.121	.09
%RSD	6.110	.19628	.72182	1.4480	.15430	1.0882	.2245
#1	.0021	.04985	.09637	.08832	94.826	11.301	38.10
#2	.0020	.04991	.09499	.08675	94.547	11.101	38.03
#3	.0018	.05004	.09566	.08928	94.610	11.082	37.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001L(5) Acquired: 12/31/2019 07:16:15 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.0947	.01299	.25887	.11457	.09433	.00337	.00602
Stddev	.0582	.00038	.03094	.00022	.00220	.00098	.00050
%RSD	.95450	2.9212	11.952	.19023	2.3328	28.976	8.2643
#1	6.1099	.01337	.29456	.11436	.09179	.00308	.00617
#2	6.0304	.01261	.23973	.11480	.09560	.00446	.00642
#3	6.1437	.01299	.24231	.11455	.09559	.00257	.00546
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1807	.00689	.0723	.8266	-.03005	-.2014	.16019
Stddev	.0031	.00101	.0001	.0063	.00370	.0079	.00157
%RSD	.14087	14.684	.1078	.7616	12.304	3.909	.97980
#1	2.1830	.00805	.0723	.8289	-.02779	-.1950	.16093
#2	2.1819	.00623	.0722	.8195	-.03432	-.2102	.15838
#3	2.1772	.00638	.0723	.8315	-.02805	-.1988	.16124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001L(5) Acquired: 12/31/2019 07:16:15 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0064	.0156	.34304
Stddev	.0013	.0037	.00023
%RSD	20.04	23.76	.06747
#1	.0049	.0163	.34305
#2	.0073	.0116	.34281
#3	.0070	.0189	.34327
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2847.0	329270.	18575.
Stddev	11.8	2715.	18.
%RSD	.41568	.82466	.09695
#1	2856.7	328430.	18592.
#2	2850.4	332310.	18556.
#3	2833.8	327080.	18576.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.284%	96.927%	100.65%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 07:21:45 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.52044	26.049	.51725	.5345	2.6631	2.6876	51.879
Stddev	.00406	.091	.00384	.0015	.0144	.0069	.010
%RSD	.78089	.34827	.74186	.2813	.54243	.25734	.01898
#1	.52239	25.948	.51632	.5340	2.6465	2.6803	51.870
#2	.51577	26.073	.51396	.5333	2.6709	2.6885	51.877
#3	.52317	26.125	.52146	.5362	2.6720	2.6940	51.890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5097	2.6019	2.6422	2.6214	25.874	51.881	51.09
Stddev	.0020	.0101	.0112	.0087	.052	.269	.11
%RSD	.3882	.38911	.42254	.33289	.20204	.51912	.2167
#1	.5088	2.5964	2.6458	2.6308	25.826	51.806	51.06
#2	.5083	2.5957	2.6297	2.6198	25.930	52.180	51.01
#3	.5119	2.6135	2.6512	2.6136	25.866	51.657	51.22
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 07:21:45 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6518	2.5887	52.471	2.5886	.52368	.50929	.51306
Stddev	.0113	.0110	.168	.0091	.00362	.00367	.00146
%RSD	.42523	.42552	.32026	.35185	.69062	.72091	.28392
#1	2.6624	2.5808	52.426	2.5862	.51973	.50807	.51197
#2	2.6399	2.5841	52.658	2.5810	.52682	.50638	.51248
#3	2.6530	2.6013	52.331	2.5987	.52449	.51341	.51471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4943	.52250	2.613	.5291	1.0529	2.613	2.6559
Stddev	.0110	.00260	.006	.0012	.0064	.019	.0038
%RSD	.44053	.49763	.2278	.2348	.60481	.7191	.14298
#1	2.4842	.52206	2.606	.5290	1.0467	2.624	2.6549
#2	2.4928	.52015	2.615	.5278	1.0527	2.591	2.6527
#3	2.5060	.52530	2.617	.5303	1.0594	2.624	2.6601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 07:21:45 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.594	2.530	2.5849
Stddev	.017	.010	.0110
%RSD	.6476	.3794	.42710
#1	2.578	2.526	2.5810
#2	2.592	2.540	2.5764
#3	2.612	2.522	2.5974
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2817.2	316530.	17949.
Stddev	13.1	784.	5.
%RSD	.46534	.24781	.02971
#1	2824.5	316380.	17945.
#2	2825.0	317380.	17955.
#3	2802.1	315830.	17946.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 07:27:09 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00009	.00997	.00126	.0045	.00037	.00007	-.13185
Stddev	.00020	.01550	.00031	.0002	.00023	.00001	.00419
%RSD	221.85	155.50	24.307	5.194	62.232	20.235	3.1741
#1	-.00002	.02538	.00127	.0044	.00021	.00008	-.12709
#2	.00006	.01014	.00095	.0048	.00064	.00006	-.13494
#3	-.00032	-.00562	.00157	.0044	.00027	.00006	-.13353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.00041	-.00028	-.00033	.00358	.36579	-.2466
Stddev	.0001	.00013	.00022	.00012	.00053	.02622	.0108
%RSD	73.04	32.152	79.557	37.211	14.876	7.1690	4.367
#1	.0001	.00042	-.00006	-.00019	.00302	.39514	-.2566
#2	.0000	.00028	-.00050	-.00041	.00365	.35759	-.2352
#3	.0002	.00054	-.00029	-.00039	.00408	.34465	-.2480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 07:27:09 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00050	.00600	-.09964	-.00023	.00001	.00161	.00129
Stddev	.00005	.00182	.03923	.00007	.00028	.00322	.00186
%RSD	10.490	30.316	39.377	31.314	2033.2	200.41	144.63
#1	-.00051	.00801	-.14177	-.00017	.00029	-.00123	.00324
#2	-.00054	.00550	-.09300	-.00021	-.00027	.00510	-.00047
#3	-.00044	.00448	-.06415	-.00031	.00001	.00095	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06143	.00048	.0000	-.0007	-.00109	-.0127	.00021
Stddev	.00023	.00043	.0000	.0002	.00120	.0022	.00058
%RSD	.38233	88.949	132.5	25.77	110.42	17.32	273.85
#1	.06133	.00000	.0000	-.0009	-.00072	-.0110	-.00038
#2	.06126	.00082	.0000	-.0006	-.00012	-.0152	.00022
#3	.06170	.00062	.0000	-.0006	-.00244	-.0120	.00079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 07:27:09 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0177	.0319	.00006
Stddev	.0022	.0053	.00012
%RSD	12.62	16.54	192.95
#1	.0201	.0260	.00000
#2	.0175	.0336	-.00001
#3	.0156	.0361	.00020
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3031.2	337860.	18291.
Stddev	8.1	2654.	108.
%RSD	.26634	.78546	.59196
#1	3036.2	340270.	18407.
#2	3035.5	338300.	18273.
#3	3021.9	335010.	18193.

Sample Name: UL20021-001A Acquired: 12/31/2019 07:32:41 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40368	349.08	.63472	.6078	5.5493	2.0375	292.69
Stddev	.00122	2.89	.00524	.0037	.0443	.0139	2.36
%RSD	.30337	.82860	.82524	.6096	.79811	.68213	.80666
#1	.40484	345.76	.62933	.6040	5.5001	2.0230	292.99
#2	.40240	350.42	.63505	.6114	5.5616	2.0386	294.88
#3	.40381	351.06	.63979	.6079	5.5861	2.0508	290.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4117	2.1604	2.3312	2.4351	434.08	92.710	204.8
Stddev	.0024	.0070	.0120	.0022	2.76	1.310	.6
%RSD	.5909	.32461	.51619	.08875	.63505	1.4134	.2740
#1	.4106	2.1577	2.3225	2.4369	433.76	91.201	205.4
#2	.4100	2.1552	2.3261	2.4327	436.98	93.563	204.4
#3	.4145	2.1684	2.3449	2.4357	431.49	93.365	204.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001A Acquired: 12/31/2019 07:32:41 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 25.649	1.9973	42.439	2.4159	.80199	.38610	.40988
Stddev	.196	.0092	.552	.0048	.00311	.00507	.00222
%RSD	.76463	.45904	1.3010	.19728	.38839	1.3129	.54050
#1	25.818	1.9912	41.805	2.4200	.79841	.39172	.41079
#2	25.434	1.9927	42.693	2.4107	.80356	.38469	.41150
#3	25.696	2.0078	42.818	2.4171	.80402	.38188	.40736
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 13.012	.40679	1.285	4.281	.62624	-.8569	2.6818
Stddev	.029	.00083	.000	.030	.00720	.0128	.0250
%RSD	.22140	.20379	.0316	.7094	1.1496	1.496	.93241
#1	13.015	.40590	1.286	4.249	.61898	-.8430	2.6549
#2	12.982	.40753	1.285	4.284	.62635	-.8594	2.6861
#3	13.039	.40694	1.286	4.309	.63338	-.8683	2.7044
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001A Acquired: 12/31/2019 07:32:41 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0592	-.0064	3.4014
Stddev	.0031	.0138	.0108
%RSD	5.238	214.9	.31829
#1	-.0628	-.0221	3.4131
#2	-.0573	-.0015	3.3917
#3	-.0576	.0042	3.3994
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2602.1	311060.	18645.
Stddev	9.6	839.	32.
%RSD	.36734	.26973	.17300
#1	2592.2	310090.	18682.
#2	2611.3	311530.	18629.
#3	2602.8	311560.	18623.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	85.260%	91.566%	101.03%
Range			

Sample Name: UL20021-002 Acquired: 12/31/2019 07:38:28 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10A-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00072	289.50	.33167	.2351	2.9692	.01676	53.887
Stddev	.00013	1.43	.00106	.0035	.0209	.00014	.164
%RSD	18.083	.49406	.31913	1.478	.70207	.82873	.30422
#1	.00076	287.85	.33218	.2320	2.9451	.01664	53.737
#2	.00057	290.27	.33045	.2344	2.9807	.01691	54.062
#3	.00082	290.39	.33238	.2388	2.9818	.01671	53.861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074	.28887	.41784	.47347	F 573.04	49.504	69.52
Stddev	.0001	.00060	.00461	.00312	5.71	.961	.11
%RSD	1.578	.20723	1.1029	.65957	.99707	1.9407	.1652
#1	.0075	.28860	.41266	.47296	566.45	48.495	69.48
#2	.0073	.28845	.42148	.47682	576.63	50.407	69.43
#3	.0073	.28955	.41938	.47063	576.04	49.612	69.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					500.00		
Low Limit					-500.00		

Sample Name: UL20021-002 Acquired: 12/31/2019 07:38:28 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10A-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 28.347	.06280	2.2905	.68970	.43918	-.00306	.01199
Stddev	.236	.00079	.0548	.00452	.00289	.00396	.00431
%RSD	.83267	1.2515	2.3917	.65590	.65771	129.29	35.940
#1	28.120	.06358	2.2282	.68918	.43658	-.00360	.00714
#2	28.591	.06201	2.3309	.68546	.44229	-.00672	.01342
#3	28.328	.06282	2.3126	.69447	.43867	.00114	.01539
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.0857	.02863	.2075	3.089	-.18317	-.9762	.73825
Stddev	.0377	.00076	.0009	.037	.00094	.0314	.01094
%RSD	.74074	2.6478	.4295	1.200	.51060	3.217	1.4822
#1	5.0642	.02934	.2066	3.055	-.18298	-.9622	.72784
#2	5.0637	.02873	.2084	3.128	-.18234	-1.012	.74966
#3	5.1292	.02783	.2074	3.085	-.18418	-.9543	.73726
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-002 Acquired: 12/31/2019 07:38:28 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10A-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0288	-.0043	1.4216
Stddev	.0020	.0106	.0063
%RSD	6.846	246.0	.43956
#1	-.0289	-.0140	1.4182
#2	-.0268	-.0059	1.4178
#3	-.0307	.0070	1.4288
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2705.2	322860.	18736.
Stddev	1.9	2661.	49.
%RSD	.06901	.82414	.26407
#1	2703.6	324670.	18767.
#2	2707.3	319800.	18761.
#3	2704.7	324090.	18679.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	88.638%	95.038%	101.52%
Range			

Sample Name: UL20021-003 Acquired: 12/31/2019 07:44:07 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10B-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00067	281.43	.24507	.2543	2.1264	.01468	252.44
Stddev	.00021	3.27	.00428	.0086	.0328	.00014	2.05
%RSD	31.361	1.1610	1.7455	3.396	1.5424	.96036	.81297
#1	-.00070	278.12	.24269	.2491	2.0953	.01455	252.81
#2	-.00045	281.53	.24251	.2496	2.1233	.01465	250.23
#3	-.00087	284.66	.25001	.2643	2.1607	.01483	254.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.27092	.39540	.38624	443.06	51.176	176.2
Stddev	.0002	.00172	.00661	.00341	11.55	1.146	.6
%RSD	5.705	.63578	1.6711	.88332	2.6074	2.2397	.3178
#1	.0037	.27035	.38974	.38378	435.79	49.884	176.0
#2	.0039	.26956	.39380	.38480	437.01	51.572	175.7
#3	.0041	.27286	.40266	.39013	456.38	52.072	176.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-003 Acquired: 12/31/2019 07:44:07 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10B-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.568	.04146	2.4931	.50118	.41026	.00058	.00310
Stddev	.135	.00055	.1199	.00274	.00360	.00255	.00064
%RSD	.76638	1.3249	4.8089	.54613	.87724	440.96	20.621
#1	17.478	.04141	2.3730	.50231	.40658	-.00235	.00375
#2	17.504	.04094	2.4935	.49806	.41041	.00176	.00248
#3	17.723	.04204	2.6128	.50317	.41377	.00233	.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 10.785	.03015	.3224	3.901	-.10578	-.9234	.68149
Stddev	.079	.00059	.0017	.064	.00314	.0124	.01412
%RSD	.73109	1.9479	.5225	1.643	2.9693	1.340	2.0724
#1	10.758	.02949	.3205	3.834	-.10923	-.9157	.66655
#2	10.723	.03060	.3229	3.908	-.10501	-.9169	.68330
#3	10.874	.03037	.3238	3.961	-.10310	-.9377	.69463
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-003 Acquired: 12/31/2019 07:44:07 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10B-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0250	.0054	1.5665
Stddev	.0022	.0079	.0096
%RSD	8.949	145.7	.61511
#1	-.0275	-.0024	1.5682
#2	-.0231	.0053	1.5561
#3	-.0246	.0134	1.5751
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2599.2	320980.	18714.
Stddev	9.9	2471.	162.
%RSD	.38144	.76994	.86715
#1	2595.7	323060.	18821.
#2	2610.4	321630.	18793.
#3	2591.5	318250.	18527.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	85.164%	94.487%	101.41%
Range			

Sample Name: UL20021-004 Acquired: 12/31/2019 07:49:53 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10C-121719

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00310	332.79	.36476	.2636	5.9603	.01856	153.69
Stddev	.00039	2.82	.00204	.0036	.0612	.00021	.37
%RSD	12.497	.84750	.55828	1.361	1.0261	1.1550	.24016
#1	.00269	330.82	.36357	.2595	5.9244	.01852	153.41
#2	.00346	331.53	.36359	.2651	5.9256	.01837	153.54
#3	.00315	336.02	.36711	.2661	6.0309	.01879	154.10
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.38787	.46916	.51239	F 592.37	64.465	116.5
Stddev	.0001	.00284	.00531	.00492	8.40	1.336	.5
%RSD	1.276	.73281	1.1325	.95933	1.4185	2.0729	.4128
#1	.0083	.38460	.46792	.51233	583.74	63.375	116.8
#2	.0081	.38974	.46458	.50750	592.85	64.064	116.7
#3	.0082	.38926	.47499	.51733	600.52	65.956	115.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					500.00		
Low Limit					-500.00		

Sample Name: UL20021-004 Acquired: 12/31/2019 07:49:53 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10C-121719

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 39.307	.06241	5.0857	.68401	.61994	.00507	.01578
Stddev	.300	.00039	.0752	.00144	.00736	.00266	.00323
%RSD	.76386	.62376	1.4793	.20984	1.1868	52.390	20.457
#1	39.206	.06274	5.0624	.68536	.61345	.00526	.01333
#2	39.070	.06198	5.0249	.68250	.61844	.00763	.01458
#3	39.645	.06251	5.1698	.68417	.62793	.00233	.01944
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.4001	.03208	.3154	3.448	-.26849	-1.010	.81995
Stddev	.0544	.00064	.0013	.058	.00936	.031	.01458
%RSD	.84927	1.9896	.4089	1.667	3.4865	3.089	1.7778
#1	6.3385	.03163	.3146	3.424	-.27915	-.9877	.81322
#2	6.4205	.03281	.3147	3.406	-.26469	-.9957	.80995
#3	6.4413	.03180	.3169	3.514	-.26162	-1.045	.83667
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-004 Acquired: 12/31/2019 07:49:53 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-10C-121719

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0277	-.0189	2.3165
Stddev	.0004	.0280	.0076
%RSD	1.429	147.8	.32961
#1	-.0276	-.0046	2.3242
#2	-.0273	-.0010	2.3089
#3	-.0281	-.0512	2.3164
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2659.1	323370.	18935.
Stddev	7.3	3651.	141.
%RSD	.27376	1.1290	.74675
#1	2655.3	321540.	18773.
#2	2667.5	327580.	18996.
#3	2654.6	321000.	19036.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	87.129%	95.190%	102.61%
Range			

Sample Name: UL20021-005 Acquired: 12/31/2019 07:55:30 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11A-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00145	347.88	.26939	.2165	2.0555	.01606	106.86
Stddev	.00021	3.10	.00274	.0063	.0265	.00009	.09
%RSD	14.449	.89049	1.0177	2.914	1.2867	.56976	.08188
#1	-.00131	345.36	.26890	.2094	2.0390	.01596	106.79
#2	-.00135	346.94	.26692	.2187	2.0415	.01615	106.82
#3	-.00169	351.34	.27234	.2215	2.0860	.01606	106.96
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.11654	.43994	.35282	417.19	47.571	76.02
Stddev	.0002	.00066	.00504	.00218	8.70	.741	.04
%RSD	4.213	.57059	1.1467	.61914	2.0845	1.5569	.0545
#1	.0036	.11579	.43489	.35030	407.49	46.928	76.05
#2	.0034	.11682	.43995	.35420	419.75	47.404	76.04
#3	.0037	.11703	.44498	.35397	424.31	48.381	75.98
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-005 Acquired: 12/31/2019 07:55:30 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11A-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.3644	.01911	3.6846	.31484	.40099	.00248	.01053
Stddev	.0551	.00029	.0788	.00140	.00335	.00232	.00191
%RSD	.65936	1.4955	2.1389	.44562	.83555	93.752	18.139
#1	8.3025	.01940	3.6051	.31419	.39717	.00159	.00879
#2	8.3828	.01882	3.7627	.31387	.40241	.00511	.01022
#3	8.4081	.01910	3.6862	.31645	.40341	.00073	.01258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.8573	.03241	.3131	3.760	-.03592	-.7886	.78414
Stddev	.0217	.00064	.0014	.038	.00054	.0074	.00922
%RSD	.31654	1.9765	.4537	.9992	1.5063	.9424	1.1757
#1	6.8322	.03169	.3133	3.720	-.03566	-.7852	.77428
#2	6.8692	.03261	.3116	3.766	-.03655	-.7971	.78560
#3	6.8704	.03292	.3144	3.794	-.03556	-.7834	.79254
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-005 Acquired: 12/31/2019 07:55:30 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11A-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0203	-.0027	1.3412
Stddev	.0009	.0042	.0055
%RSD	4.610	156.3	.40704
#1	-.0209	-.0036	1.3376
#2	-.0192	-.0064	1.3386
#3	-.0209	.0019	1.3475
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2752.8	328930.	18838.
Stddev	7.6	1612.	111.
%RSD	.27616	.49007	.58950
#1	2746.1	330630.	18888.
#2	2761.1	327430.	18711.
#3	2751.1	328720.	18916.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	90.197%	96.826%	102.08%
Range			

Sample Name: UL20021-006 Acquired: 12/31/2019 08:01:05 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11B-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00189	330.43	.30257	.1980	4.8072	.01612	96.615
Stddev	.00056	1.95	.00160	.0045	.0361	.00008	.280
%RSD	29.449	.59115	.52882	2.295	.75098	.47680	.28991
#1	.00129	328.45	.30180	.1931	4.7757	.01619	96.292
#2	.00240	330.47	.30441	.1988	4.7993	.01614	96.791
#3	.00199	332.36	.30151	.2021	4.8466	.01604	96.763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.31055	.43100	.36857	462.65	43.422	72.28
Stddev	.0001	.00118	.00118	.00288	5.42	.775	.06
%RSD	1.446	.37938	.27464	.78032	1.1724	1.7859	.0865
#1	.0091	.30919	.43068	.37151	458.24	42.580	72.28
#2	.0092	.31119	.43001	.36843	461.00	43.580	72.21
#3	.0094	.31127	.43231	.36577	468.71	44.106	72.34
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-006 Acquired: 12/31/2019 08:01:05 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11B-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 31.806	.02523	2.9725	.45118	.47440	.00195	.01620
Stddev	.267	.00039	.0709	.00057	.00276	.00075	.00190
%RSD	.84051	1.5363	2.3849	.12631	.58111	38.361	11.761
#1	32.023	.02491	2.9016	.45074	.47653	.00109	.01758
#2	31.887	.02566	2.9723	.45098	.47128	.00242	.01699
#3	31.507	.02512	3.0434	.45183	.47538	.00233	.01402
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.1127	.03255	.3023	3.769	-.20845	-.8969	.81586
Stddev	.0196	.00070	.0008	.011	.00378	.0138	.00316
%RSD	.32002	2.1483	.2769	.2947	1.8154	1.535	.38730
#1	6.1145	.03267	.3016	3.757	-.21282	-.8819	.81221
#2	6.1313	.03318	.3021	3.772	-.20621	-.9090	.81768
#3	6.0923	.03180	.3032	3.778	-.20632	-.8997	.81768
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-006 Acquired: 12/31/2019 08:01:05 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11B-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0220	.0068	1.4187
Stddev	.0009	.0083	.0019
%RSD	3.937	122.4	.13598
#1	-.0213	.0104	1.4190
#2	-.0229	-.0027	1.4167
#3	-.0218	.0128	1.4205
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2738.8	329470.	18995.
Stddev	7.5	2875.	64.
%RSD	.27259	.87277	.33637
#1	2730.6	326200.	18943.
#2	2745.2	330580.	19066.
#3	2740.7	331620.	18975.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	89.740%	96.984%	102.93%
Range			

Sample Name: UL20021-007 Acquired: 12/31/2019 08:06:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11C-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00133	295.37	.35466	.1996	5.0334	.01510	116.18
Stddev	.00037	1.73	.00167	.0032	.0349	.00007	.07
%RSD	28.207	.58583	.47050	1.586	.69272	.43295	.05757
#1	.00173	293.40	.35274	.1959	4.9944	.01512	116.10
#2	.00127	296.65	.35548	.2013	5.0617	.01515	116.22
#3	.00098	296.05	.35575	.2015	5.0441	.01502	116.22
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	.24965	.39727	.38144	F 531.72	44.153	80.64
Stddev	.0001	.00197	.00060	.00159	4.10	.375	.11
%RSD	1.009	.78926	.15023	.41718	.77082	.85026	.1406
#1	.0062	.24859	.39738	.38136	527.04	43.805	80.51
#2	.0061	.24844	.39780	.38307	534.67	44.551	80.73
#3	.0063	.25193	.39663	.37989	533.44	44.102	80.68
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					500.00		
Low Limit					-500.00		

Sample Name: UL20021-007 Acquired: 12/31/2019 08:06:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11C-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 26.511	.06593	2.0636	.41171	.46397	-.00230	.01351
Stddev	.043	.00061	.0599	.00275	.00201	.00300	.00252
%RSD	.16089	.92373	2.9032	.66875	.43373	130.06	18.684
#1	26.560	.06635	2.0816	.40999	.46241	-.00051	.01301
#2	26.490	.06523	2.1125	.41026	.46325	-.00064	.01624
#3	26.483	.06621	1.9968	.41489	.46624	-.00576	.01127
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.3313	.03272	.2997	3.638	-.16725	-.7295	.78395
Stddev	.0405	.00030	.0005	.017	.00344	.0140	.00460
%RSD	.63958	.90464	.1643	.4540	2.0541	1.923	.58684
#1	6.3234	.03256	.2992	3.622	-.16606	-.7457	.77952
#2	6.2953	.03307	.2996	3.655	-.16456	-.7214	.78870
#3	6.3751	.03255	.3002	3.636	-.17112	-.7214	.78362
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-007 Acquired: 12/31/2019 08:06:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-11C-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0261	-.0055	1.7530
Stddev	.0012	.0121	.0079
%RSD	4.756	219.0	.44878
#1	-.0271	-.0167	1.7472
#2	-.0247	-.0071	1.7497
#3	-.0264	.0073	1.7619
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2670.9	322380.	18359.
Stddev	5.4	2186.	114.
%RSD	.20332	.67808	.62261
#1	2669.0	321200.	18280.
#2	2677.0	321040.	18307.
#3	2666.6	324900.	18490.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	87.513%	94.898%	99.485%
Range			

Sample Name: UL20021-008 Acquired: 12/31/2019 08:12:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12A-121919

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00097	294.31	.19173	.2318	2.1382	.01384	132.27
Stddev	.00013	2.43	.00148	.0006	.0202	.00015	.17
%RSD	13.475	.82581	.77051	.2462	.94596	1.0722	.12620
#1	-.00088	291.93	.19004	.2322	2.1205	.01387	132.20
#2	-.00091	294.21	.19238	.2311	2.1339	.01368	132.46
#3	-.00112	296.79	.19277	.2319	2.1603	.01397	132.16
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.14732	.38573	.38411	348.66	48.379	90.62
Stddev	.0003	.00008	.00414	.00374	2.20	.368	.04
%RSD	5.796	.05285	1.0735	.97377	.63196	.76092	.0475
#1	.0042	.14734	.38386	.38561	346.50	47.956	90.67
#2	.0046	.14724	.38285	.37985	348.57	48.555	90.60
#3	.0047	.14739	.39047	.38686	350.90	48.626	90.59
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-008 Acquired: 12/31/2019 08:12:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12A-121919

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.712	.02349	1.8679	.32670	.38835	.00497	.00951
Stddev	.064	.00026	.0239	.00149	.00433	.00155	.00197
%RSD	.59668	1.1161	1.2804	.45583	1.1148	31.158	20.677
#1	10.742	.02319	1.8422	.32834	.38468	.00461	.01064
#2	10.638	.02363	1.8720	.32632	.38726	.00364	.00724
#3	10.755	.02365	1.8896	.32543	.39313	.00668	.01066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 7.0823	.03189	.3339	3.353	-.05093	-.7510	.66076
Stddev	.0144	.00082	.0006	.039	.00358	.0224	.00963
%RSD	.20317	2.5864	.1843	1.172	7.0207	2.976	1.4570
#1	7.0986	.03096	.3335	3.338	-.05341	-.7368	.65717
#2	7.0769	.03216	.3346	3.324	-.04683	-.7394	.65344
#3	7.0713	.03254	.3336	3.398	-.05255	-.7768	.67166
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-008 Acquired: 12/31/2019 08:12:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12A-121919

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0160	.0113	1.7604
Stddev	.0021	.0089	.0087
%RSD	13.37	78.78	.49596
#1	-.0158	.0015	1.7704
#2	-.0182	.0191	1.7562
#3	-.0140	.0135	1.7546
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2739.4	328270.	18714.
Stddev	15.2	3941.	51.
%RSD	.55533	1.2005	.27007
#1	2722.5	325410.	18671.
#2	2752.1	332770.	18770.
#3	2743.6	326650.	18701.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	89.759%	96.633%	101.41%
Range			

Sample Name: UL20021-009 Acquired: 12/31/2019 08:17:44 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12B-121819

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00574	272.68	.28013	.2111	7.1124	.01454	184.77
Stddev	.00032	2.03	.00194	.0007	.0783	.00027	3.81
%RSD	5.5164	.74451	.69084	.3320	1.1009	1.8290	2.0645
#1	.00539	270.94	.27845	.2109	7.0519	.01423	181.83
#2	.00582	272.18	.27968	.2106	7.0844	.01471	189.08
#3	.00600	274.91	.28225	.2119	7.2009	.01469	183.40
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	.68554	.37579	.37513	453.65	45.684	119.3
Stddev	.0002	.00279	.00705	.00482	6.66	1.035	.4
%RSD	1.538	.40771	1.8757	1.2849	1.4685	2.2661	.3639
#1	.0119	.68348	.36787	.36957	448.40	44.547	119.8
#2	.0117	.68443	.37812	.37768	451.41	45.935	119.0
#3	.0121	.68872	.38138	.37814	461.15	46.571	119.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-009 Acquired: 12/31/2019 08:17:44 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12B-121819

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 47.139	.03408	2.5208	.54201	.50404	.00062	.01786
Stddev	.662	.00005	.0631	.00174	.00378	.00507	.00223
%RSD	1.4051	.14762	2.5040	.32189	.74909	821.49	12.509
#1	46.379	.03406	2.4484	.54118	.50130	.00301	.01917
#2	47.593	.03413	2.5643	.54084	.50248	-.00521	.01528
#3	47.445	.03403	2.5496	.54401	.50835	.00405	.01914
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 9.2101	.03146	.3943	3.245	-.34706	-.9523	.76369
Stddev	.0924	.00051	.0023	.069	.00523	.0087	.01763
%RSD	1.0027	1.6132	.5871	2.135	1.5069	.9108	2.3087
#1	9.1189	.03183	.3917	3.165	-.34883	-.9427	.74353
#2	9.2079	.03088	.3953	3.277	-.34117	-.9545	.77129
#3	9.3036	.03168	.3960	3.291	-.35117	-.9596	.77624
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-009 Acquired: 12/31/2019 08:17:44 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3050B/6010D Custom ID2: Custom ID3:
Comment: MPGI-SF-Soil-12B-121819

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0166	-.0223	1.7589
Stddev	.0018	.0147	.0026
%RSD	10.77	65.88	.14665
#1	-.0163	-.0094	1.7570
#2	-.0150	-.0191	1.7577
#3	-.0186	-.0383	1.7618
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2635.9	316860.	17974.
Stddev	4.4	4412.	6.
%RSD	.16770	1.3924	.03100
#1	2631.2	321950.	17968.
#2	2640.0	314130.	17974.
#3	2636.4	314490.	17980.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	86.367%	93.272%	97.398%
Range			

Sample Name: UL20021-001(2) Acquired: 12/31/2019 08:23:29 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00013	168.27	.10846	.1313	1.8355	.00791	138.63
Stddev	.00024	1.34	.00060	.0011	.0221	.00011	.53
%RSD	181.60	.79387	.55076	.8139	1.2040	1.3655	.38591
#1	.00005	169.71	.10780	.1321	1.8595	.00803	139.15
#2	-.00006	168.02	.10861	.1301	1.8309	.00789	138.65
#3	.00040	167.07	.10896	.1317	1.8160	.00781	138.08
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.12034	.22610	.21328	220.74	26.324	89.98
Stddev	.0002	.00046	.00333	.00028	1.22	.153	.57
%RSD	4.563	.38230	1.4730	.13129	.55280	.58258	.6361
#1	.0040	.11981	.22956	.21309	222.04	26.476	90.58
#2	.0043	.12061	.22581	.21315	220.55	26.327	89.91
#3	.0040	.12060	.22292	.21360	219.62	26.169	89.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001(2) Acquired: 12/31/2019 08:23:29 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.755	.02656	.69734	.27843	.22533	.00110	.00736
Stddev	.043	.00011	.08011	.00109	.00020	.00371	.00161
%RSD	.31067	.43083	11.488	.39027	.08975	338.65	21.861
#1	13.793	.02648	.74436	.27831	.22514	-.00260	.00916
#2	13.764	.02669	.74281	.27957	.22554	.00107	.00686
#3	13.709	.02652	.60484	.27741	.22531	.00482	.00606
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.6947	.01624	.1736	2.004	-.08032	-.4543	.37648
Stddev	.0489	.00015	.0013	.017	.00640	.0055	.00396
%RSD	.85877	.90029	.7431	.8627	7.9684	1.213	1.0514
#1	5.7268	.01609	.1750	2.022	-.08159	-.4567	.38027
#2	5.7189	.01626	.1730	2.003	-.08599	-.4583	.37680
#3	5.6384	.01638	.1726	1.987	-.07338	-.4480	.37238
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001(2) Acquired: 12/31/2019 08:23:29 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0079	-.0123	.82982
Stddev	.0027	.0141	.00251
%RSD	34.49	114.3	.30262
#1	-.0098	-.0279	.83058
#2	-.0091	-.0005	.83186
#3	-.0048	-.0086	.82701
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2809.7	334070.	18645.
Stddev	8.6	2922.	157.
%RSD	.30490	.87469	.84248
#1	2818.4	331130.	18512.
#2	2801.3	334110.	18606.
#3	2809.5	336980.	18818.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	92.063%	98.341%	101.04%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 08:28:58 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51042	25.402	.50789	.5234	2.6299	2.6474	50.831
Stddev	.00202	.204	.00104	.0085	.0375	.0182	.184
%RSD	.39633	.80334	.20502	1.633	1.4261	.68753	.36133
#1	.50823	25.210	.50707	.5141	2.5944	2.6274	50.750
#2	.51222	25.381	.50906	.5254	2.6261	2.6629	50.703
#3	.51080	25.617	.50755	.5309	2.6692	2.6519	51.042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5003	2.5549	2.6038	2.5827	25.385	52.156	49.80
Stddev	.0008	.0033	.0262	.0182	.281	1.147	.12
%RSD	.1535	.12849	1.0082	.70368	1.1056	2.1994	.2428
#1	.4995	2.5515	2.5739	2.5637	25.120	51.074	49.90
#2	.5011	2.5581	2.6148	2.5999	25.356	52.034	49.67
#3	.5003	2.5551	2.6228	2.5844	25.679	53.359	49.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 08:28:58 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6124	2.5495	51.722	2.5399	.51915	.49162	.50225
Stddev	.0128	.0077	1.022	.0059	.00405	.00391	.00194
%RSD	.48904	.30382	1.9763	.23236	.78014	.79578	.38577
#1	2.5977	2.5430	50.723	2.5462	.51496	.49490	.50430
#2	2.6205	2.5581	51.676	2.5344	.52305	.48729	.50045
#3	2.6189	2.5475	52.766	2.5391	.51943	.49266	.50200
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4517	.51588	2.572	.5215	1.0352	2.565	2.6218
Stddev	.0058	.00166	.014	.0067	.0036	.029	.0388
%RSD	.23677	.32135	.5295	1.276	.34783	1.114	1.4792
#1	2.4506	.51402	2.562	.5139	1.0336	2.550	2.5773
#2	2.4581	.51720	2.565	.5247	1.0328	2.597	2.6396
#3	2.4466	.51641	2.587	.5260	1.0394	2.547	2.6484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 08:28:58 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.557	2.400	2.5333
Stddev	.013	.010	.0087
%RSD	.4907	.4097	.34283
#1	2.544	2.389	2.5373
#2	2.568	2.403	2.5233
#3	2.560	2.407	2.5392
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2860.3	322300.	17611.
Stddev	12.6	3072.	196.
%RSD	.44061	.95300	1.1142
#1	2874.4	325840.	17808.
#2	2856.3	320620.	17608.
#3	2850.1	320430.	17416.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 08:34:21 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00012	-.00085	.00084	.0023	.00062	.00007	-.13542
Stddev	.00018	.00877	.00083	.0007	.00021	.00004	.00127
%RSD	151.54	1034.2	99.179	31.92	33.352	53.958	.94028
#1	-.00022	.00809	.00122	.0031	.00063	.00010	-.13689
#2	-.00023	-.00119	.00141	.0016	.00083	.00003	-.13479
#3	.00009	-.00945	-.00012	.0021	.00041	.00007	-.13460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00012	.00010	.00030	.00102	.38347	-.2539
Stddev	.0000	.00012	.00017	.00061	.00191	.10715	.0155
%RSD	14.08	96.337	176.01	201.69	187.47	27.941	6.088
#1	.0004	.00024	.00026	.00101	.00269	.33235	-.2598
#2	.0003	.00012	.00012	.00003	.00142	.50660	-.2655
#3	.0003	.00001	-.00008	-.00012	-.00106	.31145	-.2364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 08:34:21 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00039	.00590	-.29106	-.00003	-.00031	.00083	.00079
Stddev	.00003	.00136	.03184	.00036	.00210	.00140	.00157
%RSD	8.0899	22.977	10.939	1257.1	687.66	168.23	198.84
#1	-.00036	.00740	-.28314	.00038	.00188	.00223	.00234
#2	-.00038	.00553	-.26393	-.00017	-.00047	.00084	-.00080
#3	-.00042	.00477	-.32610	-.00030	-.00232	-.00057	.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06304	-.00017	.0000	-.0007	-.00124	-.0110	-.00028
Stddev	.00137	.00008	.0000	.0003	.00234	.0027	.00052
%RSD	2.1665	48.241	103.2	40.00	187.90	24.85	187.28
#1	.06435	-.00022	.0001	-.0004	-.00318	-.0079	-.00050
#2	.06162	-.00021	-.0000	-.0009	.00135	-.0132	-.00065
#3	.06314	-.00008	.0001	-.0007	-.00190	-.0118	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 08:34:21 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0185	.0249	.00016
Stddev	.0017	.0084	.00012
%RSD	9.445	33.85	77.249
#1	.0194	.0153	.00028
#2	.0196	.0287	.00004
#3	.0164	.0308	.00016
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3098.9	343020.	17967.
Stddev	3.0	3557.	70.
%RSD	.09816	1.0371	.38793
#1	3099.9	344360.	18018.
#2	3101.4	345700.	17887.
#3	3095.5	338980.	17996.

Sample Name: UL20021-001S(2) Acquired: 12/31/2019 08:39:52 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50009	226.30	2.7311	.6713	6.4756	1.0577	104.28
Stddev	.00346	.70	.0075	.0094	.0292	.0113	.32
%RSD	.69275	.30873	.27484	1.395	.45117	1.0680	.30907
#1	.50350	226.20	2.7296	.6669	6.4810	1.0515	104.64
#2	.49657	225.65	2.7244	.6650	6.4440	1.0510	104.21
#3	.50021	227.04	2.7392	.6821	6.5017	1.0708	104.00
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4797	1.0893	2.7415	1.2161	217.83	60.692	81.82
Stddev	.0015	.0007	.0176	.0060	.73	1.070	.65
%RSD	.3148	.06343	.64128	.49422	.33684	1.7627	.7975
#1	.4791	1.0893	2.7432	1.2194	217.29	59.742	82.54
#2	.4785	1.0887	2.7231	1.2092	217.54	60.483	81.67
#3	.4814	1.0900	2.7582	1.2199	218.67	61.851	81.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001S(2) Acquired: 12/31/2019 08:39:52 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.0921	.98080	21.376	1.1862	2.7120	.20630	.50249
Stddev	.0253	.00200	.256	.0078	.0246	.00134	.00238
%RSD	.35658	.20393	1.1969	.66076	.90749	.65172	.47417
#1	7.1204	.97959	21.181	1.1948	2.6858	.20782	.50518
#2	7.0718	.97969	21.281	1.1846	2.7158	.20581	.50163
#3	7.0840	.98310	21.666	1.1793	2.7345	.20527	.50065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.5188	.47327	.6863	3.644	.37436	.5987	1.4472
Stddev	.0513	.00518	.0010	.033	.00123	.0259	.0197
%RSD	.92885	1.0953	.1411	.8953	.32756	4.321	1.3619
#1	5.5428	.46888	.6873	3.632	.37335	.5994	1.4382
#2	5.5536	.47194	.6854	3.619	.37399	.6242	1.4336
#3	5.4599	.47898	.6860	3.681	.37572	.5724	1.4698
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001S(2) Acquired: 12/31/2019 08:39:52 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0604	.0166	1.7326
Stddev	.0036	.0144	.0154
%RSD	5.887	87.05	.88709
#1	-.0635	.0222	1.7485
#2	-.0612	.0002	1.7315
#3	-.0565	.0274	1.7178
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2818.1	329610.	18485.
Stddev	8.4	2854.	71.
%RSD	.29843	.86593	.38453
#1	2816.0	328980.	18458.
#2	2827.4	332730.	18565.
#3	2810.9	327130.	18431.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	92.338%	97.027%	100.17%
Range			

Sample Name: UL20021-001SD(2) Acquired: 12/31/2019 08:45:25 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.51332	238.30	2.7972	.6903	6.6050	1.0847	113.56
Stddev	.00667	1.69	.0150	.0062	.0537	.0190	.56
%RSD	1.2985	.70896	.53820	.8929	.81322	1.7486	.49576
#1	.51602	239.13	2.8145	.6910	6.6453	1.0786	113.94
#2	.51821	239.42	2.7901	.6961	6.6256	1.1060	113.82
#3	.50573	236.35	2.7871	.6839	6.5440	1.0695	112.91
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4931	1.1155	2.8170	1.2593	226.07	63.127	87.55
Stddev	.0016	.0035	.0306	.0156	1.26	.326	.74
%RSD	.3175	.30976	1.0876	1.2418	.55864	.51575	.8488
#1	.4948	1.1195	2.8209	1.2595	226.81	62.775	88.20
#2	.4927	1.1136	2.8454	1.2748	226.79	63.417	87.71
#3	.4917	1.1134	2.7845	1.2435	224.61	63.187	86.74
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001SD(2) Acquired: 12/31/2019 08:45:25 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.5923	1.0017	22.057	1.2277	2.7698	.20528	.51525
Stddev	.1008	.0031	.100	.0062	.0166	.00145	.00259
%RSD	1.5297	.30801	.45144	.50350	.59806	.70843	.50295
#1	6.5369	1.0052	21.974	1.2348	2.7832	.20695	.51811
#2	6.7086	1.00000	22.167	1.2252	2.7749	.20455	.51458
#3	6.5312	.99981	22.029	1.2232	2.7513	.20433	.51306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.6828	.49725	.7119	3.873	.38539	.5966	1.4927
Stddev	.1525	.00177	.0045	.045	.00499	.0149	.0185
%RSD	2.2812	.35650	.6341	1.162	1.2939	2.501	1.2401
#1	6.7834	.49906	.7141	3.878	.38916	.5802	1.4912
#2	6.7577	.49716	.7150	3.915	.38727	.6095	1.5119
#3	6.5074	.49552	.7068	3.825	.37973	.6000	1.4750
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001SD(2) Acquired: 12/31/2019 08:45:25 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0652	.0068	1.8179
Stddev	.0010	.0058	.0112
%RSD	1.504	84.23	.61408
#1	-.0662	.0089	1.8308
#2	-.0642	.0113	1.8108
#3	-.0652	.0003	1.8122
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2756.1	322610.	18049.
Stddev	11.2	2813.	121.
%RSD	.40537	.87204	.66813
#1	2743.9	323550.	17942.
#2	2765.9	319450.	18026.
#3	2758.3	324830.	18180.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	90.305%	94.966%	97.805%
Range			

Sample Name: UL20021-001L(10) Acquired: 12/31/2019 08:51:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00049	36.465	.02344	.0313	.39560	.00155	30.349
Stddev	.00033	.338	.00100	.0009	.00262	.00006	.406
%RSD	68.702	.92666	4.2463	3.010	.66310	3.9239	1.3393
#1	.00086	36.850	.02300	.0323	.39861	.00162	30.786
#2	.00024	36.327	.02458	.0313	.39381	.00153	30.278
#3	.00035	36.218	.02275	.0304	.39438	.00150	29.982
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.02543	.04911	.04461	48.959	5.9511	19.49
Stddev	.0001	.00023	.00041	.00116	.431	.0399	.32
%RSD	9.315	.89555	.82695	2.6026	.87932	.67061	1.643
#1	.0012	.02564	.04945	.04588	49.441	5.9072	19.82
#2	.0014	.02544	.04921	.04434	48.821	5.9852	19.45
#3	.0013	.02519	.04866	.04360	48.614	5.9609	19.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001L(10) Acquired: 12/31/2019 08:51:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.2006	.00775	-.05321	.05759	.04918	.00147	.00122
Stddev	.0570	.00042	.06126	.00110	.00040	.00151	.00098
%RSD	1.7803	5.4584	115.14	1.9067	.81104	102.56	80.144
#1	3.2563	.00823	-.09563	.05881	.04964	.00137	.00037
#2	3.2031	.00745	-.08101	.05726	.04900	.00303	.00100
#3	3.1424	.00757	.01703	.05669	.04891	.00002	.00228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.2406	.00339	.0372	.4354	-.01466	-.1144	.08313
Stddev	.0239	.00034	.0005	.0025	.00210	.0067	.00042
%RSD	1.9230	10.165	1.229	.5693	14.335	5.893	.50683
#1	1.2673	.00366	.0377	.4382	-.01696	-.1212	.08358
#2	1.2334	.00300	.0372	.4346	-.01284	-.1078	.08274
#3	1.2212	.00351	.0368	.4334	-.01419	-.1142	.08306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001L(10) Acquired: 12/31/2019 08:51:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0092	.0008	.17373
Stddev	.0006	.0054	.00230
%RSD	6.388	721.7	1.3253
#1	.0093	-.0055	.17636
#2	.0098	.0042	.17275
#3	.0086	.0036	.17208
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2921.7	331500.	17770.
Stddev	8.3	1260.	145.
%RSD	.28289	.38004	.81499
#1	2922.3	330930.	17840.
#2	2929.7	332950.	17867.
#3	2913.2	330630.	17604.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.732%	97.584%	96.295%
Range			

Sample Name: UL20021-001A(2) Acquired: 12/31/2019 08:56:34 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.20425	180.42	.32050	.3261	2.9149	1.0547	156.62
Stddev	.00144	.86	.00153	.0031	.0216	.0098	.73
%RSD	.70637	.47698	.47824	.9399	.73980	.92517	.46292
#1	.20389	179.72	.31903	.3268	2.8915	1.0634	157.08
#2	.20584	181.38	.32036	.3288	2.9340	1.0564	157.00
#3	.20302	180.16	.32209	.3228	2.9191	1.0441	155.79
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2060	1.1171	1.2209	1.2372	232.50	47.855	107.6
Stddev	.0006	.0010	.0114	.0153	1.20	.272	.3
%RSD	.2673	.08837	.93376	1.2326	.51749	.56830	.2994
#1	.2066	1.1176	1.2177	1.2489	231.61	47.559	107.7
#2	.2055	1.1159	1.2335	1.2428	233.87	48.094	107.9
#3	.2061	1.1177	1.2114	1.2200	232.02	47.911	107.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-001A(2) Acquired: 12/31/2019 08:56:34 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.645	1.0173	21.474	1.2556	.42208	.19906	.20705
Stddev	.101	.0016	.204	.0033	.00311	.00170	.00250
%RSD	.68744	.15800	.94792	.26274	.73580	.85511	1.2057
#1	14.590	1.0187	21.294	1.2550	.42437	.19981	.20461
#2	14.761	1.0178	21.695	1.2527	.41854	.19711	.20694
#3	14.583	1.0156	21.432	1.2592	.42331	.20026	.20960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 6.7172	.21738	.6695	2.255	.33006	-.4602	1.3857
Stddev	.1236	.00053	.0019	.027	.00251	.0171	.0178
%RSD	1.8399	.24411	.2849	1.184	.75924	3.711	1.2874
#1	6.8573	.21681	.6702	2.257	.33135	-.4790	1.3865
#2	6.6707	.21746	.6710	2.281	.33165	-.4557	1.4032
#3	6.6236	.21787	.6673	2.228	.32717	-.4458	1.3675
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL20021-001A(2) Acquired: 12/31/2019 08:56:34 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0256	.0097	1.7812
Stddev	.0015	.0188	.0062
%RSD	5.799	193.7	.34733
#1	-.0271	.0147	1.7772
#2	-.0257	-.0111	1.7781
#3	-.0241	.0255	1.7883
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2775.2	324260.	18305.
Stddev	6.7	2361.	91.
%RSD	.24034	.72826	.49877
#1	2769.2	323430.	18288.
#2	2782.4	322420.	18223.
#3	2774.0	326920.	18403.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	90.932%	95.450%	99.189%
Range			

Sample Name: UL20021-002(2) Acquired: 12/31/2019 09:02:11 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00058	148.86	.16577	.1340	1.5249	.00836	28.038
Stddev	.00022	2.84	.00393	.0026	.0240	.00023	.625
%RSD	37.360	1.9059	2.3697	1.904	1.5758	2.7858	2.2306
#1	.00061	151.74	.16992	.1365	1.5510	.00852	28.615
#2	.00077	148.78	.16529	.1340	1.5200	.00847	28.126
#3	.00034	146.06	.16211	.1314	1.5036	.00809	27.373
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.14775	.21429	.23956	304.51	25.610	36.13
Stddev	.0001	.00315	.00524	.00554	5.38	.224	.99
%RSD	3.450	2.1297	2.4468	2.3112	1.7682	.87416	2.749
#1	.0043	.15120	.21893	.24431	309.74	25.449	37.16
#2	.0042	.14700	.21533	.24090	304.80	25.866	36.06
#3	.0045	.14505	.20860	.23348	298.99	25.516	35.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-002(2) Acquired: 12/31/2019 09:02:11 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.065	.03244	.78334	.35163	.22776	.00213	.00815
Stddev	.353	.00097	.02256	.00870	.00628	.00265	.00267
%RSD	2.1993	2.9822	2.8802	2.4736	2.7556	124.50	32.811
#1	16.292	.03338	.76253	.36121	.23340	.00516	.00522
#2	16.244	.03250	.78018	.34949	.22887	.00026	.01046
#3	15.657	.03145	.80732	.34421	.22100	.00097	.00877
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.7797	.01450	.1072	1.597	-.09233	-.5181	.37648
Stddev	.0792	.00032	.0026	.034	.00749	.0131	.00663
%RSD	2.8479	2.1739	2.443	2.099	8.1121	2.526	1.7615
#1	2.8559	.01478	.1096	1.622	-.09669	-.5071	.38122
#2	2.7853	.01458	.1074	1.609	-.09662	-.5147	.37932
#3	2.6979	.01416	.1044	1.559	-.08368	-.5326	.36890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-002(2) Acquired: 12/31/2019 09:02:11 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0100	.0178	.72810
Stddev	.0016	.0238	.01703
%RSD	16.33	133.7	2.3396
#1	-.0116	.0089	.74686
#2	-.0099	.0447	.72382
#3	-.0084	-.0002	.71360
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2818.6	334290.	18188.
Stddev	5.8	2476.	66.
%RSD	.20564	.74058	.36291
#1	2823.6	337030.	18218.
#2	2820.0	332210.	18233.
#3	2812.2	333640.	18112.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	92.355%	98.405%	98.556%
Range			

Sample Name: UL20021-004(2) Acquired: 12/31/2019 09:07:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00164	171.30	.17997	.1475	3.0883	.00945	80.297
Stddev	.00030	1.83	.00254	.0015	.0421	.00007	.752
%RSD	18.408	1.0695	1.4127	.9851	1.3635	.78763	.93596
#1	.00190	173.35	.18138	.1490	3.1346	.00952	81.084
#2	.00131	170.70	.18150	.1461	3.0779	.00946	80.219
#3	.00170	169.84	.17704	.1473	3.0523	.00937	79.587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.19680	.24622	.25895	317.02	32.909	60.76
Stddev	.0001	.00128	.00229	.00211	3.54	.356	.53
%RSD	1.461	.65013	.92907	.81426	1.1171	1.0811	.8689
#1	.0044	.19824	.24884	.26138	320.93	33.221	61.22
#2	.0044	.19581	.24520	.25769	316.09	32.983	60.88
#3	.0045	.19633	.24462	.25777	314.04	32.521	60.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-004(2) Acquired: 12/31/2019 09:07:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 23.566	.03242	2.2103	.34795	.31695	.00075	.01100
Stddev	.174	.00032	.0135	.00133	.00269	.00273	.00248
%RSD	.73628	.99065	.60968	.38148	.84865	365.58	22.542
#1	23.737	.03260	2.2259	.34947	.31390	-.00025	.01386
#2	23.572	.03205	2.2029	.34705	.31794	-.00134	.00944
#3	23.390	.03261	2.2023	.34732	.31900	.00384	.00970
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	20.000						
Low Limit	-20.000						

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.3783	.01617	.1613	1.787	-.14029	-.5444	.42491
Stddev	.0276	.00092	.0018	.014	.00649	.0088	.00299
%RSD	.81703	5.6814	1.104	.7714	4.6244	1.615	.70251
#1	3.4079	.01694	.1631	1.802	-.14612	-.5506	.42829
#2	3.3737	.01641	.1612	1.784	-.14146	-.5344	.42385
#3	3.3533	.01515	.1596	1.775	-.13330	-.5483	.42261
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-004(2) Acquired: 12/31/2019 09:07:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0108	.0051	1.1908
Stddev	.0014	.0115	.0068
%RSD	12.68	226.2	.56748
#1	-.0119	-.0031	1.1984
#2	-.0093	.0002	1.1883
#3	-.0111	.0182	1.1856
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2784.7	326810.	18142.
Stddev	12.4	151.	16.
%RSD	.44377	.04634	.08759
#1	2783.4	326880.	18133.
#2	2797.6	326900.	18133.
#3	2773.0	326630.	18161.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	91.242%	96.201%	98.310%
Range			

Sample Name: UL20021-004(4) Acquired: 12/31/2019 09:13:12 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00084	85.117	.08822	.0778	1.5209	.00459	40.660
Stddev	.00052	.110	.00238	.0012	.0026	.00001	.123
%RSD	61.402	.12926	2.6978	1.570	.16886	.20624	.30337
#1	.00127	85.175	.08986	.0792	1.5193	.00459	40.780
#2	.00099	84.990	.08549	.0771	1.5195	.00459	40.665
#3	.00027	85.186	.08931	.0770	1.5239	.00458	40.534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.09894	.12332	.12830	160.59	16.413	30.69
Stddev	.0002	.00039	.00141	.00017	.12	.179	.18
%RSD	6.644	.39133	1.1468	.12918	.07634	1.0922	.5978
#1	.0026	.09901	.12171	.12829	160.67	16.578	30.87
#2	.0023	.09852	.12436	.12815	160.66	16.439	30.69
#3	.0023	.09928	.12389	.12848	160.45	16.223	30.51
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-004(4) Acquired: 12/31/2019 09:13:12 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.716	.01704	.77543	.17519	.16127	.00068	.00523
Stddev	.148	.00016	.05191	.00069	.00131	.00222	.00127
%RSD	1.1606	.93255	6.6948	.39608	.81096	328.00	24.256
#1	12.577	.01686	.80870	.17577	.16041	.00293	.00537
#2	12.870	.01714	.80199	.17442	.16063	.00063	.00642
#3	12.699	.01713	.71562	.17538	.16278	-.00152	.00390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.6747	.00852	.0807	.8870	-.07255	-.2854	.21051
Stddev	.0104	.00047	.0004	.0108	.00484	.0067	.00354
%RSD	.62266	5.5316	.4568	1.218	6.6652	2.364	1.6812
#1	1.6867	.00903	.0811	.8747	-.07376	-.2932	.20671
#2	1.6697	.00810	.0805	.8951	-.06722	-.2821	.21372
#3	1.6678	.00842	.0805	.8913	-.07666	-.2809	.21109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-004(4) Acquired: 12/31/2019 09:13:12 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0003	-.0018	.60192
Stddev	.0023	.0081	.00194
%RSD	787.3	453.5	.32193
#1	-.0005	.0055	.60340
#2	.0029	-.0105	.59973
#3	-.0015	-.0004	.60263
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2885.5	336780.	18239.
Stddev	10.5	2990.	85.
%RSD	.36379	.88772	.46332
#1	2892.5	339910.	18167.
#2	2890.5	333960.	18217.
#3	2873.4	336470.	18332.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.546%	99.137%	98.831%
Range			

Sample Name: UL20021-005(3) Acquired: 12/31/2019 09:18:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00051	119.45	.09023	.0814	.70310	.00530	37.244
Stddev	.00006	2.37	.00243	.0034	.01376	.00012	.830
%RSD	12.477	1.9824	2.6968	4.145	1.9577	2.3216	2.2295
#1	-.00045	121.75	.09255	.0850	.71658	.00544	38.058
#2	-.00050	119.57	.09044	.0810	.70365	.00527	37.277
#3	-.00057	117.02	.08770	.0782	.68907	.00520	36.398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.03969	.15209	.11829	149.02	16.336	26.40
Stddev	.0001	.00064	.00228	.00273	3.02	.233	.66
%RSD	8.504	1.6231	1.5010	2.3110	2.0263	1.4283	2.502
#1	.0016	.04043	.15458	.12111	151.94	16.570	27.07
#2	.0017	.03938	.15162	.11812	149.20	16.334	26.38
#3	.0014	.03926	.15008	.11565	145.91	16.104	25.75
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-005(3) Acquired: 12/31/2019 09:18:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.0065	.00728	.80106	.10582	.13906	.00329	.00711
Stddev	.0535	.00015	.06185	.00193	.00155	.00137	.00135
%RSD	1.7792	2.0012	7.7206	1.8283	1.1113	41.645	18.924
#1	3.0631	.00744	.87076	.10805	.14013	.00224	.00854
#2	2.9996	.00724	.77968	.10470	.13975	.00484	.00694
#3	2.9569	.00716	.75274	.10470	.13729	.00279	.00586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4520	.01123	.1077	1.295	-.01165	-.2894	.26902
Stddev	.0835	.00018	.0023	.024	.00265	.0036	.00413
%RSD	3.4076	1.6279	2.120	1.867	22.731	1.259	1.5342
#1	2.5210	.01132	.1101	1.321	-.00859	-.2856	.27339
#2	2.4760	.01136	.1076	1.290	-.01320	-.2900	.26848
#3	2.3591	.01102	.1055	1.273	-.01316	-.2928	.26519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-005(3) Acquired: 12/31/2019 09:18:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0014	.0105	.45753
Stddev	.0008	.0085	.00715
%RSD	57.01	80.63	1.5634
#1	.0007	.0137	.46570
#2	.0013	.0169	.45445
#3	.0023	.0009	.45243
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2873.7	332360.	18041.
Stddev	6.4	2150.	134.
%RSD	.22367	.64679	.74525
#1	2866.5	329880.	17891.
#2	2878.8	333550.	18079.
#3	2875.8	333650.	18152.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.160%	97.836%	97.761%
Range			

Sample Name: UL20021-007(3) Acquired: 12/31/2019 09:24:12 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00047	97.849	.11387	.0763	1.6657	.00479	39.228
Stddev	.00018	.835	.00122	.0004	.0173	.00001	.115
%RSD	38.554	.85375	1.0670	.5376	1.0396	.30680	.29430
#1	.00052	97.910	.11520	.0767	1.6621	.00480	39.343
#2	.00063	96.986	.11361	.0759	1.6504	.00478	39.112
#3	.00027	98.653	.11281	.0763	1.6845	.00480	39.228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.08240	.13356	.12432	183.25	14.705	26.99
Stddev	.0002	.00032	.00095	.00090	1.55	.160	.08
%RSD	6.338	.39059	.70926	.72447	.84612	1.0851	.3082
#1	.0023	.08264	.13306	.12465	183.03	14.601	27.08
#2	.0025	.08203	.13297	.12330	181.82	14.627	26.91
#3	.0026	.08253	.13466	.12501	184.90	14.889	26.98
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-007(3) Acquired: 12/31/2019 09:24:12 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.110	.02208	-.03218	.13430	.15706	.00077	.00560
Stddev	.033	.00017	.08927	.00082	.00135	.00188	.00109
%RSD	.32607	.78471	277.45	.61342	.86053	244.62	19.487
#1	10.148	.02202	-.04933	.13525	.15662	.00110	.00439
#2	10.089	.02227	-.11162	.13374	.15598	-.00125	.00590
#3	10.094	.02194	.06443	.13393	.15857	.00245	.00651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2558	.01099	.0994	1.218	-.05520	-.2768	.26010
Stddev	.0181	.00043	.0005	.012	.00358	.0094	.00407
%RSD	.80304	3.9116	.4586	.9864	6.4873	3.397	1.5650
#1	2.2757	.01142	.0994	1.213	-.05859	-.2677	.25844
#2	2.2514	.01098	.0989	1.209	-.05557	-.2762	.25711
#3	2.2403	.01056	.0998	1.232	-.05145	-.2865	.26473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-007(3) Acquired: 12/31/2019 09:24:12 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0010	.0170	.57925
Stddev	.0034	.0122	.00401
%RSD	344.9	72.06	.69176
#1	-.0008	.0087	.58378
#2	-.0011	.0310	.57616
#3	.0048	.0112	.57782
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2944.7	342320.	18573.
Stddev	5.5	2159.	191.
%RSD	.18741	.63077	1.0309
#1	2938.6	343030.	18564.
#2	2949.3	344030.	18769.
#3	2946.3	339890.	18386.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.487%	100.77%	100.64%
Range			

Sample Name: UL20021-008(2) Acquired: 12/31/2019 09:29:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00014	149.84	.09602	.1237	1.0787	.00692	68.915
Stddev	.00015	1.26	.00114	.0006	.0111	.00007	.563
%RSD	111.49	.84360	1.1903	.4661	1.0310	1.0291	.81701
#1	-.00008	151.03	.09731	.1239	1.0887	.00693	69.359
#2	-.00002	149.98	.09513	.1231	1.0807	.00698	69.103
#3	-.00031	148.51	.09562	.1242	1.0667	.00684	68.282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.07557	.19663	.19335	181.37	24.631	46.83
Stddev	.0001	.00077	.00178	.00320	1.39	.154	.49
%RSD	4.169	1.0135	.90423	1.6558	.76520	.62455	1.039
#1	.0023	.07645	.19671	.19384	182.50	24.523	47.32
#2	.0024	.07512	.19837	.19628	181.78	24.807	46.84
#3	.0024	.07513	.19482	.18993	179.82	24.563	46.35
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-008(2) Acquired: 12/31/2019 09:29:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.6605	.01272	.56508	.16666	.20116	.00274	.00488
Stddev	.0570	.00040	.04999	.00168	.00225	.00205	.00302
%RSD	1.0069	3.1705	8.8472	1.0051	1.1209	74.863	61.920
#1	5.6694	.01227	.51695	.16847	.20268	.00156	.00733
#2	5.7125	.01283	.56153	.16635	.20224	.00511	.00150
#3	5.5996	.01305	.61675	.16517	.19857	.00155	.00581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.5061	.01700	.1711	1.725	-.02612	-.3943	.33285
Stddev	.1293	.00021	.0014	.020	.00070	.0024	.00427
%RSD	2.8691	1.2276	.7995	1.155	2.6737	.6040	1.2826
#1	4.6085	.01709	.1723	1.726	-.02539	-.3935	.33136
#2	4.5490	.01676	.1714	1.745	-.02677	-.3924	.33767
#3	4.3608	.01715	.1696	1.705	-.02621	-.3970	.32953
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-008(2) Acquired: 12/31/2019 09:29:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0030	.0217	.90448
Stddev	.0005	.0104	.00999
%RSD	16.84	47.78	1.1042
#1	-.0036	.0098	.91574
#2	-.0030	.0286	.90100
#3	-.0026	.0269	.89670
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2823.4	335370.	18194.
Stddev	3.3	2414.	83.
%RSD	.11718	.71993	.45462
#1	2819.7	337570.	18223.
#2	2826.0	332790.	18258.
#3	2824.4	335760.	18100.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	92.510%	98.723%	98.588%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 09:35:12 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50942	25.403	.50715	.5302	2.6443	2.6349	50.326
Stddev	.00109	.182	.00202	.0045	.0206	.0094	.162
%RSD	.21425	.71551	.39919	.8478	.77885	.35602	.32255
#1	.50823	25.278	.50861	.5260	2.6327	2.6245	50.234
#2	.51038	25.612	.50484	.5350	2.6681	2.6427	50.513
#3	.50965	25.320	.50800	.5297	2.6321	2.6375	50.230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4981	2.5470	2.6057	2.5879	25.301	52.313	49.03
Stddev	.0010	.0057	.0196	.0038	.155	1.000	.08
%RSD	.2077	.22244	.75066	.14798	.61372	1.9110	.1727
#1	.4986	2.5511	2.5869	2.5852	25.210	51.871	48.96
#2	.4969	2.5405	2.6259	2.5862	25.480	53.457	49.02
#3	.4987	2.5493	2.6042	2.5923	25.212	51.610	49.13
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 09:35:12 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6066	2.5375	51.331	2.5163	.51452	.49168	.49940
Stddev	.0085	.0029	.808	.0076	.00383	.00606	.00371
%RSD	.32445	.11254	1.5739	.30378	.74437	1.2331	.74195
#1	2.5975	2.5386	50.844	2.5126	.51892	.48579	.49608
#2	2.6142	2.5342	52.263	2.5112	.51193	.49134	.49872
#3	2.6081	2.5396	50.885	2.5251	.51272	.49790	.50340
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4443	.51451	2.559	.5248	1.0275	2.555	2.6445
Stddev	.0022	.00305	.012	.0037	.0060	.018	.0246
%RSD	.09143	.59240	.4862	.7081	.58616	.6890	.92860
#1	2.4469	.51802	2.554	.5220	1.0253	2.559	2.6262
#2	2.4428	.51251	2.573	.5290	1.0229	2.535	2.6724
#3	2.4433	.51301	2.550	.5234	1.0343	2.570	2.6349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 09:35:12 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.543	2.378	2.5078
Stddev	.002	.031	.0115
%RSD	.0591	1.292	.45878
#1	2.542	2.348	2.5010
#2	2.543	2.409	2.5014
#3	2.545	2.376	2.5211
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2881.9	321630.	17491.
Stddev	13.6	1837.	91.
%RSD	.47122	.57109	.52166
#1	2893.0	323740.	17594.
#2	2886.0	320360.	17419.
#3	2866.8	320790.	17460.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 09:40:35 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00022	.00434	-.00011	.0027	.00050	.00010	-.13147
Stddev	.00011	.00914	.00053	.0009	.00037	.00003	.00062
%RSD	48.098	210.81	462.87	32.62	72.794	29.931	.47402
#1	.00015	.00745	.00047	.0035	.00066	.00013	-.13203
#2	.00017	.01151	-.00026	.0018	.00008	.00012	-.13080
#3	.00035	-.00595	-.00055	.0027	.00077	.00007	-.13160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00013	-.00006	-.00048	.00321	.28070	-.2427
Stddev	.0000	.00003	.00039	.00050	.00278	.05035	.0040
%RSD	12.60	24.014	643.64	103.64	86.661	17.939	1.628
#1	.0003	.00012	.00005	-.00058	.00091	.31593	-.2449
#2	.0004	.00017	-.00050	.00006	.00630	.30314	-.2381
#3	.0004	.00011	.00026	-.00093	.00241	.22303	-.2450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 09:40:35 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00037	.00564	-.42522	.00037	-.00063	.00291	.00107
Stddev	.00003	.00102	.01522	.00046	.00122	.00222	.00123
%RSD	7.2589	18.008	3.5804	125.42	193.22	76.339	115.26
#1	-.00035	.00650	-.41595	.00034	-.00133	.00155	.00233
#2	-.00037	.00590	-.44279	-.00008	-.00133	.00548	-.00013
#3	-.00040	.00452	-.41691	.00085	.00078	.00171	.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06158	.00010	.0001	-.0007	-.00110	-.0069	-.00128
Stddev	.00116	.00032	.0000	.0001	.00192	.0058	.00015
%RSD	1.8860	304.07	69.91	18.97	174.03	84.09	12.037
#1	.06256	.00038	.0000	-.0006	.00015	-.0132	-.00139
#2	.06030	-.00024	.0001	-.0006	-.00015	-.0058	-.00111
#3	.06189	.00018	.0000	-.0008	-.00331	-.0018	-.00135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 09:40:35 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0180	.0209	.00028
Stddev	.0008	.0149	.00008
%RSD	4.291	71.50	27.851
#1	.0177	.0361	.00035
#2	.0175	.0202	.00019
#3	.0189	.0063	.00031
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3052.6	344730.	17718.
Stddev	9.3	995.	33.
%RSD	.30537	.28858	.18820
#1	3061.1	345850.	17708.
#2	3054.1	343960.	17755.
#3	3042.7	344370.	17690.

Sample Name: UL20021-009(5) Acquired: 12/31/2019 09:46:07 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00155	55.732	.05519	.0508	1.4460	.00273	39.495
Stddev	.00034	.787	.00095	.0011	.0232	.00004	.248
%RSD	21.940	1.4125	1.7157	2.159	1.6031	1.3228	.62777
#1	.00171	54.907	.05531	.0503	1.4218	.00274	39.249
#2	.00177	55.816	.05607	.0500	1.4482	.00276	39.491
#3	.00116	56.475	.05419	.0520	1.4680	.00269	39.745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.14129	.07720	.07392	97.150	9.4933	24.79
Stddev	.0001	.00033	.00037	.00080	1.180	.3070	.19
%RSD	4.633	.23415	.48236	1.0784	1.2144	3.2339	.7780
#1	.0029	.14130	.07699	.07480	95.901	9.1546	24.67
#2	.0030	.14162	.07763	.07368	97.303	9.5719	24.68
#3	.0027	.14096	.07698	.07326	98.246	9.7533	25.01
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-009(5) Acquired: 12/31/2019 09:46:07 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.676	.00852	-.07877	.11075	.10701	.00125	.00450
Stddev	.068	.00026	.09564	.00068	.00222	.00221	.00272
%RSD	.54015	3.0428	121.42	.61670	2.0734	176.35	60.446
#1	12.629	.00881	-.16172	.11144	.10861	-.00120	.00612
#2	12.754	.00833	-.10044	.11074	.10795	.00188	.00136
#3	12.643	.00841	.02584	.11007	.10448	.00309	.00602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2269	.00619	.0811	.6812	-.07332	-.2160	.15363
Stddev	.0025	.00024	.0004	.0039	.00296	.0073	.00098
%RSD	.11104	3.8473	.5100	.5794	4.0377	3.397	.64008
#1	2.2298	.00638	.0807	.6776	-.07603	-.2093	.15269
#2	2.2257	.00627	.0810	.6854	-.07016	-.2149	.15465
#3	2.2253	.00592	.0815	.6805	-.07377	-.2238	.15355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-009(5) Acquired: 12/31/2019 09:46:07 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0073	.0156	.36400
Stddev	.0018	.0062	.00094
%RSD	23.88	39.72	.25827
#1	.0086	.0196	.36483
#2	.0081	.0187	.36298
#3	.0053	.0085	.36419
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2891.0	339660.	18007.
Stddev	5.9	1272.	230.
%RSD	.20282	.37457	1.2785
#1	2884.2	339480.	18232.
#2	2894.1	338490.	18016.
#3	2894.7	341010.	17772.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.726%	99.985%	97.575%
Range			

Sample Name: XUL20021-006(3) Acquired: 12/31/2019 09:51:37 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00051	s -.00600	s .00132	k .0022	s .00274	k -.00117	s -.14121
Stddev	.00015	.03327	.00053	.0003	.00089	.00004	.00577
%RSD	28.410	554.70	39.959	15.00	32.312	3.3706	4.0890
#1	.00068	s .03084	k .00188	k .0021	s .00342	k -.00118	s -.14309
#2	.00044	s -.01497	s .00124	k .0020	s .00174	k -.00120	s -.14581
#3	.00042	s -.03386	s .00083	k .0026	s .00306	k -.00112	s -.13473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s .0011	s -.00019	-.00002	k .00983	s -.00172	s .57358	s -.2563
Stddev	.0006	.00012	.00022	.00004	.00510	.08149	.0223
%RSD	54.37	61.726	1362.3	.37055	297.50	14.207	8.688
#1	k .0004	-.00019	.00013	k .00981	s .00264	s .58236	s -.2808
#2	s .0016	s -.00007	.00010	k .00988	s -.00734	s .48805	s -.2508
#3	s .0014	s -.00031	-.00028	k .00982	s -.00045	s .65032	s -.2373
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: XUL20021-006(3) Acquired: 12/31/2019 09:51:37 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00067	s .00148	s 3.5308	s -.00025	s .00117	s -.00222	s .00077
Stddev	.00003	.00041	1.1383	.00013	.00121	.00411	.00029
%RSD	3.9478	27.587	32.238	54.938	103.05	185.58	38.153
#1	-.00068	.00195	s 4.0237	k -.00034	k .00255	k .00226	k .00098
#2	-.00064	s .00122	s 2.2292	s -.00009	s .00031	s -.00583	s .00044
#3	-.00069	s .00126	s 4.3395	s -.00030	s .00065	s -.00308	s .00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	s .05975	s .00017	s -.0002	-.0002	s -.00430	.0381	k -.01847
Stddev	.00503	.00018	.0000	.0003	.00237	.0053	.00842
%RSD	8.4185	105.74	18.59	198.0	55.091	13.83	45.592
#1	.06207	.00036	s -.0002	.0001	k -.00560	.0422	k -.02176
#2	s .06321	s .00015	s -.0002	-.0001	s -.00574	.0400	k -.02475
#3	s .05398	s .00000	s -.0001	-.0005	s -.00157	.0321	k -.00890
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: XUL20021-006(3) Acquired: 12/31/2019 09:51:37 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	s .0116	.0135	s .00023
Stddev	.0010	.0076	.00042
%RSD	8.850	56.09	178.58
#1	.0115	.0112	.00070
#2	s .0127	.0219	s .00012
#3	s .0106	.0073	s -.00011
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	^W *****	W 773840.	^ *****
Stddev	-----	149280.	-----
%RSD	-----	19.291	-----
#1	6313.1	822230.	^ -----
#2	^ -----	892930.	^ -----
#3	^ -----	606370.	^ -----
Check ?	Chk Warn	Chk Warn	Chk Pass
Value	170.38%	227.79%	81.992%
Range	50.000%	50.000%	

Sample Name: UL20021-006(3) Acquired: 12/31/2019 09:57:06 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00083	114.89	.10198	.0768	1.6715	.00538	33.830
Stddev	.00037	.85	.00127	.0017	.0127	.00009	.132
%RSD	43.866	.73698	1.2414	2.259	.76273	1.6359	.38886
#1	.00122	113.95	.10061	.0753	1.6580	.00545	33.678
#2	.00049	115.13	.10310	.0764	1.6731	.00540	33.900
#3	.00080	115.60	.10222	.0787	1.6833	.00528	33.912
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.10747	.15124	.12527	166.80	15.313	25.13
Stddev	.0001	.00027	.00109	.00108	1.10	.263	.03
%RSD	4.030	.25283	.71929	.85920	.65865	1.7196	.1074
#1	.0035	.10726	.15202	.12575	165.56	15.009	25.10
#2	.0035	.10737	.15170	.12603	167.19	15.484	25.15
#3	.0038	.10777	.15000	.12404	167.66	15.444	25.15
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-006(3) Acquired: 12/31/2019 09:57:06 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.861	.00935	.49232	.15371	.16683	.00208	.00557
Stddev	.120	.00042	.09006	.00043	.00092	.00115	.00250
%RSD	.93591	4.5017	18.293	.27902	.55094	55.082	44.891
#1	12.944	.00910	.39111	.15343	.16583	.00340	.00839
#2	12.916	.00912	.52223	.15350	.16764	.00141	.00361
#3	12.723	.00984	.56361	.15421	.16702	.00143	.00471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1646	.01102	.1046	1.323	-.06834	-.3294	.28560
Stddev	.0193	.00071	.0006	.015	.00195	.0204	.00323
%RSD	.88914	6.4237	.5410	1.158	2.8597	6.193	1.1304
#1	2.1586	.01042	.1039	1.334	-.06794	-.3514	.28764
#2	2.1491	.01085	.1047	1.329	-.06662	-.3258	.28727
#3	2.1862	.01180	.1051	1.305	-.07047	-.3110	.28187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20021-006(3) Acquired: 12/31/2019 09:57:06 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0015	.0144	.49020
Stddev	.0014	.0073	.00288
%RSD	92.67	50.92	.58654
#1	.0021	.0065	.48909
#2	.0024	.0158	.48805
#3	-.0001	.0210	.49347
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2872.8	335890.	18169.
Stddev	8.3	3593.	157.
%RSD	.28887	1.0696	.86353
#1	2879.4	333780.	18342.
#2	2875.5	333860.	18129.
#3	2863.5	340040.	18036.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.129%	98.876%	98.453%
Range			

Sample Name: UQ39572-001 Acquired: 12/31/2019 10:02:35 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00000	.00501	.00040	.0022	-.00016	-.00028	-.13733
Stddev	.00018	.00191	.00097	.0003	.00013	.00001	.00189
%RSD	191230.	38.232	245.55	11.99	78.411	1.9020	1.3747
#1	-.00021	.00717	.00143	.0021	-.00029	-.00027	-.13814
#2	.00014	.00352	-.00050	.0025	-.00005	-.00028	-.13517
#3	.00007	.00433	.00025	.0020	-.00014	-.00028	-.13867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00016	.00009	.00009	.00717	.06383	-.2450
Stddev	.0001	.00013	.00006	.00118	.00293	.03390	.0107
%RSD	36.10	77.162	66.785	1286.7	40.899	53.112	4.376
#1	.0004	.00026	.00014	-.00123	.00915	.05737	-.2546
#2	.0003	.00002	.00011	.00046	.00856	.03362	-.2469
#3	.0002	.00021	.00002	.00105	.00380	.10050	-.2334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39572-001 Acquired: 12/31/2019 10:02:35 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00049	.00172	-.93727	-.00040	-.00046	.00098	.00099
Stddev	.00018	.00019	.03868	.00022	.00147	.00132	.00013
%RSD	35.769	11.112	4.1265	55.546	323.05	134.43	13.092
#1	-.00029	.00172	-.89623	-.00059	-.00154	.00034	.00113
#2	-.00056	.00153	-.97304	-.00044	.00122	.00011	.00088
#3	-.00062	.00192	-.94255	-.00016	-.00105	.00250	.00095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06063	.00025	-.0003	-.0008	-.00293	-.0090	-.00538
Stddev	.00176	.00027	.0001	.0002	.00085	.0083	.00061
%RSD	2.9079	106.43	19.14	26.20	28.846	92.16	11.389
#1	.06246	.00031	-.0004	-.0006	-.00203	-.0008	-.00475
#2	.06051	-.00004	-.0003	-.0008	-.00307	-.0173	-.00542
#3	.05894	.00049	-.0003	-.0010	-.00370	-.0087	-.00597
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ39572-001 Acquired: 12/31/2019 10:02:35 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0118	.0121	.00042
Stddev	.0011	.0198	.00005
%RSD	9.492	163.7	12.186
#1	.0130	-.0107	.00040
#2	.0108	.0247	.00038
#3	.0117	.0223	.00048
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3205.1	358510.	18723.
Stddev	10.4	2835.	102.
%RSD	.32508	.79073	.54239
#1	3203.7	355260.	18607.
#2	3195.5	359740.	18771.
#3	3216.2	360520.	18792.

Sample Name: UQ39572-002 Acquired: 12/31/2019 10:08:07 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41335	20.214	.41781	.4175	2.1161	2.1156	39.582
Stddev	.00159	.100	.00063	.0026	.0175	.0245	.140
%RSD	.38494	.49522	.15006	.6262	.82658	1.1555	.35254
#1	.41326	20.315	.41854	.4186	2.1350	2.0938	39.730
#2	.41498	20.212	.41746	.4193	2.1128	2.1421	39.453
#3	.41181	20.115	.41745	.4145	2.1005	2.1110	39.562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3960	2.0006	2.0487	2.0466	19.886	41.483	38.74
Stddev	.0020	.0084	.0197	.0040	.089	.532	.07
%RSD	.4980	.41820	.96220	.19640	.44870	1.2825	.1685
#1	.3968	2.0026	2.0462	2.0434	19.987	42.096	38.82
#2	.3938	1.9914	2.0695	2.0452	19.854	41.139	38.71
#3	.3975	2.0078	2.0304	2.0511	19.817	41.214	38.71
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ39572-002 Acquired: 12/31/2019 10:08:07 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0610	1.9387	40.563	1.9776	.40702	.38387	.39975
Stddev	.0146	.0091	.374	.0119	.00060	.00341	.00336
%RSD	.70649	.47094	.92266	.60088	.14686	.88920	.84067
#1	2.0542	1.9348	40.995	1.9785	.40657	.38027	.39726
#2	2.0777	1.9321	40.338	1.9653	.40679	.38429	.39841
#3	2.0511	1.9491	40.356	1.9890	.40770	.38706	.40357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9202	.40410	1.012	.4169	.83401	-.0036	2.0662
Stddev	.0101	.00247	.005	.0031	.00101	.0110	.0174
%RSD	.52420	.61195	.4896	.7506	.12053	308.0	.84099
#1	1.9314	.40568	1.018	.4173	.83492	-.0007	2.0658
#2	1.9120	.40125	1.010	.4198	.83418	-.0158	2.0838
#3	1.9173	.40536	1.009	.4136	.83293	.0057	2.0490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ39572-002 Acquired: 12/31/2019 10:08:07 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0273	.0145	1.9724
Stddev	.0010	.0129	.0113
%RSD	3.760	88.57	.57066
#1	-.0281	.0016	1.9727
#2	-.0261	.0146	1.9609
#3	-.0276	.0274	1.9835
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2972.4	332810.	18151.
Stddev	8.3	2573.	69.
%RSD	.27822	.77297	.37787
#1	2965.6	333760.	18074.
#2	2981.6	329900.	18205.
#3	2970.1	334770.	18173.

Sample Name: UL19032-003 Acquired: 12/31/2019 10:13:33 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-MW03(121819)

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	8.8784	.00154	.0133	.08931	.00134	5.0966
Stddev	.00027	.0672	.00103	.0004	.00088	.00004	.0328
%RSD	737.83	.75709	66.654	3.191	.98606	2.8561	.64389
#1	-.00033	8.9418	.00270	.0138	.09028	.00132	5.0988
#2	.00000	8.8079	.00121	.0131	.08857	.00139	5.0628
#3	.00021	8.8855	.00072	.0130	.08906	.00132	5.1283
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00240	.00269	.00664	5.5008	2.5073	4.878
Stddev	.0001	.00014	.00030	.00041	.0304	.0425	.038
%RSD	54.99	5.6719	11.249	6.2273	.55245	1.6971	.7746
#1	.0002	.00241	.00235	.00647	5.5095	2.5431	4.921
#2	.0003	.00226	.00280	.00634	5.4670	2.4603	4.865
#3	.0001	.00253	.00292	.00711	5.5259	2.5186	4.849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19032-003 Acquired: 12/31/2019 10:13:33 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-MW03(121819)

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.17182	.00518	5.9004	.00111	.00535	.00215	.00276
Stddev	.00058	.00135	.0916	.00034	.00095	.00106	.00049
%RSD	.33854	26.036	1.5525	30.478	17.833	49.444	17.830
#1	.17163	.00655	5.9404	.00115	.00603	.00219	.00228
#2	.17247	.00516	5.7956	.00142	.00576	.00320	.00274
#3	.17136	.00385	5.9652	.00075	.00426	.00107	.00326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 18.478	.00106	.0492	.3521	-.00173	-.0229	.00816
Stddev	.112	.00033	.0003	.0003	.00032	.0049	.00032
%RSD	.60764	31.433	.5598	.0936	18.660	21.31	3.9765
#1	18.355	.00100	.0492	.3525	-.00143	-.0190	.00854
#2	18.504	.00143	.0489	.3519	-.00207	-.0283	.00798
#3	18.576	.00077	.0495	.3520	-.00170	-.0213	.00797
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL19032-003 Acquired: 12/31/2019 10:13:33 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-MW03(121819)

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0103	.0102	.01363
Stddev	.0004	.0133	.00006
%RSD	3.811	131.1	.45318
#1	.0105	.0256	.01357
#2	.0106	.0018	.01370
#3	.0099	.0032	.01363
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3114.9	352650.	18753.
Stddev	14.6	356.	98.
%RSD	.46980	.10088	.52074
#1	3131.7	352290.	18708.
#2	3108.0	352660.	18865.
#3	3104.9	353000.	18685.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.06%	103.81%	101.62%
Range			

Sample Name: UL19032-004 Acquired: 12/31/2019 10:19:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-MW05(121819)

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00039	.10945	.00109	.0269	.05136	-.00014	10.283
Stddev	.00049	.01065	.00088	.0007	.00065	.00002	.005
%RSD	123.44	9.7295	80.561	2.596	1.2723	11.492	.04931
#1	.00094	.11150	.00207	.0272	.05085	-.00012	10.277
#2	-.00000	.09793	.00081	.0274	.05113	-.00014	10.286
#3	.00025	.11893	.00039	.0261	.05209	-.00016	10.286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00016	.01163	.00004	.05253	4.9310	3.552
Stddev	.0001	.00001	.00022	.00075	.00368	.0561	.003
%RSD	15.05	8.2660	1.9341	1900.8	7.0028	1.1387	.0896
#1	.0004	.00015	.01188	.00082	.04882	4.9207	3.551
#2	.0004	.00015	.01157	-.00068	.05258	4.9916	3.550
#3	.0003	.00018	.01145	-.00002	.05618	4.8807	3.556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19032-004 Acquired: 12/31/2019 10:19:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-MW05(121819)

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09317	.00445	12.084	.00116	.00089	.00119	.00098
Stddev	.00030	.00020	.137	.00026	.00031	.00143	.00041
%RSD	.32274	4.5338	1.1338	22.243	34.718	119.88	42.203
#1	.09351	.00462	11.933	.00099	.00061	.00076	.00125
#2	.09293	.00452	12.119	.00103	.00123	.00278	.00050
#3	.09308	.00423	12.200	.00146	.00085	.00003	.00118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 12.252	.00093	.0981	.0006	-.00408	-.0071	-.00469
Stddev	.029	.00025	.0008	.0002	.00225	.0018	.00013
%RSD	.23567	27.427	.7977	36.21	55.095	25.94	2.8127
#1	12.222	.00115	.0972	.0006	-.00148	-.0090	-.00460
#2	12.280	.00065	.0984	.0009	-.00534	-.0070	-.00484
#3	12.254	.00097	.0987	.0004	-.00541	-.0054	-.00463
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL19032-004 Acquired: 12/31/2019 10:19:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-MW05(121819)

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0108	.0206	.00629
Stddev	.0002	.0011	.00006
%RSD	1.809	5.161	.93940
#1	.0109	.0210	.00633
#2	.0109	.0194	.00622
#3	.0106	.0214	.00632
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3111.9	352020.	18605.
Stddev	3.3	1096.	58.
%RSD	.10650	.31125	.31326
#1	3108.8	351820.	18664.
#2	3111.5	353200.	18605.
#3	3115.4	351030.	18547.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.96%	103.62%	100.82%
Range			

Sample Name: UL19032-005 Acquired: 12/31/2019 10:24:28 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-EB05(121819)

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	.01011	.00152	.0022	.00493	-.00016	-.08187
Stddev	.00011	.00654	.00064	.0010	.00019	.00001	.00215
%RSD	508.14	64.655	41.832	47.76	3.8840	5.7945	2.6316
#1	-.00012	.01728	.00226	.0017	.00515	-.00017	-.08022
#2	-.00004	.00859	.00112	.0034	.00481	-.00015	-.08430
#3	.00009	.00447	.00118	.0015	.00483	-.00015	-.08108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00006	.00008	.00062	.01271	.21181	-.2420
Stddev	.0000	.00010	.00021	.00050	.00231	.09348	.0067
%RSD	10.26	169.15	250.52	80.800	18.140	44.133	2.758
#1	.0002	.00005	.00021	.00076	.01056	.12380	-.2437
#2	.0002	-.00003	.00021	.00006	.01243	.30993	-.2346
#3	.0002	.00016	-.00016	.00104	.01515	.20170	-.2476
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19032-005 Acquired: 12/31/2019 10:24:28 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-EB05(121819)

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00039	.00204	-.72354	.00008	.00137	.00280	.00048
Stddev	.00003	.00018	.03221	.00027	.00134	.00132	.00101
%RSD	8.3948	8.9542	4.4518	331.59	97.991	47.043	209.82
#1	-.00036	.00204	-.68651	-.00012	.00175	.00420	.00002
#2	-.00039	.00186	-.73904	-.00003	.00248	.00263	.00164
#3	-.00043	.00222	-.74508	.00039	-.00012	.00158	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10417	.00068	.0038	-.0003	-.00349	-.0104	-.00521
Stddev	.00061	.00004	.0000	.0000	.00173	.0042	.00018
%RSD	.58925	6.1293	.5621	11.86	49.608	40.04	3.5298
#1	.10425	.00067	.0038	-.0003	-.00285	-.0059	-.00511
#2	.10474	.00072	.0038	-.0003	-.00544	-.0142	-.00510
#3	.10352	.00064	.0038	-.0004	-.00216	-.0112	-.00542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19032-005 Acquired: 12/31/2019 10:24:28 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: CCGE01-EB05(121819)

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0125	.0227	.00079
Stddev	.0011	.0068	.00005
%RSD	9.166	30.11	6.7307
#1	.0117	.0265	.00084
#2	.0119	.0268	.00079
#3	.0138	.0148	.00074
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3119.8	351630.	18409.
Stddev	11.3	1378.	58.
%RSD	.36227	.39193	.31391
#1	3132.4	351550.	18368.
#2	3116.1	350280.	18384.
#3	3110.7	353040.	18475.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.22%	103.51%	99.755%
Range			

Sample Name: UL19035-002 Acquired: 12/31/2019 10:30:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-49-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00022	.23928	.00121	.0175	.01143	-.00021	2.4295
Stddev	.00015	.00974	.00066	.0008	.00054	.00004	.0097
%RSD	67.503	4.0702	54.708	4.334	4.7043	17.247	.40065
#1	.00006	.22819	.00058	.0178	.01202	-.00017	2.4285
#2	.00035	.24644	.00190	.0180	.01097	-.00023	2.4204
#3	.00026	.24321	.00115	.0166	.01130	-.00024	2.4398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00048	.00053	-.00009	.25849	1.3365	.5215
Stddev	.0001	.00011	.00004	.00047	.00169	.0250	.0238
%RSD	30.33	22.192	7.3134	508.68	.65219	1.8735	4.570
#1	.0003	.00059	.00056	.00045	.25852	1.3592	.5161
#2	.0002	.00044	.00054	-.00032	.25679	1.3096	.5475
#3	.0003	.00039	.00049	-.00040	.26016	1.3407	.5008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-002 Acquired: 12/31/2019 10:30:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-49-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01602	.00201	1.9801	-.00001	.00059	.00173	-.00050
Stddev	.00012	.00010	.0946	.00014	.00134	.00098	.00123
%RSD	.72689	4.8962	4.7760	2544.6	228.51	56.547	246.87
#1	.01614	.00204	2.0693	-.00016	-.00034	.00103	.00088
#2	.01591	.00210	1.8810	.00004	.00212	.00130	-.00090
#3	.01601	.00191	1.9900	.00010	-.00002	.00284	-.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.3429	.00090	.0134	.0013	-.00204	-.0226	-.00551
Stddev	.0060	.00002	.0001	.0001	.00042	.0113	.00054
%RSD	.44884	1.8074	.4280	6.277	20.854	49.87	9.7467
#1	1.3368	.00092	.0134	.0012	-.00168	-.0099	-.00490
#2	1.3430	.00088	.0133	.0012	-.00250	-.0263	-.00590
#3	1.3488	.00089	.0134	.0014	-.00192	-.0315	-.00572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-002 Acquired: 12/31/2019 10:30:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-49-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0111	.0261	.00459
Stddev	.0018	.0058	.00014
%RSD	16.01	22.09	3.0666
#1	.0106	.0290	.00445
#2	.0096	.0194	.00473
#3	.0131	.0297	.00458
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3131.1	361910.	18746.
Stddev	11.8	2868.	155.
%RSD	.37661	.79234	.82783
#1	3132.4	359010.	18586.
#2	3142.2	364740.	18895.
#3	3118.7	361990.	18758.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.59%	106.53%	101.58%
Range			

Sample Name: UL19035-003 Acquired: 12/31/2019 10:35:32 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-51-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00044	.07135	.00110	.0138	.02865	-.00015	.39791
Stddev	.00035	.00471	.00089	.0003	.00016	.00004	.00294
%RSD	79.998	6.6063	81.283	2.472	.57252	25.303	.73764
#1	.00075	.06706	.00208	.0141	.02882	-.00017	.40119
#2	.00049	.07640	.00033	.0134	.02865	-.00018	.39700
#3	.00006	.07059	.00089	.0139	.02849	-.00011	.39554
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00080	-.00006	.00031	.00760	1.2880	.7299
Stddev	.0001	.00009	.00010	.00009	.00340	.0569	.0051
%RSD	42.48	10.609	164.93	30.422	44.728	4.4165	.6931
#1	.0004	.00074	-.00002	.00038	.00822	1.3236	.7274
#2	.0002	.00076	.00001	.00020	.00394	1.3180	.7358
#3	.0003	.00090	-.00017	.00035	.01065	1.2224	.7267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-003 Acquired: 12/31/2019 10:35:32 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-51-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00643	.00169	6.3784	.00035	.00093	.00221	.00107
Stddev	.00006	.00007	.1129	.00020	.00071	.00144	.00063
%RSD	.85838	4.2212	1.7706	56.625	76.049	65.521	59.288
#1	.00640	.00161	6.5065	.00032	.00012	.00174	.00099
#2	.00639	.00173	6.3352	.00017	.00142	.00105	.00174
#3	.00649	.00174	6.2934	.00056	.00126	.00383	.00048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.8104	.00031	.0104	-.0004	-.00135	-.0211	-.00519
Stddev	.0141	.00044	.0001	.0002	.00084	.0042	.00022
%RSD	.50062	141.43	.5259	41.72	62.340	19.77	4.2165
#1	2.7979	.00078	.0104	-.0004	-.00038	-.0195	-.00494
#2	2.8076	.00023	.0104	-.0006	-.00176	-.0180	-.00533
#3	2.8256	-.00008	.0103	-.0003	-.00191	-.0258	-.00531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-003 Acquired: 12/31/2019 10:35:32 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-51-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0108	.0157	.00193
Stddev	.0005	.0124	.00006
%RSD	4.445	78.84	3.0285
#1	.0104	.0218	.00197
#2	.0113	.0015	.00195
#3	.0108	.0238	.00186
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3148.4	353210.	18629.
Stddev	6.2	1913.	67.
%RSD	.19828	.54158	.35784
#1	3155.1	353760.	18555.
#2	3147.1	354790.	18684.
#3	3142.9	351080.	18648.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	103.16%	103.97%	100.95%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 10:41:04 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50174	25.195	.51114	.5152	2.6305	2.6084	50.400
Stddev	.00369	.218	.00325	.0053	.0242	.0321	.086
%RSD	.73447	.86536	.63491	1.035	.92113	1.2319	.16995
#1	.50288	25.197	.50877	.5139	2.6262	2.6046	50.365
#2	.49762	24.976	.50981	.5106	2.6087	2.5784	50.337
#3	.50472	25.412	.51484	.5210	2.6566	2.6423	50.498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5044	2.5764	2.5478	2.5736	25.084	53.066	48.50
Stddev	.0017	.0084	.0197	.0189	.178	.975	.05
%RSD	.3336	.32480	.77456	.73543	.70793	1.8376	.1123
#1	.5030	2.5743	2.5415	2.5812	25.017	52.834	48.56
#2	.5039	2.5694	2.5320	2.5520	24.950	52.227	48.45
#3	.5063	2.5857	2.5699	2.5875	25.285	54.136	48.49
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 10:41:04 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5710	2.5785	51.439	2.5484	.52127	.49305	.50521
Stddev	.0167	.0153	.611	.0060	.00391	.00119	.00289
%RSD	.65030	.59295	1.1877	.23484	.74965	.24050	.57239
#1	2.5728	2.5652	51.240	2.5491	.51687	.49437	.50386
#2	2.5534	2.5751	50.953	2.5422	.52433	.49207	.50324
#3	2.5867	2.5952	52.125	2.5541	.52262	.49271	.50853
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4718	.52004	2.578	.5158	1.0334	2.553	2.5869
Stddev	.0150	.00354	.009	.0038	.0038	.008	.0223
%RSD	.60482	.68123	.3655	.7394	.36810	.3199	.86334
#1	2.4617	.51652	2.573	.5143	1.0335	2.559	2.5774
#2	2.4648	.52001	2.572	.5130	1.0295	2.543	2.5708
#3	2.4890	.52360	2.589	.5202	1.0371	2.555	2.6124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 10:41:04 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.582	2.341	2.5283
Stddev	.021	.024	.0033
%RSD	.8096	1.014	.13217
#1	2.567	2.340	2.5293
#2	2.573	2.318	2.5246
#3	2.606	2.365	2.5311
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2836.3	326550.	17623.
Stddev	8.9	2141.	114.
%RSD	.31291	.65566	.64732
#1	2839.7	326620.	17528.
#2	2842.9	328660.	17749.
#3	2826.2	324380.	17591.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 10:46:28 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00005	-.00123	.00060	.0022	.00057	.00017	-.13014
Stddev	.00043	.01147	.00046	.0003	.00022	.00001	.00121
%RSD	875.68	933.83	78.141	13.50	38.933	6.3072	.92649
#1	-.00030	.00737	.00111	.0020	.00044	.00018	-.13136
#2	.00053	-.01426	.00048	.0025	.00082	.00017	-.13010
#3	-.00008	.00320	.00020	.0020	.00044	.00016	-.12895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00027	.00010	.00037	.00523	.35210	-.2531
Stddev	.0001	.00012	.00025	.00033	.00478	.04148	.0082
%RSD	32.54	42.780	249.87	89.242	91.471	11.781	3.254
#1	.0004	.00026	.00033	.00001	.00998	.39857	-.2445
#2	.0002	.00040	-.00017	.00044	.00530	.33891	-.2610
#3	.0004	.00017	.00014	.00067	.00041	.31882	-.2538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 10:46:28 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00036	.00614	-.33428	-.00007	-.00052	.00233	.00155
Stddev	.00005	.00112	.00853	.00011	.00030	.00190	.00074
%RSD	13.784	18.187	2.5532	159.84	56.924	81.622	47.622
#1	-.00036	.00733	-.32579	.00003	-.00080	.00371	.00222
#2	-.00031	.00599	-.33418	-.00019	-.00056	.00016	.00165
#3	-.00041	.00511	-.34286	-.00006	-.00021	.00312	.00076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06081	.00037	.0000	-.0007	-.00090	-.0088	-.00076
Stddev	.00114	.00092	.0001	.0002	.00140	.0104	.00038
%RSD	1.8748	250.58	884.8	25.66	156.35	117.7	49.969
#1	.06044	-.00069	.0000	-.0008	-.00213	-.0055	-.00080
#2	.05990	.00087	.0001	-.0005	-.00120	-.0205	-.00036
#3	.06209	.00092	-.0001	-.0009	.00063	-.0005	-.00113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 10:46:28 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0191	.0306	.00032
Stddev	.0007	.0069	.00006
%RSD	3.858	22.71	19.336
#1	.0199	.0385	.00032
#2	.0187	.0271	.00038
#3	.0186	.0260	.00026
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2982.5	337040.	17283.
Stddev	10.5	1640.	29.
%RSD	.35325	.48662	.16659
#1	2992.2	336560.	17253.
#2	2984.1	335690.	17286.
#3	2971.3	338860.	17310.

Sample Name: UL19035-007 Acquired: 12/31/2019 10:52:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00005	.11588	.00186	.0138	.01994	-.00012	.73575
Stddev	.00025	.00691	.00028	.0003	.00036	.00003	.00166
%RSD	468.36	5.9608	15.218	2.421	1.8024	22.283	.22598
#1	.00021	.12304	.00202	.0141	.02029	-.00009	.73481
#2	-.00008	.11535	.00153	.0138	.01997	-.00013	.73477
#3	-.00030	.10925	.00203	.0134	.01957	-.00014	.73767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00040	.00010	.00010	.03059	.73384	.2238
Stddev	.0001	.00008	.00022	.00075	.00236	.03705	.0157
%RSD	39.44	19.532	229.75	781.42	7.7247	5.0493	7.002
#1	.0005	.00036	-.00016	-.00069	.03072	.69903	.2417
#2	.0002	.00034	.00020	.00018	.03289	.77279	.2129
#3	.0004	.00048	.00025	.00080	.02817	.72970	.2167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007 Acquired: 12/31/2019 10:52:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.03791	.00271	3.6899	-.00005	.00013	.00213	.00076
Stddev	.00017	.00024	.0537	.00028	.00159	.00177	.00147
%RSD	.45469	8.7274	1.4555	546.39	1206.1	83.165	192.56
#1	.03797	.00289	3.7368	-.00010	-.00170	.00191	-.00035
#2	.03804	.00244	3.6313	.00025	.00091	.00048	.00021
#3	.03771	.00281	3.7016	-.00031	.00118	.00400	.00243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5751	.00040	.0112	-.0003	-.00052	-.0095	-.00564
Stddev	.0013	.00031	.0001	.0002	.00183	.0197	.00047
%RSD	.04903	77.139	.8277	63.49	350.21	207.8	8.2880
#1	2.5737	.00062	.0111	-.0003	-.00236	.0119	-.00511
#2	2.5754	.00052	.0111	-.0005	-.00052	-.0136	-.00581
#3	2.5762	.00005	.0113	-.0001	.00131	-.0268	-.00600
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007 Acquired: 12/31/2019 10:52:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0131	.0161	.12041
Stddev	.0011	.0137	.00062
%RSD	8.164	85.42	.51265
#1	.0120	.0271	.12052
#2	.0134	.0205	.12097
#3	.0141	.0007	.11975
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3143.0	355510.	18581.
Stddev	10.6	2109.	113.
%RSD	.33751	.59316	.60650
#1	3143.1	353400.	18453.
#2	3132.4	355510.	18626.
#3	3153.6	357620.	18665.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.98%	104.65%	100.69%
Range			

Sample Name: UL19035-007S Acquired: 12/31/2019 10:57:33 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218S

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40429	20.341	.41323	.4101	2.0647	2.0690	39.931
Stddev	.00359	.149	.00165	.0045	.0166	.0236	.131
%RSD	.88742	.73052	.39988	1.096	.80532	1.1405	.32838
#1	.40817	20.505	.41317	.4148	2.0836	2.0937	40.082
#2	.40109	20.301	.41160	.4059	2.0578	2.0467	39.868
#3	.40361	20.216	.41490	.4096	2.0526	2.0666	39.844
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3921	1.9832	1.9830	2.0318	19.431	40.841	38.65
Stddev	.0012	.0088	.0221	.0167	.138	.375	.16
%RSD	.3125	.44106	1.1166	.82394	.71256	.91930	.4248
#1	.3910	1.9761	2.0083	2.0489	19.590	41.236	38.71
#2	.3918	1.9806	1.9673	2.0155	19.346	40.489	38.77
#3	.3934	1.9930	1.9734	2.0311	19.355	40.797	38.46
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007S Acquired: 12/31/2019 10:57:33 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218S

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0525	1.9298	43.564	1.9727	.40160	.38453	.39629
Stddev	.0178	.0137	.462	.0080	.00151	.00463	.00188
%RSD	.86894	.71139	1.0599	.40404	.37478	1.2050	.47525
#1	2.0730	1.9151	44.094	1.9690	.40169	.38477	.39412
#2	2.0401	1.9319	43.252	1.9671	.40006	.37979	.39723
#3	2.0445	1.9423	43.345	1.9818	.40306	.38904	.39751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.0767	.39991	1.008	.4042	.82159	.0031	1.9906
Stddev	.0183	.00283	.003	.0045	.00280	.0058	.0239
%RSD	.36132	.70674	.3144	1.126	.34092	189.0	1.1982
#1	5.0593	.39665	1.012	.4091	.81842	.0041	2.0165
#2	5.0751	.40151	1.007	.4002	.82375	-.0032	1.9695
#3	5.0958	.40158	1.005	.4033	.82259	.0083	1.9858
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL19035-007S Acquired: 12/31/2019 10:57:33 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218S

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0274	.0175	2.0846
Stddev	.0007	.0062	.0073
%RSD	2.387	35.68	.35089
#1	-.0278	.0104	2.0803
#2	-.0266	.0222	2.0803
#3	-.0277	.0199	2.0930
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2931.7	334710.	18131.
Stddev	8.8	3186.	180.
%RSD	.30095	.95192	.99460
#1	2935.3	331270.	17963.
#2	2938.1	337560.	18108.
#3	2921.6	335300.	18322.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.058%	98.526%	98.249%
Range			

Sample Name: UL19035-007SD Acquired: 12/31/2019 11:02:59 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218SD

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40339	20.341	.41607	.4103	2.0560	2.0706	40.027
Stddev	.00163	.107	.00185	.0026	.0071	.0097	.088
%RSD	.40395	.52673	.44541	.6431	.34398	.46582	.21946
#1	.40454	20.463	.41536	.4079	2.0640	2.0666	40.128
#2	.40153	20.298	.41468	.4099	2.0507	2.0636	39.968
#3	.40412	20.262	.41817	.4132	2.0533	2.0816	39.985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3926	1.9885	1.9754	2.0254	19.401	41.076	38.49
Stddev	.0010	.0021	.0049	.0112	.033	.170	.18
%RSD	.2448	.10441	.25019	.55219	.17165	.41379	.4567
#1	.3921	1.9866	1.9755	2.0281	19.439	41.056	38.69
#2	.3919	1.9883	1.9705	2.0131	19.384	40.916	38.36
#3	.3937	1.9907	1.9804	2.0350	19.380	41.255	38.41
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007SD Acquired: 12/31/2019 11:02:59 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218SD

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0488	1.9352	43.596	1.9740	.40237	.38113	.39903
Stddev	.0042	.0070	.124	.0004	.00222	.00053	.00035
%RSD	.20513	.36158	.28530	.02027	.55233	.14018	.08679
#1	2.0516	1.9293	43.669	1.9736	.40150	.38057	.39890
#2	2.0440	1.9335	43.453	1.9741	.40072	.38164	.39877
#3	2.0509	1.9429	43.667	1.9744	.40490	.38117	.39943
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.1479	.40138	1.010	.4038	.81964	-.0060	1.9830
Stddev	.0174	.00207	.003	.0018	.00554	.0070	.0080
%RSD	.33734	.51607	.2500	.4558	.67544	116.4	.40385
#1	5.1422	.40011	1.013	.4026	.81375	-.0138	1.9782
#2	5.1341	.40026	1.008	.4029	.82044	-.0041	1.9786
#3	5.1674	.40377	1.009	.4059	.82474	-.0002	1.9923
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL19035-007SD Acquired: 12/31/2019 11:02:59 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-68-WG-20191218SD

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0290	.0071	2.0802
Stddev	.0006	.0120	.0017
%RSD	2.049	168.6	.08212
#1	-.0284	.0141	2.0786
#2	-.0289	-.0067	2.0799
#3	-.0296	.0139	2.0820
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2972.4	340580.	18427.
Stddev	5.4	810.	68.
%RSD	.18225	.23794	.36773
#1	2974.5	340700.	18373.
#2	2976.3	341320.	18503.
#3	2966.2	339710.	18406.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.392%	100.25%	99.854%
Range			

Sample Name: UL19035-007L(5) Acquired: 12/31/2019 11:08:25 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00028	.01808	.00134	.0046	.00408	-.00014	.03529
Stddev	.00014	.00799	.00130	.0005	.00008	.00005	.00279
%RSD	48.777	44.197	96.967	10.14	1.8479	36.514	7.9202
#1	.00013	.02230	.00067	.0047	.00409	-.00018	.03231
#2	.00040	.00886	.00284	.0040	.00400	-.00014	.03570
#3	.00030	.02307	.00051	.0049	.00414	-.00008	.03785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00020	-.00032	-.00026	.00736	.34444	-.1571
Stddev	.0002	.00009	.00008	.00040	.00009	.04857	.0119
%RSD	93.07	42.006	25.206	156.37	1.2169	14.102	7.579
#1	.0004	.00022	-.00024	-.00006	.00746	.35156	-.1515
#2	.0003	.00011	-.00041	.00001	.00732	.38905	-.1708
#3	.0000	.00028	-.00031	-.00072	.00730	.29270	-.1491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007L(5) Acquired: 12/31/2019 11:08:25 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00713	.00579	.24288	-.00026	.00068	.00259	.00239
Stddev	.00012	.00143	.05598	.00022	.00151	.00150	.00217
%RSD	1.6170	24.675	23.048	85.163	221.56	58.008	90.685
#1	.00700	.00730	.23306	-.00001	.00051	.00086	.00160
#2	.00720	.00559	.19247	-.00035	-.00073	.00340	.00485
#3	.00720	.00447	.30313	-.00042	.00227	.00353	.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.55974	.00035	.0020	-.0006	-.00055	-.0103	-.00349
Stddev	.00357	.00031	.0000	.0000	.00148	.0022	.00070
%RSD	.63821	87.670	1.065	4.191	271.26	21.61	19.992
#1	.55624	.00032	.0019	-.0006	-.00079	-.0089	-.00414
#2	.55961	.00006	.0020	-.0006	-.00189	-.0091	-.00358
#3	.56338	.00067	.0020	-.0007	.00104	-.0128	-.00276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007L(5) Acquired: 12/31/2019 11:08:25 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0126	.0050	.02374
Stddev	.0015	.0064	.00014
%RSD	11.54	127.4	.59686
#1	.0126	.0025	.02360
#2	.0141	.0003	.02374
#3	.0112	.0123	.02388
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3109.4	347680.	18095.
Stddev	4.1	3873.	78.
%RSD	.13335	1.1141	.43023
#1	3111.5	351780.	18119.
#2	3112.0	347170.	18157.
#3	3104.6	344080.	18007.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.88%	102.34%	98.051%
Range			

Sample Name: UL19035-007A Acquired: 12/31/2019 11:13:54 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.39565	19.195	.40587	.4026	1.9993	2.0375	39.110
Stddev	.00247	.125	.00145	.0061	.0130	.0241	.129
%RSD	.62547	.65152	.35733	1.526	.64996	1.1831	.33071
#1	.39281	19.140	.40462	.3968	1.9941	2.0175	39.000
#2	.39677	19.108	.40553	.4020	1.9896	2.0307	39.076
#3	.39737	19.339	.40746	.4091	2.0140	2.0643	39.252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3863	1.9527	1.9542	1.9908	18.896	40.150	37.68
Stddev	.0015	.0057	.0148	.0199	.115	.462	.09
%RSD	.3903	.29038	.75652	1.0015	.61098	1.1519	.2369
#1	.3849	1.9465	1.9425	1.9679	18.821	39.661	37.75
#2	.3860	1.9540	1.9493	2.0003	18.838	40.207	37.58
#3	.3879	1.9576	1.9708	2.0043	19.029	40.581	37.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007A Acquired: 12/31/2019 11:13:54 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0242	1.9031	42.502	1.9486	.39298	.37797	.39025
Stddev	.0120	.0086	.419	.0070	.00248	.00266	.00137
%RSD	.59397	.45051	.98526	.36031	.63155	.70252	.35066
#1	2.0126	1.8937	42.105	1.9425	.39102	.37900	.38908
#2	2.0235	1.9053	42.461	1.9471	.39216	.37495	.38991
#3	2.0366	1.9105	42.940	1.9563	.39577	.37995	.39176
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.4202	.39249	.9834	.3949	.81367	-.0026	1.9519
Stddev	.0206	.00071	.0030	.0039	.00622	.0065	.0216
%RSD	.46634	.18142	.3087	.9945	.76484	251.2	1.1054
#1	4.3977	.39169	.9814	.3912	.81191	-.0062	1.9332
#2	4.4248	.39274	.9818	.3944	.80852	-.0065	1.9470
#3	4.4381	.39305	.9869	.3990	.82059	.0049	1.9755
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-007A Acquired: 12/31/2019 11:13:54 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0281	.0008	2.0527
Stddev	.0015	.0112	.0072
%RSD	5.430	1401.	.35261
#1	-.0293	.0128	2.0475
#2	-.0264	-.0009	2.0497
#3	-.0288	-.0095	2.0610
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2970.8	339740.	18388.
Stddev	3.0	1883.	47.
%RSD	.10079	.55412	.25523
#1	2970.0	341610.	18353.
#2	2974.2	339780.	18441.
#3	2968.3	337840.	18369.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.342%	100.01%	99.640%
Range			

Sample Name: UL19035-009 Acquired: 12/31/2019 11:19:19 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-62-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	.13389	.00072	.0136	.01128	-.00019	4.1140
Stddev	.00013	.01747	.00111	.0005	.00029	.00004	.0184
%RSD	332.67	13.044	153.79	3.316	2.5546	21.842	.44605
#1	-.00017	.15254	.00034	.0134	.01125	-.00014	4.1263
#2	.00008	.13121	.00198	.0134	.01101	-.00021	4.0929
#3	-.00003	.11792	-.00015	.0142	.01158	-.00022	4.1227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.00011	-.00001	.00022	.05191	.85731	.7399
Stddev	.0001	.00007	.00022	.00065	.00339	.07016	.0230
%RSD	39.24	64.916	2796.3	298.49	6.5272	8.1843	3.103
#1	.0002	-.00011	-.00003	.00096	.05068	.85556	.7664
#2	.0003	-.00018	.00022	-.00014	.04932	.92833	.7273
#3	.0005	-.00004	-.00021	-.00018	.05575	.78803	.7260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-009 Acquired: 12/31/2019 11:19:19 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-62-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00630	.00546	1.4534	-.00021	.00120	.00262	.00162
Stddev	.00004	.00129	.0381	.00044	.00171	.00155	.00112
%RSD	.69467	23.691	2.6177	208.98	142.82	59.241	68.895
#1	.00633	.00693	1.4282	.00009	.00313	.00097	.00236
#2	.00625	.00495	1.4348	-.00071	.00058	.00406	.00217
#3	.00632	.00450	1.4972	-.00001	-.00012	.00282	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1755	.00008	.0211	.0002	-.00193	-.0026	-.00654
Stddev	.0013	.00022	.0001	.0001	.00024	.0104	.00023
%RSD	.06031	284.35	.4722	31.03	12.349	396.0	3.5476
#1	2.1756	.00004	.0211	.0003	-.00212	-.0144	-.00629
#2	2.1742	.00031	.0210	.0001	-.00201	.0013	-.00675
#3	2.1768	-.00012	.0212	.0002	-.00167	.0052	-.00658
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-009 Acquired: 12/31/2019 11:19:19 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-62-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0112	.0104	.00219
Stddev	.0009	.0115	.00005
%RSD	7.974	111.5	2.4211
#1	.0104	.0056	.00217
#2	.0109	.0020	.00216
#3	.0122	.0235	.00225
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3177.4	362620.	18916.
Stddev	7.0	898.	83.
%RSD	.21946	.24754	.43897
#1	3173.2	361880.	18914.
#2	3185.4	363620.	19000.
#3	3173.5	362380.	18833.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	104.11%	106.74%	102.50%
Range			

Sample Name: UL19035-014 Acquired: 12/31/2019 11:24:49 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-10-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00002	.12545	.00115	.0970	.03626	-.00020	30.634
Stddev	.00052	.01280	.00116	.0010	.00030	.00002	.172
%RSD	3064.7	10.205	100.61	1.020	.83474	7.4715	.56281
#1	-.00045	.14021	.00233	.0979	.03638	-.00020	30.787
#2	.00055	.11879	.00002	.0960	.03648	-.00019	30.668
#3	-.00015	.11736	.00110	.0972	.03591	-.00022	30.447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00000	.00038	-.00066	.49809	1.3600	1.489
Stddev	.0001	.00016	.00012	.00012	.00434	.0406	.010
%RSD	43.89	4070.3	30.244	18.026	.87224	2.9849	.6833
#1	.0001	-.00003	.00050	-.00052	.50280	1.3466	1.479
#2	.0003	-.00016	.00027	-.00073	.49725	1.3279	1.499
#3	.0002	.00017	.00037	-.00073	.49423	1.4056	1.490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-014 Acquired: 12/31/2019 11:24:49 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-10-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09389	.00425	19.631	-.00004	.00078	.00133	.00134
Stddev	.00014	.00022	.122	.00034	.00048	.00064	.00180
%RSD	.14745	5.1212	.62135	955.74	60.773	47.786	134.13
#1	.09397	.00450	19.679	.00030	.00130	.00060	.00115
#2	.09373	.00415	19.722	-.00003	.00069	.00165	.00324
#3	.09397	.00410	19.493	-.00037	.00036	.00175	-.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.8452	.00011	.0450	-.0002	-.00316	-.0077	-.00271
Stddev	.0148	.00023	.0002	.0001	.00183	.0090	.00045
%RSD	.38472	205.20	.5032	51.71	57.919	116.4	16.500
#1	3.8609	.00016	.0452	-.0001	-.00259	-.0181	-.00322
#2	3.8434	.00032	.0451	-.0003	-.00521	-.0036	-.00241
#3	3.8315	-.00014	.0448	-.0003	-.00168	-.0016	-.00249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-014 Acquired: 12/31/2019 11:24:49 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-10-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0118	.0145	.00072
Stddev	.0002	.0116	.00004
%RSD	1.512	80.24	5.7430
#1	.0116	.0016	.00070
#2	.0120	.0175	.00069
#3	.0117	.0242	.00077
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3125.2	346710.	18618.
Stddev	5.8	740.	68.
%RSD	.18586	.21350	.36294
#1	3119.8	347350.	18649.
#2	3124.2	346880.	18540.
#3	3131.4	345900.	18665.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.40%	102.06%	100.89%
Range			

Sample Name: UL19035-015 Acquired: 12/31/2019 11:30:18 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-09-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00003	.08795	.00079	.1569	.06380	-.00012	48.108
Stddev	.00027	.00537	.00035	.0031	.00083	.00002	.762
%RSD	844.22	6.1005	44.307	1.999	1.3011	17.368	1.5845
#1	-.00014	.08988	.00039	.1535	.06293	-.00011	47.240
#2	.00027	.08189	.00093	.1574	.06388	-.00011	48.412
#3	-.00023	.09208	.00105	.1597	.06459	-.00015	48.671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00001	.00031	-.00064	2.2801	2.0464	2.969
Stddev	.0001	.00011	.00016	.00070	.0417	.1536	.052
%RSD	15.96	1058.6	50.235	109.93	1.8276	7.5060	1.754
#1	.0004	-.00011	.00019	.00016	2.2329	1.8838	2.909
#2	.0004	.00010	.00049	-.00091	2.2953	2.0664	2.994
#3	.0003	.00004	.00026	-.00116	2.3120	2.1890	3.005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-015 Acquired: 12/31/2019 11:30:18 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-09-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.16239	.00489	22.262	.00036	.00015	.00200	.00093
Stddev	.00184	.00038	.464	.00023	.00067	.00052	.00113
%RSD	1.1359	7.8751	2.0823	63.588	438.54	25.865	121.09
#1	.16063	.00498	21.735	.00044	.00091	.00151	.00084
#2	.16224	.00447	22.444	.00010	-.00040	.00254	.00211
#3	.16431	.00522	22.607	.00053	-.00005	.00195	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 5.5780	-.00018	.0768	-.0004	-.00287	-.0228	-.00276
Stddev	.0359	.00022	.0012	.0001	.00127	.0133	.00071
%RSD	.64263	121.91	1.616	12.70	44.443	58.04	25.890
#1	5.5401	.00000	.0754	-.0004	-.00228	-.0110	-.00351
#2	5.6114	-.00043	.0772	-.0004	-.00433	-.0372	-.00266
#3	5.5823	-.00012	.0778	-.0003	-.00199	-.0204	-.00210
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL19035-015 Acquired: 12/31/2019 11:30:18 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-09-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0115	.0098	.00037
Stddev	.0009	.0080	.00006
%RSD	8.003	81.47	15.664
#1	.0124	.0011	.00038
#2	.0105	.0114	.00031
#3	.0116	.0169	.00043
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3018.7	341430.	18418.
Stddev	18.3	4196.	274.
%RSD	.60700	1.2289	1.4877
#1	3036.7	346040.	18719.
#2	3000.0	340400.	18353.
#3	3019.4	337840.	18182.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.910%	100.51%	99.803%
Range			

Sample Name: UL19035-016 Acquired: 12/31/2019 11:35:46 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-04-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	.01087	.00064	.1738	.03354	-.00019	20.126
Stddev	.00015	.01047	.00014	.0011	.00010	.00002	.124
%RSD	85.850	96.300	22.438	.6547	.30747	9.5422	.61562
#1	.00002	.01922	.00075	.1735	.03358	-.00017	20.268
#2	.00031	-.00087	.00069	.1750	.03342	-.00019	20.074
#3	.00018	.01427	.00047	.1728	.03362	-.00020	20.037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00014	-.00010	-.00018	.02221	2.5046	3.718
Stddev	.0001	.00008	.00005	.00063	.00036	.0592	.034
%RSD	38.28	55.183	47.874	344.44	1.6173	2.3630	.9218
#1	.0003	.00007	-.00011	-.00050	.02246	2.5510	3.757
#2	.0001	.00022	-.00014	.00054	.02237	2.5247	3.694
#3	.0002	.00012	-.00005	-.00059	.02180	2.4379	3.703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-016 Acquired: 12/31/2019 11:35:46 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-04-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10001	.00182	11.849	-.00016	-.00028	.00176	.00056
Stddev	.00073	.00033	.129	.00013	.00043	.00270	.00102
%RSD	.72809	17.929	1.0873	78.920	150.82	153.37	180.68
#1	.10067	.00194	11.889	-.00014	-.00029	.00210	.00084
#2	.10012	.00208	11.705	-.00005	-.00071	-.00109	.00141
#3	.09923	.00146	11.953	-.00030	.00015	.00426	-.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.6825	.00014	.0684	-.0010	-.00335	-.0131	-.00444
Stddev	.0053	.00042	.0002	.0001	.00235	.0053	.00015
%RSD	.31508	294.97	.2519	10.27	69.945	40.24	3.3119
#1	1.6811	-.00022	.0686	-.0010	-.00071	-.0098	-.00427
#2	1.6780	.00005	.0683	-.0010	-.00520	-.0192	-.00449
#3	1.6884	.00061	.0684	-.0009	-.00415	-.0103	-.00455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-016 Acquired: 12/31/2019 11:35:46 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-04-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0117	.0159	.00184
Stddev	.0007	.0203	.00013
%RSD	5.657	127.6	6.9340
#1	.0125	.0331	.00169
#2	.0115	.0210	.00193
#3	.0112	-.0065	.00189
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3069.7	348250.	18390.
Stddev	3.8	1393.	150.
%RSD	.12482	.39994	.81626
#1	3068.7	346940.	18232.
#2	3074.0	348100.	18531.
#3	3066.5	349720.	18408.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.58%	102.51%	99.654%
Range			

Sample Name: UL19035-017 Acquired: 12/31/2019 11:41:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-15-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00035	-.00319	.00154	.1984	.05060	-.00021	19.596
Stddev	.00042	.00292	.00039	.0014	.00059	.00002	.104
%RSD	122.13	91.468	25.311	.7231	1.1720	7.9610	.53078
#1	.00001	-.00010	.00138	.2000	.05090	-.00022	19.658
#2	-.00081	-.00589	.00126	.1980	.05099	-.00021	19.654
#3	-.00024	-.00358	.00199	.1973	.04992	-.00019	19.476
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00047	.00020	-.00041	3.3352	2.9538	3.474
Stddev	.0000	.00015	.00022	.00082	.0237	.1158	.020
%RSD	1.426	30.724	110.02	200.86	.70974	3.9205	.5600
#1	.0004	.00059	.00016	-.00128	3.3492	3.0728	3.496
#2	.0004	.00052	.00043	.00035	3.3486	2.9472	3.467
#3	.0004	.00031	.00000	-.00029	3.3079	2.8415	3.459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-017 Acquired: 12/31/2019 11:41:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-15-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.43180	.00178	11.888	-.00005	-.00066	.00226	.00031
Stddev	.00064	.00012	.194	.00015	.00123	.00042	.00059
%RSD	.14857	6.7463	1.6353	332.21	185.21	18.627	188.47
#1	.43251	.00172	12.049	-.00014	-.00041	.00231	.00100
#2	.43160	.00171	11.942	-.00012	.00042	.00181	-.00004
#3	.43128	.00192	11.672	.00013	-.00200	.00265	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.7365	.00013	.0691	-.0011	-.00471	.0026	-.00357
Stddev	.0106	.00049	.0004	.0001	.00162	.0033	.00044
%RSD	.61030	371.18	.6435	13.35	34.346	125.2	12.277
#1	1.7455	.00049	.0694	-.0012	-.00322	.0041	-.00348
#2	1.7248	.00033	.0694	-.0011	-.00448	.0049	-.00319
#3	1.7392	-.00042	.0686	-.0009	-.00643	-.0011	-.00405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-017 Acquired: 12/31/2019 11:41:16 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-15-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0111	.0092	.00066
Stddev	.0001	.0075	.00005
%RSD	1.223	81.77	8.0551
#1	.0111	.0164	.00064
#2	.0110	.0099	.00072
#3	.0113	.0014	.00062
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3100.4	345540.	18282.
Stddev	11.1	539.	144.
%RSD	.35733	.15597	.79021
#1	3090.1	345550.	18183.
#2	3112.1	345000.	18216.
#3	3098.9	346080.	18448.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.59%	101.72%	99.069%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 11:46:46 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.52257	25.300	.51241	.5271	2.6478	2.6629	50.747
Stddev	.00338	.216	.00276	.0065	.0255	.0196	.078
%RSD	.64773	.85509	.53766	1.240	.96267	.73718	.15449
#1	.52356	25.540	.51419	.5346	2.6762	2.6855	50.837
#2	.52536	25.239	.50924	.5241	2.6403	2.6520	50.709
#3	.51881	25.121	.51380	.5226	2.6269	2.6511	50.695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5064	2.5859	2.6376	2.6279	25.093	51.107	49.71
Stddev	.0018	.0116	.0197	.0039	.131	.660	.05
%RSD	.3637	.44743	.74774	.14842	.52122	1.2917	.1042
#1	.5060	2.5820	2.6562	2.6317	25.242	51.863	49.68
#2	.5047	2.5768	2.6397	2.6281	25.038	50.812	49.77
#3	.5084	2.5989	2.6169	2.6239	24.998	50.646	49.69
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 11:46:46 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.6554	2.5761	50.542	2.5966	.51672	.51712	.51481
Stddev	.0096	.0213	.666	.0181	.00366	.00166	.00121
%RSD	.36319	.82611	1.3171	.69890	.70899	.32127	.23486
#1	2.6606	2.5609	51.295	2.5851	.51552	.51656	.51458
#2	2.6614	2.5670	50.300	2.5872	.51380	.51898	.51373
#3	2.6443	2.6004	50.031	2.6175	.52083	.51580	.51611
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4785	.51432	2.591	.5260	1.0452	2.648	2.6318
Stddev	.0117	.00281	.009	.0039	.0067	.014	.0263
%RSD	.47040	.54586	.3669	.7373	.64246	.5270	1.0005
#1	2.4764	.51370	2.602	.5299	1.0402	2.635	2.6608
#2	2.4681	.51188	2.587	.5260	1.0425	2.647	2.6252
#3	2.4911	.51739	2.585	.5222	1.0528	2.663	2.6094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 11:46:46 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.568	2.331	2.5883
Stddev	.017	.030	.0137
%RSD	.6596	1.300	.52996
#1	2.558	2.356	2.5765
#2	2.558	2.340	2.5850
#3	2.588	2.297	2.6033
Check ?	Chk Pass	Chk Pass	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2809.0	318120.	17250.
Stddev	8.8	2484.	89.
%RSD	.31275	.78087	.51492
#1	2813.1	315470.	17163.
#2	2814.9	318480.	17248.
#3	2798.9	320400.	17340.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 11:52:10 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00024	.01233	.00131	.0023	.00069	.00024	-.13077
Stddev	.00023	.00622	.00117	.0011	.00014	.00008	.00360
%RSD	96.926	50.410	89.429	46.19	20.966	34.567	2.7553
#1	-.00050	.01813	.00182	.0029	.00059	.00020	-.13459
#2	-.00013	.00577	.00213	.0029	.00063	.00018	-.13027
#3	-.00008	.01309	-.00003	.0011	.00086	.00033	-.12744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00045	.00016	-.00024	.00485	.13825	-.2497
Stddev	.0001	.00019	.00019	.00043	.00092	.09385	.0073
%RSD	35.89	41.616	114.59	178.05	19.008	67.886	2.911
#1	.0005	.00029	-.00005	.00017	.00408	.17103	-.2413
#2	.0003	.00065	.00025	-.00070	.00587	.03241	-.2544
#3	.0004	.00040	.00029	-.00021	.00460	.21133	-.2534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 11:52:10 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00026	.00631	-.52308	.00025	-.00112	.00125	.00242
Stddev	.00010	.00143	.02034	.00034	.00153	.00027	.00083
%RSD	37.387	22.595	3.8885	138.99	136.10	21.354	34.246
#1	-.00030	.00788	-.50055	.00036	-.00031	.00098	.00231
#2	-.00032	.00595	-.52861	.00052	-.00017	.00127	.00330
#3	-.00015	.00510	-.54009	-.00014	-.00288	.00151	.00165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05989	.00011	.0001	-.0006	-.00310	-.0170	-.00240
Stddev	.00145	.00021	.0000	.0002	.00095	.0103	.00057
%RSD	2.4208	196.01	11.47	34.21	30.523	60.44	23.940
#1	.05896	.00033	.0001	-.0005	-.00391	-.0087	-.00306
#2	.06157	-.00008	.0001	-.0008	-.00333	-.0138	-.00205
#3	.05916	.00006	.0001	-.0004	-.00206	-.0286	-.00209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 11:52:10 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0182	.0156	.00048
Stddev	.0021	.0085	.00009
%RSD	11.30	54.57	19.489
#1	.0206	.0155	.00037
#2	.0171	.0072	.00055
#3	.0170	.0243	.00052
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3034.6	347330.	17721.
Stddev	3.8	3731.	34.
%RSD	.12607	1.0743	.18920
#1	3038.1	351620.	17731.
#2	3035.2	345540.	17684.
#3	3030.6	344830.	17749.

Sample Name: UL19035-018 Acquired: 12/31/2019 11:57:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-02-WG-20191218

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00010	.00690	.00253	.1483	.04320	-.00017	38.281
Stddev	.00032	.01281	.00092	.0003	.00010	.00001	.072
%RSD	321.15	185.66	36.573	.2287	.22765	7.1040	.18799
#1	.00002	-.00511	.00260	.1485	.04314	-.00017	38.282
#2	.00014	.02038	.00157	.1479	.04314	-.00017	38.208
#3	-.00046	.00543	.00341	.1485	.04331	-.00015	38.352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00102	.00004	-.00067	5.2803	2.3575	2.818
Stddev	.0001	.00006	.00007	.00046	.0183	.0207	.022
%RSD	17.95	6.0657	206.84	68.517	.34718	.87879	.7760
#1	.0003	.00107	.00004	-.00118	5.2640	2.3770	2.809
#2	.0002	.00095	-.00004	-.00029	5.2769	2.3357	2.802
#3	.0003	.00104	.00011	-.00055	5.3001	2.3599	2.843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-018 Acquired: 12/31/2019 11:57:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-02-WG-20191218

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.41072	.00274	14.959	.00002	.00121	.00182	-.00011
Stddev	.00142	.00037	.103	.00021	.00106	.00087	.00144
%RSD	.34534	13.464	.69136	1175.6	87.334	47.708	1308.7
#1	.41210	.00278	14.891	-.00016	.00121	.00281	-.00136
#2	.40927	.00309	14.907	-.00004	.00228	.00149	-.00042
#3	.41078	.00235	15.078	.00025	.00015	.00117	.00146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.8919	.00040	.0762	-.0009	-.00531	-.0029	-.00460
Stddev	.0059	.00041	.0001	.0003	.00191	.0167	.00050
%RSD	.30916	101.62	.1105	28.63	35.938	576.0	10.809
#1	1.8856	.00051	.0763	-.0006	-.00620	-.0218	-.00483
#2	1.8928	-.00005	.0761	-.0011	-.00661	.0030	-.00494
#3	1.8972	.00075	.0762	-.0011	-.00312	.0100	-.00403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19035-018 Acquired: 12/31/2019 11:57:42 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 3005A DOD/60 Custom ID2: Custom ID3:
Comment: MW-02-WG-20191218

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0128	.0222	.00075
Stddev	.0007	.0059	.00005
%RSD	5.672	26.61	6.0541
#1	.0125	.0276	.00070
#2	.0123	.0159	.00079
#3	.0136	.0232	.00077
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3110.6	351760.	18640.
Stddev	7.2	2402.	64.
%RSD	.23208	.68280	.34566
#1	3118.4	351710.	18694.
#2	3109.4	354190.	18657.
#3	3104.1	349390.	18569.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.92%	103.55%	101.01%
Range			

Sample Name: UL10012-005(3) Acquired: 12/31/2019 12:03:10 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	-.00474	.03424	.0028	.01271	-.00012	2.0440
Stddev	.00029	.00796	.00077	.0003	.00023	.00002	.0063
%RSD	704.66	167.87	2.2365	10.29	1.8048	15.668	.30824
#1	-.00009	.00377	.03400	.0030	.01276	-.00010	2.0477
#2	.00027	-.00599	.03362	.0027	.01291	-.00014	2.0475
#3	-.00030	-.01201	.03510	.0025	.01246	-.00013	2.0367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.00002	-.00035	-.00061	.00173	.28708	-.2093
Stddev	.0002	.00020	.00018	.00064	.00065	.11871	.0121
%RSD	301.9	1230.9	52.119	105.82	37.453	41.352	5.781
#1	.0001	-.00002	-.00015	-.00076	.00118	.27347	-.2212
#2	.0001	.00023	-.00050	.00010	.00244	.41201	-.1970
#3	-.0001	-.00016	-.00039	-.00115	.00157	.17575	-.2097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL10012-005(3) Acquired: 12/31/2019 12:03:10 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00504	.00197	39.842	-.00014	3.2489	.08410	.00066
Stddev	.00008	.00019	.117	.00019	.0110	.00208	.00113
%RSD	1.6376	9.5421	.29462	138.90	.33856	2.4767	172.50
#1	.00513	.00217	39.841	-.00032	3.2505	.08515	-.00054
#2	.00498	.00179	39.725	.00006	3.2372	.08170	.00081
#3	.00499	.00194	39.960	-.00015	3.2590	.08545	.00170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09131	-.00022	.0055	-.0008	-.00325	-.0252	-.00213
Stddev	.00084	.00029	.0002	.0000	.00022	.0082	.00028
%RSD	.91460	130.10	2.752	5.602	6.8330	32.49	13.074
#1	.09074	-.00039	.0054	-.0009	-.00309	-.0223	-.00186
#2	.09227	.00011	.0057	-.0009	-.00350	-.0189	-.00242
#3	.09092	-.00039	.0055	-.0008	-.00316	-.0344	-.00212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL10012-005(3) Acquired: 12/31/2019 12:03:10 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0136	.0112	.00489
Stddev	.0014	.0057	.00006
%RSD	10.26	50.90	1.2230
#1	.0120	.0144	.00496
#2	.0141	.0046	.00485
#3	.0147	.0146	.00486
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3019.4	339940.	17764.
Stddev	8.3	2868.	66.
%RSD	.27612	.84351	.37008
#1	3026.5	336640.	17733.
#2	3021.4	341430.	17720.
#3	3010.2	341760.	17840.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.932%	100.07%	96.261%
Range			

Sample Name: UL16044-003 Acquired: 12/31/2019 12:08:40 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00001	.13470	.00036	.0047	.00839	-.00009	9.6348
Stddev	.00045	.00496	.00128	.0006	.00005	.00003	.0523
%RSD	3439.3	3.6838	358.60	13.91	.58741	30.466	.54287
#1	-.00045	.12908	-.00112	.0045	.00837	-.00006	9.6904
#2	.00046	.13655	.00115	.0041	.00836	-.00012	9.5866
#3	.00003	.13848	.00104	.0054	.00845	-.00010	9.6275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.00004	.00001	-.00130	.09567	.64078	-.0975
Stddev	.0002	.00010	.00020	.00034	.00219	.04252	.0096
%RSD	55.24	261.33	1858.6	26.186	2.2925	6.6355	9.866
#1	.0002	.00006	.00008	-.00157	.09593	.59474	-.1056
#2	.0006	-.00015	-.00022	-.00092	.09336	.67857	-.0869
#3	.0005	-.00004	.00017	-.00142	.09773	.64904	-.1001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL16044-003 Acquired: 12/31/2019 12:08:40 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00661	.00163	102.43	-.00006	.00233	.00199	.00103
Stddev	.00009	.00027	.83	.00017	.00068	.00150	.00065
%RSD	1.3711	16.682	.81210	260.05	28.962	75.521	62.863
#1	.00670	.00175	102.28	.00009	.00213	.00360	.00140
#2	.00652	.00132	101.69	-.00025	.00178	.00171	.00028
#3	.00661	.00182	103.33	-.00004	.00309	.00064	.00142
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.13210	.00037	.0108	-.0007	-.00326	-.0101	-.00122
Stddev	.00138	.00031	.0001	.0001	.00178	.0188	.00082
%RSD	1.0422	83.499	1.130	15.23	54.759	186.7	66.764
#1	.13231	.00029	.0107	-.0008	-.00288	.0070	-.00150
#2	.13063	.00072	.0109	-.0006	-.00169	-.0069	-.00186
#3	.13336	.00012	.0107	-.0007	-.00520	-.0303	-.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL16044-003 Acquired: 12/31/2019 12:08:40 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0143	.0104	.00097
Stddev	.0009	.0096	.00011
%RSD	6.542	92.74	11.792
#1	.0139	.0137	.00085
#2	.0137	.0178	.00108
#3	.0154	-.0005	.00097
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2920.3	332010.	17804.
Stddev	19.0	4200.	100.
%RSD	.65048	1.2650	.56177
#1	2924.0	331800.	17794.
#2	2937.3	336300.	17909.
#3	2899.8	327910.	17710.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.688%	97.732%	96.479%
Range			

Sample Name: UL16044-004 Acquired: 12/31/2019 12:14:13 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.14350	-.00007	.0055	.00770	-.00009	.95779
Stddev	.00029	.01380	.00045	.0005	.00003	.00001	.00626
%RSD	351.63	9.6173	607.26	9.374	.39336	12.080	.65390
#1	-.00017	.15893	-.00024	.0057	.00770	-.00009	.95658
#2	.00041	.13922	-.00042	.0049	.00774	-.00008	.95223
#3	.00001	.13234	.00044	.0058	.00768	-.00010	.96458
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00018	.00016	-.00167	.11998	.70906	-.2255
Stddev	.0001	.00010	.00025	.00032	.00093	.08454	.0101
%RSD	24.87	55.698	152.34	18.890	.77452	11.923	4.484
#1	.0003	.00007	.00041	-.00161	.11932	.64353	-.2370
#2	.0002	.00020	-.00009	-.00139	.11959	.80449	-.2216
#3	.0004	.00026	.00017	-.00201	.12105	.67916	-.2179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL16044-004 Acquired: 12/31/2019 12:14:13 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00174	.00183	115.18	.00056	.00033	.00121	-.00060
Stddev	.00006	.00018	.73	.00020	.00165	.00135	.00073
%RSD	3.3103	9.6620	.63348	36.226	492.85	111.55	122.51
#1	.00178	.00195	115.42	.00064	.00088	.00259	-.00112
#2	.00178	.00163	114.36	.00072	-.00152	-.00011	.00024
#3	.00168	.00192	115.76	.00033	.00164	.00115	-.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10870	-.00028	.0042	-.0006	-.00240	-.0104	-.00059
Stddev	.00038	.00031	.0000	.0000	.00287	.0072	.00009
%RSD	.34871	112.60	.9743	7.460	119.83	69.75	14.308
#1	.10837	.00006	.0042	-.0006	-.00443	-.0082	-.00050
#2	.10911	-.00033	.0042	-.0007	-.00365	-.0045	-.00063
#3	.10861	-.00057	.0043	-.0006	.00089	-.0185	-.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL16044-004 Acquired: 12/31/2019 12:14:13 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0143	.0150	.00191
Stddev	.0016	.0035	.00003
%RSD	10.97	23.20	1.7163
#1	.0125	.0177	.00187
#2	.0152	.0163	.00193
#3	.0152	.0111	.00193
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2923.4	327890.	17553.
Stddev	3.0	1586.	36.
%RSD	.10158	.48364	.20677
#1	2926.9	326070.	17523.
#2	2921.6	328630.	17593.
#3	2921.9	328970.	17544.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.789%	96.520%	95.118%
Range			

Sample Name: UL18053-006(2) Acquired: 12/31/2019 12:19:45 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00168	3.2192	.00130	.0095	2.7141	.00019	5.3641
Stddev	.00034	.0435	.00033	.0007	.0288	.00002	.0528
%RSD	20.231	1.3523	25.587	7.103	1.0598	11.824	.98491
#1	.00136	3.1764	.00120	.0102	2.6866	.00021	5.3049
#2	.00164	3.2176	.00103	.0090	2.7118	.00016	5.3811
#3	.00203	3.2634	.00167	.0092	2.7440	.00020	5.4064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.03867	.01021	.01303	3.5597	1.8085	.6332
Stddev	.0000	.00030	.00046	.00025	.0287	.0965	.0063
%RSD	17.95	.76764	4.5476	1.9533	.80635	5.3343	.9935
#1	-.0002	.03836	.01014	.01288	3.5296	1.7237	.6369
#2	-.0001	.03868	.01070	.01288	3.5629	1.9134	.6368
#3	-.0001	.03896	.00978	.01332	3.5867	1.7883	.6260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL18053-006(2) Acquired: 12/31/2019 12:19:45 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.231	.01572	5.0940	.01153	.00953	.00026	-.00181
Stddev	.139	.00033	.1379	.00022	.00109	.00054	.00058
%RSD	1.1405	2.0670	2.7071	1.9430	11.413	207.31	32.154
#1	12.164	.01569	4.9411	.01146	.00861	.00015	-.00115
#2	12.138	.01606	5.1320	.01178	.00926	.00084	-.00224
#3	12.391	.01542	5.2090	.01135	.01073	-.00022	-.00202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 7.0338	.00161	.0561	.0158	-.07547	-.0320	.00253
Stddev	.0492	.00028	.0004	.0003	.00451	.0072	.00074
%RSD	.69965	17.230	.7389	1.621	5.9773	22.36	29.175
#1	6.9847	.00136	.0556	.0155	-.08065	-.0323	.00257
#2	7.0337	.00157	.0562	.0159	-.07336	-.0247	.00178
#3	7.0831	.00191	.0564	.0159	-.07240	-.0390	.00325
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	5.0000						
Low Limit	-5.0000						

Sample Name: UL18053-006(2) Acquired: 12/31/2019 12:19:45 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.3158	.2659	.40637
Stddev	.0041	.0061	.00114
%RSD	1.310	2.305	.28133
#1	.3122	.2589	.40528
#2	.3148	.2688	.40756
#3	.3203	.2700	.40628
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3095.0	348060.	18183.
Stddev	8.3	2779.	79.
%RSD	.26770	.79834	.43698
#1	3104.5	348800.	18273.
#2	3090.7	350400.	18123.
#3	3089.7	344990.	18152.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.41%	102.46%	98.528%
Range			

Sample Name: UL21005-001(10) Acquired: 12/31/2019 12:25:18 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00015	.00936	.00023	.0136	.00217	-.00019	.48240
Stddev	.00050	.00701	.00061	.0006	.00021	.00002	.00242
%RSD	346.08	74.939	263.42	4.493	9.8235	8.6585	.50178
#1	.00040	.01745	-.00047	.0132	.00192	-.00021	.48182
#2	-.00058	.00557	.00053	.0143	.00232	-.00018	.48506
#3	-.00026	.00505	.00063	.0134	.00226	-.00019	.48033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00000	.00028	.00106	.06250	2.1668	-.0170
Stddev	.0001	.00008	.00012	.00084	.00475	.0742	.0205
%RSD	84.14	2194.7	43.704	79.393	7.5926	3.4253	120.4
#1	.0003	-.00009	.00029	.00092	.06660	2.0953	-.0115
#2	.0002	.00006	.00015	.00197	.05730	2.1616	.0002
#3	.0000	.00002	.00040	.00030	.06360	2.2434	-.0397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001(10) Acquired: 12/31/2019 12:25:18 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00291	.00164	14.462	.00025	.00033	.00144	.00034
Stddev	.00009	.00007	.127	.00037	.00055	.00024	.00135
%RSD	3.0353	3.9580	.87920	147.89	164.59	16.424	402.71
#1	.00282	.00170	14.605	.00066	.00018	.00171	-.00100
#2	.00300	.00166	14.419	.00017	.00094	.00128	.00170
#3	.00292	.00157	14.362	-.00007	-.00012	.00132	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0974	.00006	.0072	-.0003	-.00161	-.0095	-.00301
Stddev	.0046	.00033	.0001	.0002	.00252	.0139	.00044
%RSD	.22115	539.60	1.269	69.69	156.12	146.3	14.696
#1	2.1015	.00043	.0072	-.0002	.00071	-.0146	-.00324
#2	2.0924	-.00004	.0071	-.0001	-.00429	.0062	-.00250
#3	2.0984	-.00021	.0073	-.0006	-.00126	-.0202	-.00329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001(10) Acquired: 12/31/2019 12:25:18 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0138	.0153	.00448
Stddev	.0022	.0057	.00003
%RSD	16.04	37.02	.68139
#1	.0148	.0181	.00445
#2	.0153	.0191	.00449
#3	.0112	.0088	.00451
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3076.5	348020.	17978.
Stddev	8.3	2480.	41.
%RSD	.26821	.71272	.22552
#1	3083.0	349900.	18025.
#2	3079.3	345210.	17955.
#3	3067.2	348950.	17954.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.80%	102.45%	97.421%
Range			

Sample Name: UL21005-001S(10) Acquired: 12/31/2019 12:30:48 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04018	1.9809	.04080	.0509	.20690	.21026	4.4598
Stddev	.00037	.0636	.00190	.0006	.00459	.00488	.0833
%RSD	.93043	3.2120	4.6449	1.227	2.2164	2.3204	1.8668
#1	.03980	1.9179	.03897	.0505	.20170	.20520	4.3757
#2	.04017	1.9796	.04068	.0507	.20864	.21064	4.4617
#3	.04055	2.0451	.04275	.0517	.21036	.21494	4.5421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0389	.20333	.20470	.20495	2.0323	6.0739	3.965
Stddev	.0006	.00360	.00453	.00405	.0392	.2734	.076
%RSD	1.665	1.7702	2.2131	1.9766	1.9296	4.5018	1.907
#1	.0382	.19959	.19991	.20074	1.9870	5.7685	3.880
#2	.0390	.20364	.20527	.20530	2.0535	6.2959	3.990
#3	.0395	.20677	.20891	.20882	2.0563	6.1574	4.024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001S(10) Acquired: 12/31/2019 12:30:48 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21086	.19448	18.083	.20542	.04183	.04152	.03955
Stddev	.00515	.00439	.410	.00410	.00139	.00130	.00097
%RSD	2.4424	2.2563	2.2661	1.9980	3.3173	3.1356	2.4647
#1	.20556	.19009	17.624	.20099	.04068	.04002	.03884
#2	.21117	.19449	18.212	.20616	.04143	.04237	.04066
#3	.21585	.19887	18.413	.20910	.04337	.04216	.03914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3099	.04020	.1071	.0404	.08460	-.0104	.19560
Stddev	.0415	.00067	.0024	.0011	.00167	.0127	.00493
%RSD	1.7962	1.6734	2.213	2.834	1.9764	122.1	2.5224
#1	2.2645	.03954	.1045	.0394	.08267	-.0008	.19028
#2	2.3192	.04018	.1077	.0402	.08555	-.0249	.19648
#3	2.3458	.04088	.1092	.0416	.08558	-.0057	.20003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001S(10) Acquired: 12/31/2019 12:30:48 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0094	.0183	.20805
Stddev	.0004	.0242	.00402
%RSD	4.197	132.4	1.9335
#1	.0094	.0418	.20381
#2	.0090	.0197	.20855
#3	.0098	-.0066	.21181
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3068.9	348620.	18058.
Stddev	5.9	1665.	100.
%RSD	.19072	.47765	.55257
#1	3067.1	350530.	17998.
#2	3075.4	347860.	18004.
#3	3064.1	347480.	18173.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	100.55%	102.62%	97.854%
Range			

Sample Name: UL21005-001SD(10) Acquired: 12/31/2019 12:36:09 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04017	1.9836	.04123	.0511	.20722	.20966	4.4695
Stddev	.00025	.0162	.00083	.0006	.00203	.00072	.0160
%RSD	.63282	.81675	2.0115	1.252	.97783	.34182	.35764
#1	.03992	1.9803	.04184	.0505	.20613	.20969	4.4848
#2	.04043	1.9693	.04028	.0510	.20598	.20893	4.4529
#3	.04016	2.0012	.04156	.0518	.20956	.21036	4.4708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0384	.20153	.20442	.20325	2.0278	6.0440	3.979
Stddev	.0003	.00083	.00102	.00047	.0181	.0978	.016
%RSD	.8244	.41323	.50131	.23264	.89059	1.6174	.3974
#1	.0381	.20058	.20443	.20286	2.0199	6.0130	3.975
#2	.0384	.20187	.20338	.20310	2.0150	5.9655	3.966
#3	.0387	.20213	.20543	.20378	2.0484	6.1535	3.997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001SD(10) Acquired: 12/31/2019 12:36:09 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21010	.19319	18.053	.20306	.04087	.04120	.03946
Stddev	.00083	.00116	.209	.00029	.00026	.00180	.00179
%RSD	.39385	.60105	1.1574	.14083	.63387	4.3649	4.5284
#1	.21032	.19188	17.967	.20337	.04074	.04147	.03955
#2	.20918	.19358	17.901	.20302	.04117	.03928	.04120
#3	.21079	.19410	18.292	.20280	.04070	.04284	.03763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2843	.03993	.1074	.0403	.08024	-.0060	.19513
Stddev	.0106	.00055	.0003	.0001	.00374	.0115	.00178
%RSD	.46577	1.3696	.2773	.3196	4.6600	192.8	.91386
#1	2.2729	.03932	.1075	.0403	.07745	-.0190	.19412
#2	2.2861	.04009	.1070	.0402	.08449	.0031	.19408
#3	2.2939	.04037	.1076	.0405	.07878	-.0021	.19719
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001SD(10) Acquired: 12/31/2019 12:36:09 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0090	.0211	.20619
Stddev	.0010	.0108	.00050
%RSD	11.07	50.99	.24270
#1	.0100	.0157	.20673
#2	.0080	.0335	.20574
#3	.0091	.0141	.20609
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3088.4	350910.	18165.
Stddev	3.7	1708.	71.
%RSD	.11974	.48659	.38899
#1	3091.5	351700.	18134.
#2	3089.3	352080.	18245.
#3	3084.3	348950.	18114.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.19%	103.30%	98.430%
Range			

Sample Name: UL21005-001L(50) Acquired: 12/31/2019 12:41:31 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00029	.00923	.00055	.0036	.00068	-.00019	-.01515
Stddev	.00008	.00725	.00071	.0016	.00010	.00002	.00242
%RSD	28.969	78.526	129.88	43.79	15.226	8.6631	15.942
#1	.00031	.01715	.00091	.0032	.00058	-.00018	-.01567
#2	.00020	.00294	.00100	.0022	.00066	-.00019	-.01727
#3	.00037	.00760	-.00027	.0053	.00079	-.00021	-.01252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00005	-.00012	.00045	.01111	.51950	-.2019
Stddev	.0000	.00002	.00019	.00068	.00196	.08471	.0200
%RSD	32.90	41.211	159.96	148.79	17.637	16.306	9.906
#1	.0001	-.00007	-.00013	.00121	.01335	.56558	-.1803
#2	.0002	-.00005	-.00030	.00023	.00971	.42174	-.2198
#3	.0001	-.00003	.00008	-.00008	.01027	.57118	-.2056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001L(50) Acquired: 12/31/2019 12:41:31 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00004	.00201	2.4554	-.00013	-.00002	.00093	.00168
Stddev	.00001	.00022	.0526	.00007	.00011	.00129	.00032
%RSD	19.962	10.975	2.1424	49.447	549.30	138.92	19.262
#1	-.00003	.00197	2.4561	-.00020	-.00014	.00000	.00131
#2	-.00005	.00225	2.4024	-.00014	.00006	.00240	.00192
#3	-.00005	.00181	2.5076	-.00007	.00002	.00038	.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.45458	-.00004	.0012	-.0007	-.00175	-.0149	-.00298
Stddev	.00174	.00041	.0001	.0003	.00260	.0048	.00027
%RSD	.38217	1055.3	8.224	38.83	149.02	32.11	9.0350
#1	.45258	.00036	.0013	-.0007	-.00434	-.0125	-.00298
#2	.45565	-.00047	.0012	-.0004	.00087	-.0117	-.00271
#3	.45552	-.00001	.0011	-.0009	-.00177	-.0204	-.00325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001L(50) Acquired: 12/31/2019 12:41:31 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0121	.0109	.00099
Stddev	.0010	.0115	.00014
%RSD	8.127	105.2	14.383
#1	.0123	.0225	.00093
#2	.0129	.0108	.00089
#3	.0110	-.0005	.00115
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3121.9	352870.	18054.
Stddev	12.1	1632.	101.
%RSD	.38621	.46250	.56045
#1	3135.8	351240.	18008.
#2	3115.1	352860.	18170.
#3	3114.7	354500.	17984.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	102.29%	103.87%	97.831%
Range			

Sample Name: UL21005-001A(10) Acquired: 12/31/2019 12:47:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.04092	2.0174	.04071	.0514	.20863	.21350	4.4887
Stddev	.00056	.0051	.00067	.0009	.00111	.00147	.0222
%RSD	1.3591	.25169	1.6566	1.806	.53250	.68920	.49398
#1	.04133	2.0205	.04049	.0514	.20808	.21353	4.5116
#2	.04114	2.0116	.04146	.0523	.20791	.21496	4.4673
#3	.04029	2.0201	.04017	.0505	.20991	.21202	4.4872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0389	.20278	.20890	.20713	2.0552	5.9667	4.009
Stddev	.0004	.00075	.00140	.00155	.0076	.1031	.031
%RSD	1.028	.37084	.67121	.74916	.36723	1.7279	.7817
#1	.0387	.20255	.20986	.20716	2.0466	5.8479	4.044
#2	.0387	.20216	.20955	.20866	2.0579	6.0195	3.983
#3	.0394	.20362	.20729	.20556	2.0610	6.0326	4.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001A(10) Acquired: 12/31/2019 12:47:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21401	.19393	18.123	.20515	.04049	.04104	.03988
Stddev	.00111	.00131	.129	.00070	.00058	.00224	.00121
%RSD	.51912	.67334	.70915	.34036	1.4279	5.4661	3.0216
#1	.21439	.19300	17.982	.20514	.03991	.04362	.04122
#2	.21488	.19337	18.154	.20446	.04049	.03956	.03957
#3	.21276	.19543	18.233	.20586	.04106	.03995	.03887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.2605	.04003	.1078	.0409	.08279	-.0079	.20009
Stddev	.0089	.00036	.0003	.0005	.00162	.0031	.00179
%RSD	.39434	.91090	.2811	1.186	1.9561	39.06	.89488
#1	2.2544	.03988	.1081	.0409	.08225	-.0114	.19878
#2	2.2564	.03977	.1075	.0415	.08151	-.0064	.20213
#3	2.2708	.04045	.1077	.0405	.08461	-.0058	.19935
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL21005-001A(10) Acquired: 12/31/2019 12:47:01 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0086	.0137	.20839
Stddev	.0012	.0066	.00101
%RSD	13.49	48.06	.48496
#1	.0073	.0150	.20817
#2	.0093	.0065	.20751
#3	.0092	.0195	.20950
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3086.5	347810.	18006.
Stddev	4.9	1673.	75.
%RSD	.15836	.48089	.41390
#1	3089.3	347560.	18092.
#2	3089.3	346270.	17963.
#3	3080.9	349590.	17963.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	101.13%	102.38%	97.572%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 12:52:23 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50953	24.956	.50384	.5090	2.6027	2.6241	50.085
Stddev	.00120	.172	.00495	.0049	.0199	.0193	.082
%RSD	.23627	.68996	.98205	.9532	.76448	.73580	.16367
#1	.50865	24.767	.50081	.5044	2.5805	2.6023	49.995
#2	.50905	24.998	.50116	.5085	2.6089	2.6311	50.107
#3	.51091	25.104	.50955	.5141	2.6188	2.6390	50.154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4987	2.5484	2.5737	2.5522	24.717	50.002	49.51
Stddev	.0024	.0104	.0154	.0050	.146	.883	.07
%RSD	.4853	.40994	.59988	.19497	.59058	1.7656	.1383
#1	.4969	2.5401	2.5588	2.5505	24.550	49.017	49.53
#2	.4978	2.5451	2.5728	2.5484	24.782	50.268	49.57
#3	.5015	2.5601	2.5896	2.5579	24.820	50.722	49.43
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 12:52:23 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5914	2.5368	49.669	2.5653	.51044	.50788	.50536
Stddev	.0081	.0121	.549	.0095	.00217	.00581	.00555
%RSD	.31333	.47842	1.1056	.36879	.42536	1.1436	1.0980
#1	2.5869	2.5244	49.052	2.5572	.51238	.50673	.49912
#2	2.5865	2.5372	49.852	2.5630	.50809	.50273	.50723
#3	2.6008	2.5487	50.104	2.5757	.51085	.51418	.50974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.4286	.50724	2.547	.5116	1.0352	2.583	2.5580
Stddev	.0175	.00218	.009	.0036	.0038	.006	.0214
%RSD	.71882	.42945	.3706	.6965	.36945	.2316	.83460
#1	2.4139	.50650	2.538	.5081	1.0311	2.580	2.5375
#2	2.4240	.50552	2.545	.5114	1.0356	2.578	2.5565
#3	2.4479	.50969	2.557	.5152	1.0387	2.589	2.5801
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 12:52:23 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.531	W 2.241	2.5602
Stddev	.017	.041	.0062
%RSD	.6818	1.807	.24279
#1	2.514	2.194	2.5559
#2	2.531	2.263	2.5574
#3	2.548	2.265	2.5673
Check ?	Chk Pass	Chk Warn	Chk Pass
Value		2.500	
Range		-10.00%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2830.6	324400.	17211.
Stddev	8.3	1611.	26.
%RSD	.29171	.49647	.14830
#1	2834.6	324920.	17193.
#2	2836.0	325700.	17200.
#3	2821.1	322600.	17240.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 12:57:47 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00009	.01361	.00088	.0019	.00076	.00028	-.12951
Stddev	.00034	.00480	.00111	.0008	.00025	.00001	.00318
%RSD	377.98	35.310	125.48	40.77	32.153	5.2609	2.4578
#1	-.00028	.01053	-.00036	.0024	.00081	.00026	-.12618
#2	.00038	.01915	.00123	.0010	.00050	.00028	-.12982
#3	.00017	.01114	.00178	.0024	.00098	.00029	-.13253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00042	.00017	.00047	.00369	.31878	-.2392
Stddev	.0001	.00024	.00009	.00045	.00088	.01832	.0327
%RSD	44.83	57.346	50.658	96.647	23.701	5.7453	13.68
#1	.0004	.00069	.00018	.00086	.00302	.29895	-.2104
#2	.0002	.00024	.00025	-.00002	.00338	.32235	-.2748
#3	.0004	.00033	.00008	.00056	.00468	.33506	-.2324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 12:57:47 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00022	.00584	-.30628	.00009	.00062	.00123	.00220
Stddev	.00002	.00168	.02798	.00010	.00040	.00158	.00178
%RSD	8.7552	28.698	9.1354	103.48	63.868	129.29	80.643
#1	-.00021	.00770	-.33791	.00001	.00081	.00302	.00169
#2	-.00025	.00539	-.29615	.00019	.00089	.00002	.00418
#3	-.00022	.00444	-.28477	.00007	.00017	.00063	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06037	.00015	.0002	-.0006	-.00015	-.0081	-.00101
Stddev	.00086	.00025	.0001	.0002	.00331	.0041	.00041
%RSD	1.4279	168.16	55.43	29.69	2202.5	50.69	40.351
#1	.06106	-.00013	.0001	-.0009	-.00284	-.0059	-.00110
#2	.05941	.00033	.0003	-.0006	-.00116	-.0056	-.00137
#3	.06065	.00025	.0002	-.0005	.00355	-.0128	-.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 12:57:47 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0181	.0131	.00036
Stddev	.0019	.0191	.00013
%RSD	10.77	146.4	34.790
#1	.0201	.0350	.00044
#2	.0179	.0004	.00022
#3	.0163	.0037	.00043
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3044.6	343390.	17397.
Stddev	3.1	1705.	90.
%RSD	.10272	.49653	.51728
#1	3043.0	344620.	17478.
#2	3048.2	344110.	17414.
#3	3042.6	341440.	17300.

Sample Name: UQ40355-001TC Acquired: 12/31/2019 13:03:20 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.00965	.00040	.0036	.00057	-.00012	-.14203
Stddev	.00041	.01165	.00029	.0002	.00003	.00001	.00156
%RSD	169.28	120.75	73.583	6.160	5.0203	9.1851	1.1016
#1	-.00023	-.00118	.00055	.0038	.00060	-.00012	-.14045
#2	.00041	.00815	.00059	.0034	.00054	-.00012	-.14358
#3	.00054	.02197	.00006	.0036	.00058	-.00014	-.14206
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00010	-.00036	-.00128	-.00181	.34576	-.2464
Stddev	.0001	.00020	.00033	.00119	.00365	.12587	.0042
%RSD	24.24	190.21	92.837	93.566	201.50	36.404	1.702
#1	.0002	.00030	-.00024	-.00250	.00240	.37334	-.2476
#2	.0002	.00010	-.00010	-.00011	-.00383	.20838	-.2499
#3	.0003	-.00009	-.00073	-.00122	-.00399	.45555	-.2418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ40355-001TC Acquired: 12/31/2019 13:03:20 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00078	.00282	F 120.75	.00021	-.00015	.00200	.00068
Stddev	.00001	.00040	1.56	.00020	.00049	.00105	.00224
%RSD	1.5949	14.041	1.2899	95.015	334.27	52.431	327.94
#1	-.00078	.00296	119.23	.00027	.00034	.00310	-.00097
#2	-.00080	.00312	122.34	.00037	-.00065	.00102	-.00021
#3	-.00077	.00237	120.68	-.00001	-.00013	.00186	.00323
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			5.0000				
Low Limit			-5.0000				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.06795	-.00005	-.0003	-.0008	-.00209	-.0174	.00009
Stddev	.00309	.00041	.0001	.0001	.00076	.0057	.00042
%RSD	4.5477	766.81	39.24	14.71	36.213	32.57	468.40
#1	.07151	.00041	-.0002	-.0008	-.00124	-.0152	-.00028
#2	.06596	-.00019	-.0003	-.0009	-.00270	-.0131	.00055
#3	.06639	-.00038	-.0004	-.0006	-.00232	-.0238	-.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UQ40355-001TC Acquired: 12/31/2019 13:03:20 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0157	.0215	.00005
Stddev	.0012	.0079	.00009
%RSD	7.793	36.89	178.39
#1	.0164	.0245	.00003
#2	.0143	.0276	-.00003
#3	.0163	.0125	.00014
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2950.4	330970.	17431.
Stddev	4.4	1624.	69.
%RSD	.14947	.49070	.39708
#1	2949.4	331120.	17508.
#2	2955.3	329270.	17374.
#3	2946.7	332510.	17410.

Sample Name: UQ40355-002TC Acquired: 12/31/2019 13:08:53 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98972	18.940	5.0512	.9366	9.9129	2.0245	37.861
Stddev	.00935	.170	.0101	.0124	.0383	.0191	.185
%RSD	.94463	.89739	.20099	1.322	.38663	.94418	.48923
#1	.99119	19.103	5.0519	.9417	9.9291	2.0131	38.000
#2	.99825	18.953	5.0407	.9457	9.8691	2.0465	37.933
#3	.97973	18.764	5.0610	.9225	9.9405	2.0138	37.651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9186	1.9121	4.9475	1.9463	18.720	38.120	37.43
Stddev	.0023	.0050	.0630	.0101	.197	.401	.28
%RSD	.2489	.26274	1.2730	.52020	1.0513	1.0515	.7408
#1	.9191	1.9147	4.9675	1.9499	18.900	38.217	37.75
#2	.9162	1.9063	4.9980	1.9541	18.751	38.464	37.24
#3	.9207	1.9153	4.8769	1.9348	18.510	37.680	37.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: UQ40355-002TC Acquired: 12/31/2019 13:08:53 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.9711	1.8711	F 154.71	1.9262	4.8027	.96148	.96767
Stddev	.0179	.0063	1.95	.0051	.0094	.00444	.00436
%RSD	.90938	.33496	1.2631	.26257	.19491	.46207	.45103
#1	1.9757	1.8679	156.53	1.9238	4.8050	.95977	.96822
#2	1.9863	1.8671	154.96	1.9228	4.7924	.95814	.96306
#3	1.9513	1.8783	152.64	1.9320	4.8108	.96652	.97173
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			40.000				
Range			20.500%				

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.5200	.94607	.9616	.9903	.78247	2.015	1.9447
Stddev	.0114	.00147	.0052	.0111	.00289	.019	.0256
%RSD	.32391	.15581	.5388	1.121	.36956	.9591	1.3140
#1	3.5155	.94718	.9667	.9952	.78525	2.021	1.9572
#2	3.5115	.94440	.9618	.9980	.77948	2.031	1.9615
#3	3.5329	.94664	.9563	.9776	.78268	1.994	1.9153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Sample Name: UQ40355-002TC Acquired: 12/31/2019 13:08:53 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0954	.0174	1.9460
Stddev	.0020	.0262	.0019
%RSD	2.071	150.8	.09789
#1	-.0931	.0372	1.9441
#2	-.0965	.0273	1.9461
#3	-.0965	-.0123	1.9479
Check ?	None	None	Chk Pass
Value			
Range			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2847.9	321100.	17378.
Stddev	.9	3051.	117.
%RSD	.03136	.95013	.67079
#1	2848.5	320210.	17283.
#2	2846.9	318590.	17343.
#3	2848.4	324490.	17508.

Sample Name: UL19074-001TC Acquired: 12/31/2019 13:14:26 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: Centrifuged Wastewater Cake

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00030	.03410	.00399	.0416	.00739	-.00008	7.1788
Stddev	.00055	.00630	.00109	.0003	.00037	.00001	.0158
%RSD	185.91	18.485	27.239	.7102	4.9855	15.322	.22058
#1	.00090	.03490	.00514	.0413	.00722	-.00007	7.1666
#2	.00018	.02744	.00298	.0415	.00713	-.00008	7.1732
#3	-.00019	.03997	.00384	.0419	.00781	-.00009	7.1967
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00032	.00001	.00024	.04719	5.9681	2.633
Stddev	.0000	.00021	.00012	.00024	.00335	.1645	.028
%RSD	13.89	64.118	2148.4	100.73	7.0947	2.7567	1.055
#1	.0003	.00012	.00010	.00007	.04827	5.9208	2.664
#2	.0003	.00032	-.00014	.00051	.04343	5.8325	2.610
#3	.0004	.00053	.00006	.00013	.04986	6.1511	2.625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19074-001TC Acquired: 12/31/2019 13:14:26 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: Centrifuged Wastewater Cake

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.02814	.00434	115.80	.00619	.00070	.00241	.00357
Stddev	.00018	.00091	.98	.00023	.00010	.00027	.00053
%RSD	.62869	20.883	.84405	3.7360	13.716	11.140	14.873
#1	.02802	.00531	115.29	.00597	.00059	.00244	.00338
#2	.02805	.00421	115.20	.00617	.00077	.00213	.00317
#3	.02834	.00351	116.93	.00643	.00074	.00266	.00418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.21624	.00060	.0200	-.0007	-.00240	-.0157	-.00101
Stddev	.00278	.00087	.0002	.0001	.00400	.0114	.00010
%RSD	1.2842	143.33	.9813	19.57	166.57	72.54	10.281
#1	.21412	.00027	.0199	-.0005	-.00151	-.0125	-.00112
#2	.21522	-.00004	.0200	-.0008	.00108	-.0063	-.00098
#3	.21939	.00159	.0203	-.0007	-.00677	-.0284	-.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL19074-001TC Acquired: 12/31/2019 13:14:26 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: Centrifuged Wastewater Cake

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0140	.0217	.07985
Stddev	.0005	.0030	.00041
%RSD	3.895	13.59	.50796
#1	.0134	.0236	.07950
#2	.0143	.0183	.07976
#3	.0143	.0233	.08029
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2935.6	334060.	17715.
Stddev	14.2	1651.	55.
%RSD	.48327	.49420	.31268
#1	2942.3	335500.	17719.
#2	2945.2	334410.	17769.
#3	2919.3	332260.	17658.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	96.188%	98.336%	95.995%
Range			

Sample Name: UL20031-001TC Acquired: 12/31/2019 13:19:56 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Treated

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00022	.42140	.00116	.0066	.01213	-.00010	-.11189
Stddev	.00022	.01252	.00071	.0005	.00020	.00002	.00212
%RSD	102.75	2.9701	61.808	7.845	1.6183	22.314	1.8950
#1	.00012	.43532	.00055	.0066	.01192	-.00007	-.11290
#2	.00006	.41108	.00097	.0061	.01230	-.00011	-.10946
#3	.00047	.41779	.00194	.0071	.01218	-.00011	-.11333
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00005	-.00019	-.00068	-.00026	.36491	-.2438
Stddev	.0000	.00002	.00027	.00025	.00105	.09135	.0225
%RSD	5.310	43.740	140.78	36.382	398.16	25.034	9.210
#1	.0002	-.00003	-.00015	-.00071	-.00045	.46469	-.2428
#2	.0002	-.00007	-.00048	-.00042	.00087	.34467	-.2218
#3	.0002	-.00005	.00005	-.00092	-.00121	.28538	-.2667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20031-001TC Acquired: 12/31/2019 13:19:56 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Treated

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00066	.00228	110.65	.00063	.00128	.00040	.00213
Stddev	.00001	.00008	.46	.00041	.00116	.00084	.00081
%RSD	1.8325	3.3031	.41459	65.231	90.686	208.08	37.779
#1	-.00066	.00220	110.72	.00069	.00257	-.00006	.00124
#2	-.00065	.00232	111.08	.00019	.00034	.00137	.00236
#3	-.00067	.00233	110.17	.00101	.00092	-.00011	.00280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07750	-.00001	.0001	-.0005	-.00253	-.0127	-.00297
Stddev	.00146	.00030	.0001	.0002	.00220	.0211	.00115
%RSD	1.8811	3315.2	46.59	45.93	86.950	166.9	38.723
#1	.07801	-.00029	.0001	-.0007	-.00057	-.0051	-.00229
#2	.07863	-.00005	.0001	-.0002	-.00212	.0037	-.00233
#3	.07585	.00030	.0002	-.0006	-.00491	-.0365	-.00430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20031-001TC Acquired: 12/31/2019 13:19:56 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Treated

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0148	.0103	.00063
Stddev	.0013	.0036	.00003
%RSD	8.503	34.95	4.1631
#1	.0137	.0112	.00063
#2	.0146	.0064	.00061
#3	.0162	.0135	.00066
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2993.3	341330.	18004.
Stddev	20.9	2705.	232.
%RSD	.69708	.79247	1.2894
#1	2970.8	340710.	17830.
#2	3012.0	338990.	17914.
#3	2997.0	344290.	18267.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.076%	100.48%	97.559%
Range			

Sample Name: UL20034-001TC Acquired: 12/31/2019 13:25:29 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Sludge

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00015	1.0286	.00023	.0068	.01359	-.00006	-.10055
Stddev	.00035	.0169	.00020	.0011	.00059	.00001	.00251
%RSD	234.48	1.6411	88.025	16.07	4.3771	15.097	2.4997
#1	-.00015	1.0142	-.00000	.0071	.01292	-.00005	-.10234
#2	.00053	1.0244	.00036	.0056	.01406	-.00005	-.10163
#3	.00006	1.0472	.00034	.0078	.01379	-.00007	-.09768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00001	-.00012	-.00126	.00055	.27465	-.2014
Stddev	.0001	.00012	.00009	.00021	.00283	.05050	.0122
%RSD	48.34	915.90	78.540	16.500	517.08	18.389	6.039
#1	.0004	.00015	-.00001	-.00104	.00166	.21659	-.1958
#2	.0002	-.00006	-.00019	-.00146	.00265	.30842	-.1931
#3	.0001	-.00005	-.00015	-.00127	-.00267	.29894	-.2154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20034-001TC Acquired: 12/31/2019 13:25:29 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Sludge

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00057	.00182	109.11	.00065	-.00010	.00182	.00115
Stddev	.00003	.00007	1.48	.00025	.00074	.00056	.00019
%RSD	5.4125	3.7086	1.3549	38.423	766.64	30.866	16.375
#1	-.00061	.00190	107.41	.00094	.00059	.00244	.00125
#2	-.00055	.00178	109.95	.00048	-.00089	.00134	.00127
#3	-.00055	.00179	109.98	.00054	.00000	.00167	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09067	.00002	.0002	-.0007	-.00286	-.0170	-.00084
Stddev	.00051	.00080	.0001	.0001	.00223	.0071	.00046
%RSD	.56795	3424.7	40.22	15.74	77.994	42.01	54.518
#1	.09008	.00040	.0001	-.0008	-.00041	-.0155	-.00128
#2	.09099	-.00090	.0003	-.0006	-.00478	-.0247	-.00086
#3	.09094	.00056	.0003	-.0007	-.00341	-.0107	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20034-001TC Acquired: 12/31/2019 13:25:29 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Sludge

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0157	.0143	.00059
Stddev	.0012	.0018	.00005
%RSD	7.694	12.53	8.9706
#1	.0161	.0139	.00065
#2	.0166	.0163	.00054
#3	.0143	.0127	.00060
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2918.9	330240.	17508.
Stddev	9.4	1908.	304.
%RSD	.32238	.57778	1.7350
#1	2917.1	331860.	17851.
#2	2929.0	330710.	17401.
#3	2910.5	328140.	17272.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	95.640%	97.211%	94.873%
Range			

Sample Name: UL20036-001TC Acquired: 12/31/2019 13:31:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSS Sludge

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00004	.92185	-.00051	.0064	.01269	-.00005	-.10565
Stddev	.00014	.01322	.00016	.0002	.00007	.00002	.00112
%RSD	373.84	1.4345	30.745	3.573	.58680	42.131	1.0591
#1	-.00008	.93489	-.00065	.0063	.01276	-.00003	-.10488
#2	-.00000	.92221	-.00055	.0063	.01271	-.00008	-.10514
#3	.00019	.90845	-.00034	.0067	.01261	-.00006	-.10694
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.00007	-.00031	-.00123	-.00002	.25463	-.2187
Stddev	.0002	.00010	.00023	.00114	.00304	.13193	.0042
%RSD	76.79	151.59	74.362	93.120	13486.	51.811	1.922
#1	.0002	.00003	-.00035	-.00030	.00321	.13995	-.2176
#2	.0001	.00018	-.00006	-.00088	-.00047	.22513	-.2152
#3	.0006	-.00001	-.00051	-.00250	-.00282	.39881	-.2233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20036-001TC Acquired: 12/31/2019 13:31:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSS Sludge

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00059	.00193	101.83	.00059	-.00064	.00307	.00270
Stddev	.00001	.00042	1.05	.00012	.00164	.00146	.00040
%RSD	1.7683	21.743	1.0308	19.955	255.30	47.444	14.987
#1	-.00060	.00149	103.04	.00056	-.00215	.00216	.00245
#2	-.00058	.00199	101.35	.00072	.00110	.00475	.00317
#3	-.00060	.00232	101.11	.00049	-.00088	.00230	.00248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.09356	.00015	.0011	-.0005	-.00377	-.0114	-.00292
Stddev	.00140	.00016	.0001	.0001	.00053	.0131	.00101
%RSD	1.4978	108.86	7.050	30.04	14.153	115.7	34.510
#1	.09401	.00027	.0012	-.0007	-.00369	.0032	-.00176
#2	.09199	.00022	.0011	-.0004	-.00434	-.0151	-.00346
#3	.09468	-.00004	.0011	-.0004	-.00328	-.0222	-.00354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20036-001TC Acquired: 12/31/2019 13:31:00 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSS Sludge

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0147	.0172	.00101
Stddev	.0009	.0042	.00013
%RSD	6.345	24.56	12.891
#1	.0155	.0201	.00095
#2	.0137	.0191	.00093
#3	.0150	.0123	.00116
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3026.0	342670.	18060.
Stddev	12.0	4565.	244.
%RSD	.39711	1.3322	1.3525
#1	3019.2	337530.	17778.
#2	3039.9	344190.	18182.
#3	3018.9	346270.	18218.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.150%	100.87%	97.862%
Range			

Sample Name: UL20038-001TC Acquired: 12/31/2019 13:36:32 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSS Water - Run as High Solids

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00008	.25476	.00052	.0042	.00164	-.00009	-.11757
Stddev	.00012	.01141	.00043	.0004	.00013	.00001	.00305
%RSD	149.63	4.4774	84.104	8.874	7.7480	6.2748	2.5983
#1	.00012	.26265	.00023	.0046	.00155	-.00010	-.12051
#2	-.00006	.25995	.00102	.0040	.00179	-.00009	-.11778
#3	.00017	.24168	.00030	.0039	.00159	-.00010	-.11441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00009	-.00017	-.00051	-.00124	.20832	-.2418
Stddev	.0001	.00010	.00014	.00071	.00153	.21124	.0039
%RSD	40.13	115.57	78.643	140.16	122.69	101.41	1.615
#1	.0002	-.00015	-.00024	-.00082	-.00177	.44553	-.2462
#2	.0001	.00003	-.00026	-.00101	-.00243	.13889	-.2405
#3	.0003	-.00013	-.00002	.00031	.00048	.04052	-.2387
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20038-001TC Acquired: 12/31/2019 13:36:32 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSS Water - Run as High Solids

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00070	.00163	101.13	.00070	.00018	.00205	-.00024
Stddev	.00004	.00063	.54	.00016	.00137	.00139	.00098
%RSD	5.0527	38.828	.53250	22.445	740.41	67.934	401.34
#1	-.00066	.00236	101.21	.00085	-.00132	.00044	-.00003
#2	-.00072	.00131	101.63	.00069	.00136	.00279	-.00131
#3	-.00072	.00122	100.56	.00054	.00051	.00292	.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07560	.00030	.0001	-.0007	-.00324	-.0082	-.00432
Stddev	.00169	.00038	.0000	.0000	.00214	.0116	.00052
%RSD	2.2298	126.67	53.18	4.535	65.969	142.5	12.117
#1	.07644	.00021	.0001	-.0007	-.00083	-.0153	-.00376
#2	.07366	.00071	.0001	-.0006	-.00492	-.0144	-.00441
#3	.07670	-.00002	.0000	-.0007	-.00396	.0053	-.00480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20038-001TC Acquired: 12/31/2019 13:36:32 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSS Water - Run as High Solids

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0144	.0034	.00093
Stddev	.0017	.0024	.00001
%RSD	11.70	69.42	.87899
#1	.0128	.0020	.00093
#2	.0162	.0021	.00093
#3	.0142	.0062	.00092
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3037.6	347130.	18331.
Stddev	19.2	2314.	140.
%RSD	.63330	.66648	.76098
#1	3043.7	345060.	18290.
#2	3053.1	346710.	18217.
#3	3016.1	349630.	18487.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	99.530%	102.19%	99.334%
Range			

Sample Name: UL20039-001TC Acquired: 12/31/2019 13:42:05 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Water - Run as High Solids

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.56766	.00070	.0049	.00227	-.00007	-.10948
Stddev	.00018	.01104	.00041	.0006	.00022	.00002	.00096
%RSD	73.852	1.9451	58.736	12.53	9.8399	22.390	.87414
#1	.00004	.58001	.00027	.0048	.00252	-.00009	-.10840
#2	.00038	.56423	.00076	.0056	.00210	-.00005	-.11022
#3	.00030	.55874	.00109	.0044	.00219	-.00008	-.10984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.00020	-.00007	-.00102	-.00058	.22166	-.2181
Stddev	.0000	.00015	.00013	.00099	.00207	.04059	.0183
%RSD	33.09	72.411	188.42	96.996	357.86	18.310	8.404
#1	.0001	-.00028	-.00008	-.00046	.00153	.21092	-.2236
#2	.0001	-.00029	.00007	-.00044	-.00066	.18753	-.2331
#3	.0001	-.00003	-.00020	-.00217	-.00261	.26654	-.1977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20039-001TC Acquired: 12/31/2019 13:42:05 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Water - Run as High Solids

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00063	.00172	106.50	.00074	-.00014	.00124	.00192
Stddev	.00005	.00012	.77	.00030	.00080	.00006	.00208
%RSD	7.1607	6.8258	.72131	40.781	562.48	4.7224	108.55
#1	-.00068	.00159	105.61	.00097	.00078	.00128	.00124
#2	-.00063	.00182	106.90	.00085	-.00060	.00118	.00026
#3	-.00059	.00174	106.98	.00040	-.00061	.00127	.00425
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.08497	.00035	-.0000	-.0005	-.00296	-.0099	-.00352
Stddev	.00049	.00033	.0000	.0002	.00138	.0060	.00058
%RSD	.57977	93.478	224.5	43.70	46.838	60.52	16.375
#1	.08552	.00073	.0000	-.0003	-.00422	-.0164	-.00287
#2	.08457	.00019	-.0000	-.0006	-.00147	-.0087	-.00397
#3	.08481	.00013	-.0000	-.0005	-.00318	-.0046	-.00372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20039-001TC Acquired: 12/31/2019 13:42:05 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: PSN Water - Run as High Solids

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0140	.0125	.00110
Stddev	.0005	.0129	.00005
%RSD	3.447	102.8	4.1445
#1	.0145	.0060	.00109
#2	.0135	.0274	.00115
#3	.0139	.0042	.00107
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3000.4	343610.	18109.
Stddev	9.4	2162.	152.
%RSD	.31265	.62930	.83787
#1	2990.0	341210.	17934.
#2	3008.1	345410.	18201.
#3	3003.1	344220.	18192.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	98.310%	101.15%	98.129%
Range			

Sample Name: UL20116-001TC Acquired: 12/31/2019 13:47:37 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGE

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00052	-.00714	-.00036	.0065	.00226	-.00010	.40528
Stddev	.00013	.00595	.00099	.0009	.00022	.00004	.00736
%RSD	25.123	83.346	273.05	14.39	9.7500	40.327	1.8167
#1	.00065	-.00244	.00066	.0055	.00206	-.00005	.40019
#2	.00052	-.01383	-.00131	.0068	.00223	-.00012	.40194
#3	.00039	-.00515	-.00043	.0073	.00250	-.00011	.41373
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00093	-.00017	.00358	.00729	.35631	-.1951
Stddev	.0001	.00010	.00022	.00057	.00379	.10620	.0129
%RSD	26.34	11.055	125.89	15.965	51.981	29.804	6.588
#1	.0004	.00092	-.00008	.00400	.00341	.42395	-.1896
#2	.0005	.00083	-.00042	.00382	.00750	.23391	-.2098
#3	.0003	.00103	-.00002	.00293	.01098	.41108	-.1859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001TC Acquired: 12/31/2019 13:47:37 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGE

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.10107	.00168	115.19	.00903	-.00026	.00097	.00123
Stddev	.00107	.00023	3.67	.00027	.00032	.00241	.00127
%RSD	1.0543	13.489	3.1845	2.9998	120.47	248.57	103.85
#1	.10020	.00155	111.71	.00906	-.00017	.00226	.00192
#2	.10075	.00154	114.84	.00928	.00000	-.00181	-.00024
#3	.10226	.00194	119.03	.00874	-.00062	.00247	.00201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.13886	.00052	.0018	-.0006	-.00289	-.0173	-.00142
Stddev	.00098	.00034	.0000	.0001	.00223	.0169	.00145
%RSD	.70345	65.102	.4914	12.84	77.099	97.73	102.34
#1	.13774	.00036	.0018	-.0006	-.00378	-.0363	-.00268
#2	.13935	.00091	.0018	-.0006	-.00453	-.0112	-.00174
#3	.13950	.00029	.0018	-.0005	-.00035	-.0043	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001TC Acquired: 12/31/2019 13:47:37 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGE

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0130	.0139	.00739
Stddev	.0011	.0006	.00016
%RSD	8.521	4.351	2.2249
#1	.0142	.0146	.00749
#2	.0121	.0137	.00749
#3	.0126	.0135	.00720
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2975.8	336000.	17918.
Stddev	11.2	4647.	354.
%RSD	.37761	1.3830	1.9772
#1	2984.5	339960.	18252.
#2	2979.7	337150.	17956.
#3	2963.1	330890.	17547.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	97.503%	98.907%	97.097%
Range			

Sample Name: UL20116-001MSTC Acquired: 12/31/2019 13:53:08 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGES

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.0080	19.183	5.1606	.9518	10.047	2.0429	38.949
Stddev	.0035	.044	.0318	.0093	.056	.0144	.102
%RSD	.34669	.22703	.61520	.9780	.55703	.70533	.26188
#1	1.0119	19.232	5.1362	.9596	10.105	2.0308	39.058
#2	1.0052	19.171	5.1491	.9415	9.9931	2.0391	38.856
#3	1.0068	19.147	5.1965	.9543	10.043	2.0589	38.932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9403	1.9528	5.0252	1.9815	18.950	38.608	38.20
Stddev	.0048	.0069	.0196	.0056	.060	.699	.18
%RSD	.5125	.35100	.39056	.28346	.31760	1.8099	.4603
#1	.9391	1.9519	5.0392	1.9879	18.996	38.524	38.39
#2	.9361	1.9464	5.0028	1.9792	18.882	37.954	38.19
#3	.9455	1.9600	5.0336	1.9774	18.971	39.344	38.04
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001MSTC Acquired: 12/31/2019 13:53:08 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGES

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0995	1.9111	153.13	1.9766	4.8918	.98773	.99118
Stddev	.0076	.0089	1.48	.0039	.0181	.00348	.00275
%RSD	.35984	.46710	.96909	.19690	.37011	.35218	.27710
#1	2.1078	1.9061	153.79	1.9759	4.8849	.98888	.98945
#2	2.0931	1.9058	151.44	1.9732	4.8781	.98383	.98974
#3	2.0975	1.9214	154.18	1.9809	4.9123	.99049	.99435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.6871	.96358	.9778	1.004	.79882	2.046	1.9677
Stddev	.0179	.00549	.0035	.005	.00542	.016	.0108
%RSD	.48665	.56950	.3590	.4854	.67872	.7599	.55032
#1	3.6802	.96222	.9804	1.005	.79879	2.056	1.9715
#2	3.6737	.95890	.9738	.9983	.79342	2.054	1.9555
#3	3.7075	.96962	.9792	1.008	.80426	2.028	1.9761
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001MSTC Acquired: 12/31/2019 13:53:08 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGES

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0990	.0097	1.9920
Stddev	.0022	.0099	.0045
%RSD	2.264	102.1	.22371
#1	-.0998	-.0017	1.9920
#2	-.0965	.0161	1.9876
#3	-.1007	.0149	1.9965
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2893.5	327460.	17744.
Stddev	9.3	1063.	33.
%RSD	.32059	.32467	.18710
#1	2896.9	326710.	17720.
#2	2900.6	328680.	17730.
#3	2883.0	327000.	17782.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	94.807%	96.394%	96.153%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 13:58:42 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.50081	24.182	.49227	.4972	2.5326	2.5385	48.636
Stddev	.00331	.114	.00141	.0020	.0220	.0145	.092
%RSD	.66032	.47108	.28545	.4010	.87026	.57164	.18989
#1	.50459	24.134	.49124	.4968	2.5278	2.5543	48.560
#2	.49844	24.100	.49169	.4955	2.5134	2.5258	48.611
#3	.49940	24.312	.49387	.4994	2.5567	2.5356	48.739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4843	2.4778	2.5212	2.4940	23.930	47.697	48.47
Stddev	.0022	.0114	.0068	.0250	.147	.681	.14
%RSD	.4620	.46012	.26936	1.0038	.61437	1.4286	.2890
#1	.4831	2.4678	2.5258	2.5211	23.840	46.999	48.63
#2	.4829	2.4755	2.5134	2.4891	23.849	47.732	48.36
#3	.4869	2.4902	2.5245	2.4718	24.099	48.361	48.43
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 13:58:42 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5347	2.4602	47.287	2.5001	.49228	.50218	.49847
Stddev	.0119	.0140	.459	.0055	.00559	.00259	.00393
%RSD	.46961	.56814	.96991	.21995	1.1352	.51671	.78838
#1	2.5481	2.4471	46.884	2.4982	.48783	.50493	.49726
#2	2.5310	2.4588	47.191	2.4958	.49046	.49977	.49529
#3	2.5252	2.4749	47.786	2.5063	.49855	.50182	.50287
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3637	.48983	2.476	.4979	1.0088	2.520	2.4833
Stddev	.0121	.00388	.009	.0015	.0062	.014	.0071
%RSD	.50965	.79299	.3733	.2941	.61419	.5348	.28534
#1	2.3516	.48651	2.468	.4983	1.0026	2.534	2.4807
#2	2.3637	.48887	2.474	.4963	1.0088	2.518	2.4779
#3	2.3757	.49410	2.486	.4991	1.0149	2.507	2.4913
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 13:58:42 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.453	F 2.177	2.5023
Stddev	.019	.019	.0045
%RSD	.7871	.8544	.17916
#1	2.435	2.183	2.5027
#2	2.452	2.156	2.4977
#3	2.473	2.191	2.5066
Check ?	Chk Pass	Chk Fail	Chk Pass
Value		2.500	
Range		-10.40%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2896.6	330680.	17491.
Stddev	11.7	1253.	83.
%RSD	.40387	.37894	.47375
#1	2906.1	329640.	17478.
#2	2900.1	332070.	17579.
#3	2883.5	330320.	17415.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 14:04:09 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00024	.00999	.00229	.0020	.00060	-.00012	-.13949
Stddev	.00065	.01146	.00058	.0005	.00023	.00004	.00072
%RSD	271.92	114.70	25.100	27.39	37.512	29.996	.51972
#1	-.00047	.02320	.00264	.0021	.00061	-.00010	-.13978
#2	.00079	.00395	.00163	.0024	.00082	-.00010	-.14002
#3	.00039	.00282	.00260	.0014	.00037	-.00016	-.13866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.00002	-.00044	.00005	-.00067	.24159	-.2591
Stddev	.0002	.00008	.00026	.00041	.00253	.18516	.0044
%RSD	95.49	416.51	59.900	877.44	378.05	76.640	1.688
#1	-.0000	.00002	-.00014	-.00033	-.00336	.45522	-.2639
#2	.0005	.00003	-.00052	.00048	.00167	.12730	-.2579
#3	.0003	-.00012	-.00065	-.00001	-.00032	.14225	-.2555
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 14:04:09 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00071	.00550	-.24010	-.00056	.00002	.00280	.00189
Stddev	.00003	.00128	.05477	.00012	.00240	.00120	.00027
%RSD	4.1853	23.319	22.813	21.994	9958.8	42.915	14.398
#1	-.00069	.00686	-.29338	-.00047	-.00162	.00308	.00197
#2	-.00070	.00533	-.18395	-.00070	.00277	.00149	.00211
#3	-.00075	.00431	-.24298	-.00050	-.00108	.00385	.00158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05837	.00024	-.0003	-.0007	-.00206	-.0175	-.00144
Stddev	.00127	.00030	.0000	.0001	.00140	.0089	.00029
%RSD	2.1752	123.34	11.54	18.71	68.118	50.97	20.133
#1	.05858	.00058	-.0003	-.0006	-.00356	-.0223	-.00144
#2	.05952	.00011	-.0004	-.0007	-.00078	-.0072	-.00115
#3	.05701	.00003	-.0003	-.0008	-.00184	-.0229	-.00173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 14:04:09 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0171	.0203	-.00021
Stddev	.0008	.0038	.00008
%RSD	4.822	18.68	39.279
#1	.0178	.0164	-.00012
#2	.0171	.0205	-.00027
#3	.0162	.0239	-.00024
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3072.6	345340.	17252.
Stddev	8.8	2662.	141.
%RSD	.28693	.77079	.81829
#1	3069.9	345730.	17411.
#2	3082.4	342510.	17140.
#3	3065.4	347790.	17206.

Sample Name: UL20116-001MDTC Acquired: 12/31/2019 14:09:45 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGESD

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.98939	18.869	5.1152	.9293	9.7755	2.0088	38.740
Stddev	.00679	.052	.0110	.0065	.1090	.0030	.020
%RSD	.68671	.27497	.21478	.6944	1.1153	.14877	.05039
#1	.98634	18.816	5.1030	.9233	9.6499	2.0055	38.749
#2	.98465	18.919	5.1181	.9286	9.8457	2.0112	38.717
#3	.99717	18.871	5.1244	.9361	9.8309	2.0099	38.753
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9357	1.9472	4.9166	1.9627	18.682	37.509	38.11
Stddev	.0030	.0050	.0353	.0125	.056	.614	.02
%RSD	.3173	.25531	.71794	.63699	.29788	1.6359	.0423
#1	.9361	1.9482	4.8981	1.9616	18.627	36.863	38.13
#2	.9325	1.9418	4.8944	1.9508	18.739	37.579	38.10
#3	.9384	1.9516	4.9573	1.9757	18.680	38.085	38.11
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001MDTC Acquired: 12/31/2019 14:09:45 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGESD

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0695	1.9087	150.93	1.9784	4.8675	.98594	.98829
Stddev	.0129	.0064	1.12	.0012	.0242	.00319	.00200
%RSD	.62114	.33697	.74264	.05907	.49804	.32368	.20229
#1	2.0649	1.9066	149.63	1.9776	4.8674	.98252	.98983
#2	2.0595	1.9036	151.62	1.9778	4.8432	.98645	.98603
#3	2.0840	1.9159	151.52	1.9797	4.8917	.98884	.98900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.6676	.95890	.9687	.9832	.79476	2.030	1.9229
Stddev	.0141	.00471	.0012	.0077	.00073	.019	.0154
%RSD	.38318	.49080	.1278	.7825	.09171	.9204	.80318
#1	3.6666	.95854	.9675	.9801	.79404	2.019	1.9175
#2	3.6541	.95438	.9686	.9776	.79474	2.020	1.9109
#3	3.6822	.96377	.9700	.9920	.79550	2.052	1.9404
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001MDTC Acquired: 12/31/2019 14:09:45 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: 1311/3010A/6 Custom ID2: Custom ID3:
Comment: SLUDGESD

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0991	.0046	1.9926
Stddev	.0006	.0096	.0024
%RSD	.6107	207.0	.11970
#1	-.0992	-.0021	1.9941
#2	-.0985	.0003	1.9898
#3	-.0997	.0156	1.9939
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			
Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2867.4	329250.	17708.
Stddev	12.0	1975.	59.
%RSD	.41957	.59985	.33361
#1	2863.0	329210.	17770.
#2	2881.0	331250.	17700.
#3	2858.1	327300.	17653.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.952%	96.922%	95.955%
Range			

Sample Name: UL20116-001TCL(5) Acquired: 12/31/2019 14:15:19 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00017	.00587	.00298	.0036	.00084	-.00012	-.02783
Stddev	.00044	.00754	.00120	.0001	.00009	.00003	.00158
%RSD	260.55	128.36	40.364	3.696	10.478	28.407	5.6868
#1	.00067	.01251	.00403	.0035	.00093	-.00008	-.02963
#2	.00002	-.00233	.00324	.0037	.00075	-.00015	-.02720
#3	-.00018	.00744	.00167	.0036	.00084	-.00012	-.02666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00003	-.00028	.00062	.00056	.19978	-.2456
Stddev	.0002	.00009	.00020	.00018	.00501	.05191	.0136
%RSD	82.57	270.51	69.496	28.682	895.29	25.983	5.538
#1	.0004	-.00001	-.00043	.00046	-.00490	.25937	-.2338
#2	.0001	.00013	-.00037	.00059	.00494	.17556	-.2426
#3	.0001	-.00003	-.00006	.00081	.00164	.16441	-.2605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001TCL(5) Acquired: 12/31/2019 14:15:19 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.01990	.00421	23.453	.00152	.00071	.00104	.00270
Stddev	.00038	.00099	.252	.00020	.00094	.00074	.00145
%RSD	1.9204	23.459	1.0753	13.184	132.08	70.501	53.882
#1	.02031	.00518	23.421	.00151	.00121	.00043	.00425
#2	.01956	.00422	23.218	.00133	-.00037	.00186	.00138
#3	.01983	.00321	23.719	.00173	.00129	.00084	.00246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.07592	.00038	.0002	-.0007	-.00271	-.0072	-.00339
Stddev	.00085	.00027	.0001	.0002	.00107	.0149	.00052
%RSD	1.1162	69.888	45.61	29.51	39.467	208.0	15.467
#1	.07498	.00068	.0001	-.0008	-.00148	-.0184	-.00279
#2	.07614	.00032	.0001	-.0005	-.00327	.0097	-.00376
#3	.07663	.00015	.0003	-.0008	-.00338	-.0128	-.00363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001TCL(5) Acquired: 12/31/2019 14:15:19 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0136	.0094	.00162
Stddev	.0009	.0109	.00009
%RSD	6.804	115.0	5.4207
#1	.0145	.0193	.00162
#2	.0137	-.0022	.00153
#3	.0127	.0113	.00171
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3144.2	351730.	18055.
Stddev	8.0	4413.	179.
%RSD	.25361	1.2547	.99409
#1	3137.3	346870.	17863.
#2	3153.0	355480.	18219.
#3	3142.5	352850.	18081.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	103.02%	103.54%	97.835%
Range			

Sample Name: UL20116-001TCPS Acquired: 12/31/2019 14:20:51 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.40721	19.536	.41596	.3941	2.0562	2.0546	39.143
Stddev	.01454	.128	.00310	.0108	.0184	.0845	.269
%RSD	3.5703	.65742	.74598	2.750	.89438	4.1125	.68825
#1	.41219	19.416	.41951	.3992	2.0382	2.0839	39.047
#2	.41860	19.672	.41377	.4015	2.0750	2.1205	39.448
#3	.39083	19.521	.41460	.3817	2.0554	1.9593	38.935
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3903	1.9862	2.0321	1.9803	19.184	38.521	38.62
Stddev	.0014	.0069	.0684	.0628	.163	.187	.28
%RSD	.3512	.34646	3.3639	3.1690	.84822	.48559	.7202
#1	.3913	1.9923	2.0483	2.0077	19.065	38.550	38.41
#2	.3887	1.9788	2.0910	2.0247	19.369	38.692	38.94
#3	.3908	1.9876	1.9571	1.9085	19.117	38.321	38.51
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001TCPS Acquired: 12/31/2019 14:20:51 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.1237	1.9391	151.60	2.0069	.38969	.39997	.40135
Stddev	.0706	.0060	1.15	.0079	.00276	.00418	.00138
%RSD	3.3235	.30776	.75676	.39409	.70837	1.0459	.34429
#1	2.1476	1.9451	151.16	2.0044	.39208	.40050	.40294
#2	2.1793	1.9331	152.91	2.0005	.38667	.39555	.40063
#3	2.0443	1.9390	150.75	2.0158	.39033	.40387	.40048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.0076	.38973	.9847	.4022	.81149	.0014	2.0012
Stddev	.0112	.00183	.0054	.0135	.00128	.0102	.0680
%RSD	.55534	.46890	.5501	3.368	.15822	739.6	3.4003
#1	2.0147	.39109	.9832	.4072	.81294	-.0102	2.0249
#2	1.9947	.38765	.9907	.4125	.81103	.0091	2.0543
#3	2.0133	.39044	.9802	.3868	.81050	.0053	1.9245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: UL20116-001TCPS Acquired: 12/31/2019 14:20:51 Type: Unk
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	-.0305	.0123	2.0298
Stddev	.0011	.0085	.0101
%RSD	3.706	69.13	.49735
#1	-.0300	.0036	2.0250
#2	-.0297	.0206	2.0229
#3	-.0318	.0128	2.0414
Check ?	None	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2845.0	324410.	17351.
Stddev	12.8	10148.	205.
%RSD	.45137	3.1282	1.1823
#1	2844.4	321380.	17554.
#2	2858.1	316130.	17144.
#3	2832.4	335730.	17354.
Check ?	Chk Pass	Chk Pass	Chk Pass
Value	93.218%	95.497%	94.020%
Range			

Sample Name: CCV MW-12174 Acquired: 12/31/2019 14:26:22 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.49850	24.075	.48876	.4889	2.5096	2.5216	48.878
Stddev	.00308	.103	.00178	.0030	.0197	.0186	.070
%RSD	.61751	.42898	.36326	.6059	.78384	.73748	.14290
#1	.50075	24.185	.48674	.4886	2.5323	2.5169	48.955
#2	.49976	23.980	.48946	.4920	2.4987	2.5420	48.819
#3	.49499	24.061	.49008	.4861	2.4977	2.5057	48.859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4872	2.4948	2.4975	2.4878	23.838	47.328	48.73
Stddev	.0008	.0055	.0148	.0047	.103	.144	.34
%RSD	.1554	.22169	.59355	.18770	.43169	.30458	.7034
#1	.4868	2.4912	2.5103	2.4928	23.956	47.243	49.05
#2	.4866	2.4921	2.5011	2.4836	23.768	47.247	48.78
#3	.4880	2.5012	2.4813	2.4869	23.791	47.494	48.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 14:26:22 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.5263	2.4792	47.003	2.5278	.49503	.50349	.49890
Stddev	.0086	.0147	.115	.0024	.00126	.00242	.00166
%RSD	.33837	.59487	.24386	.09392	.25478	.47990	.33318
#1	2.5335	2.4657	47.127	2.5277	.49600	.50523	.49760
#2	2.5286	2.4769	46.900	2.5255	.49360	.50073	.49833
#3	2.5169	2.4950	46.983	2.5303	.49549	.50451	.50078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.3680	.49221	2.478	.4919	1.0103	2.540	2.4502
Stddev	.0134	.00142	.002	.0003	.0067	.004	.0015
%RSD	.56407	.28934	.0869	.0586	.66410	.1571	.06085
#1	2.3564	.49096	2.479	.4918	1.0026	2.543	2.4486
#2	2.3649	.49190	2.479	.4922	1.0136	2.536	2.4516
#3	2.3826	.49376	2.475	.4917	1.0147	2.542	2.4505
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: CCV MW-12174 Acquired: 12/31/2019 14:26:22 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	2.461	F 2.137	2.5344
Stddev	.015	.014	.0004
%RSD	.6052	.6549	.01622
#1	2.446	2.121	2.5341
#2	2.462	2.145	2.5349
#3	2.476	2.146	2.5343
Check ?	Chk Pass	Chk Fail	Chk Pass
Value		2.500	
Range		-10.40%	

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	2866.2	330540.	17397.
Stddev	7.1	1160.	126.
%RSD	.24933	.35086	.72244
#1	2874.5	329590.	17271.
#2	2862.2	330200.	17396.
#3	2862.0	331830.	17523.

Sample Name: CCB IM-9779 Acquired: 12/31/2019 14:31:49 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_2496	Ba4554	Be3130	Ca2179
IS Ref	(Sc3613)	(Sc3613-2)	(Sc2273)	(Sc3613)	(Sc3613-2)	(Sc3613)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.00027	-.00929	.00065	.0029	.00028	-.00009	-.14181
Stddev	.00024	.00125	.00026	.0003	.00025	.00002	.00206
%RSD	89.652	13.501	39.950	9.802	87.582	17.382	1.4532
#1	.00054	-.00839	.00062	.0028	.00026	-.00009	-.13956
#2	.00019	-.01072	.00092	.0032	.00054	-.00011	-.14361
#3	.00008	-.00874	.00041	.0026	.00005	-.00008	-.14226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2611	K_7664	Mg2790
IS Ref	(Sc2273)	(Sc2273)	(Sc3613)	(Sc3613)	(Sc3613-2)	(Sc3613-2)	(Sc3613-2)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.00008	-.00050	.00025	-.00178	.31340	-.2401
Stddev	.0001	.00006	.00003	.00087	.00273	.07599	.0099
%RSD	85.26	76.211	6.6057	348.80	153.35	24.247	4.126
#1	.0001	.00008	-.00050	.00119	-.00269	.22654	-.2443
#2	.0000	.00002	-.00047	-.00053	-.00395	.34604	-.2473
#3	.0002	.00013	-.00054	.00009	.00129	.36761	-.2288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 14:31:49 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se1960
IS Ref	(Sc3613)	(Sc2273)	(Sc3613-2)	(Sc2273)	(Sc2273)	(Sc2273)	(Sc2273)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.00069	.00587	-.28660	-.00059	-.00103	.00210	.00070
Stddev	.00003	.00125	.04356	.00023	.00118	.00073	.00194
%RSD	4.6813	21.319	15.201	38.686	114.78	34.862	275.40
#1	-.00066	.00718	-.29050	-.00041	-.00239	.00157	.00209
#2	-.00072	.00574	-.32808	-.00050	-.00031	.00293	.00154
#3	-.00067	.00469	-.24121	-.00084	-.00038	.00180	-.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Si_2124	Sn1899	Sr4077	Ti3372	Tl1908	U_3854	V_2924
IS Ref	(Sc2273)	(Sc2273)	(Sc3613-2)	(Sc3613)	(Sc2273)	(Sc3613)	(Sc3613)
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.05866	.00047	-.0003	-.0007	-.00054	-.0099	-.00229
Stddev	.00042	.00047	.0001	.0003	.00082	.0160	.00061
%RSD	.71687	99.232	23.45	44.37	152.81	161.7	26.721
#1	.05819	.00099	-.0004	-.0005	-.00019	.0050	-.00296
#2	.05902	.00009	-.0003	-.0005	-.00148	-.0079	-.00212
#3	.05876	.00033	-.0003	-.0010	.00005	-.0268	-.00178
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB IM-9779 Acquired: 12/31/2019 14:31:49 Type: QC
Method: 6010D 200.7 - 070219(v220) Mode: CONC Corr. Factor: 1.000000
User: LLL Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	W_2248	W_2397	Zn2062
IS Ref	(Sc2273)	(Sc3613)	(Sc2273)
Units	ppm	ppm	ppm
Avg	.0171	.0269	-.00015
Stddev	.0010	.0143	.00011
%RSD	5.773	53.38	72.355
#1	.0180	.0314	-.00013
#2	.0161	.0384	-.00005
#3	.0171	.0108	-.00026
Check ?	None	None	Chk Pass
High Limit			
Low Limit			

Int. Std.	Sc2273	Sc3613	Sc3613-2
Units	Cts/S	Cts/S	Cts/S
Avg	3058.6	350350.	17516.
Stddev	16.4	3372.	66.
%RSD	.53517	.96244	.37464
#1	3063.4	354250.	17539.
#2	3072.1	348380.	17567.
#3	3040.4	348440.	17442.

Raw Supportive Data

Analyst: WCM **Level 2 Analyst:** KSH2

Status: Level 2 review released

Matrix: Solid

Prep Batch: 39838

3050B - Acid Digestion of Sediments, Sludges, and Soils Linked:

Printed: 01/21/20 1108

Start Date: 12/24/2019 0905

End Date: 12/24/2019 1506

Digestion Cup ID: 19-2731

Ext Solvent: 1:1 HNO3/HNO3/H2O2/HCl

Reagents Vol. (mL): 10, 5, 4, 10

Chem ID: IM9789-01, 19-2688, 19-2240, 19-2687

Hot Block ID: Hot Block # 10

Balance ID: Balance # 19-0318

Thermometer ID: 1172

Start Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ89838-001	MB	PBS	1	6010D	1.000		0.0	50			PIPET ID:388
UQ89838-002	LCS	LCS	1	6010D	1.000	19-1778, 19-1777	1.0	50			
UL20021-010	Sample	MPGI-SF-Soil-12C-121919	1	6010D	1.177		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-011	Sample	MPGI-SF-Soil-13A-121719	1	6010D	1.049		0.0	50	06/14/2020 2359	12/26/2019	
UL20021-012	Sample	MPGI-SF-Soil-13B-121719	1	6010D	1.087		0.0	50	06/14/2020 2359	12/26/2019	
UL20021-013	Sample	MPGI-SF-Soil-14A-121919	1	6010D	1.053		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-014	Sample	MPGI-SF-Soil-14A-121919-D	1	6010D	1.080		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-015	Sample	MPGI-SF-Soil-14B-121919	1	6010D	1.054		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-016	Sample	MPGI-SF-Soil-14C-121919	1	6010D	1.084		0.0	50	06/16/2020 2359	12/26/2019	
UL20030-001	Sample	PSS Treated	1	6010D	1.064		0.0	50	06/16/2020 2359	12/26/2019	
UL20031-001	Sample	PSN Treated	1	6010D	1.050		0.0	50	06/16/2020 2359	12/26/2019	
UL20034-001	Sample	PSN Sludge	1	6010D	1.127		0.0	50	06/16/2020 2359	12/26/2019	
UL20036-001	Sample	PSS Sludge	1	6010D	1.025		0.0	50	06/16/2020 2359	12/26/2019	
UL20038-001	Sample	PSS Water - Run as High Solids	1	6010D	1.061		0.0	50	06/16/2020 2359	12/26/2019	
UL20039-001	Sample	PSN Water - Run as High Solids	1	6010D	1.140		0.0	50	06/16/2020 2359	12/26/2019	
UL19163-001	Sample	Mallard 1 of 4 N&M	1	6010D	3.014		0.0	50	06/16/2020 2359	12/27/2019	NCM#: 29792
UL20003-001	Sample	Hunter Dairy (High Point)	1	6010D	1.156		0.0	50	06/16/2020 2359	12/30/2019	
UL19179-001	Sample	Pond A	1	6010D	1.030		0.0	50	06/16/2020 2359	12/31/2019	
UL19179-002	Sample	Pond B	1	6010D	1.108		0.0	50	06/16/2020 2359	12/31/2019	
UL21020-013	Sample	SB-B	1	6010D	1.038		0.0	50	06/16/2020 2359	12/30/2019	
UL21020-013MS	MS	SB-BS	1	6010D	1.028	19-1778, 19-1777	1.0	50			
UL21020-013MD	MSD	SB-BSD	1	6010D	1.059	19-1778, 19-1777	1.0	50			

(end of report) **Total Samples: 18**

Analyst: WCM **Level 2 Analyst:** NJT

Status: Level 2 review released

Matrix: Aqueous

Prep Batch: 39905

3005A - Total Recoverable Acid Digestion of Waters Linked:

Printed: 01/21/20 1113

Start Date: 12/24/2019 1021

End Date: 12/24/2019 1521

Digestion Cup ID: 19-2731

Ext Solvent: HNO3/HCl

Reagents Vol. (mL): 1, 2.5

Chem ID: 19-2688, 19-2687

Hot Block ID: Hot Block #4

Thermometer ID: 1136

Start Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ89905-001	MB	PBW	1	6010D	50.000		0.0	50			PIPET ID 388
UQ89905-002	LCS	LCS	1	6010D	50.000	19-1586, 19-1587	1.0	50			
UL20021-017	Sample	MRG1-RB-121719	1	6010D	50.000		0.0	50	06/16/2020 2359	12/26/2019	
UL18047-001	Sample	EFF	1	6010D	50.000		0.0	50	06/15/2020 2359	12/27/2019	
UL20041-001	Sample	PSS Water - Run as Low Solids	1	6010D	50.000		0.0	50	06/16/2020 2359	12/30/2019	
UL20043-001	Sample	PSN Water - Run as Low Solids	1	6010D	50.000		0.0	50	06/16/2020 2359	12/30/2019	
UL21002-001	Sample	TMW-01-WG-20191220	1	6010D	50.000		0.0	50	06/17/2020 2359	12/30/2019	
UL21002-002	Sample	TMW-02-WG-20191220	1	6010D	50.000		0.0	50	06/17/2020 2359	12/30/2019	
UL21002-003	Sample	WMP-02S-WG-20191220	1	6010D	50.000		0.0	50	06/17/2020 2359	12/30/2019	
UL21002-004	Sample	AS-01-WG-20191220	1	6010D	50.000		0.0	50	06/17/2020 2359	12/30/2019	
UL19142-018	Sample	Equipment Blank	1	6010D	50.000		0.0	50	06/08/2020 2359	12/31/2019	
UL21005-001	Sample	Eff	1	6010D	50.000		0.0	50	06/17/2020 2359	12/31/2019	
UL21005-001MS	MS	Eff S	1	6010D	50.000	19-1586, 19-1587	1.0	50			
UL21005-001MD	MSD	Eff SD	1	6010D	50.000	19-1587, 19-1586	1.0	50			

(end of report) **Total Samples: 10**

Analyst: RTL **Level 2 Analyst:** JMH

Status: Level 2 review released

Matrix: Solid

Printed: 01/21/20 1114

Prep Batch: 40381

3050B - Acid Digestion of Sediments, Sludges, and Soils Linked:

Start Date: 12/30/2019 0956

End Date: 12/30/2019 1543

Digestion Cup ID: 19-2731

Ext Solvent: 1:1 HNO3/HNO3/H2O2/HCl

Reagents Vol. (mL): 10, 5, 4, 10

Chem ID: IM9789-01, 19-2688, 19-2240, 19-2687

Hot Block ID: Hot Block # 10

Balance ID: Balance # 19-0318

Thermometer ID: 1172

Start Temperature (°C): 93

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ40381-001	MB	PBS	1	6010D	1.000		0.0	50			LCS/MS/MSD PIPET ID 388
UQ40381-002	LCS	LCS	1	6010D	1.000	19-1778, 19-1777	1.0	50			
UL20021-001	Sample	MRGI-SF-Soil-09-121719	1	6010D	1.081		0.0	50	06/14/2020 2359	12/26/2019	
UL20021-001MS	MS	MRGI-SF-Soil-09-121719S	1	6010D	1.002	19-1778, 19-1777	1.0	50			
UL20021-001MD	MSD	MRGI-SF-Soil-09-121719SD	1	6010D	1.038	19-1778, 19-1777	1.0	50			
UL20021-002	Sample	MRGI-SF-Soil-10A-121719	1	6010D	1.022		0.0	50	06/14/2020 2359	12/26/2019	
UL20021-003	Sample	MRGI-SF-Soil-10B-121719	1	6010D	1.152		0.0	50	06/14/2020 2359	12/26/2019	
UL20021-004	Sample	MRGI-SF-Soil-10C-121719	1	6010D	1.115		0.0	50	06/14/2020 2359	12/26/2019	
UL20021-005	Sample	MRGI-SF-Soil-11A-121919	1	6010D	1.117		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-006	Sample	MRGI-SF-Soil-11B-121919	1	6010D	1.111		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-007	Sample	MRGI-SF-Soil-11C-121919	1	6010D	1.001		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-008	Sample	MRGI-SF-Soil-12A-121919	1	6010D	1.025		0.0	50	06/16/2020 2359	12/26/2019	
UL20021-009	Sample	MRGI-SF-Soil-12B-121819	1	6010D	1.113		0.0	50	06/15/2020 2359	12/26/2019	

(end of report) **Total Samples: 9**

Mercury

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Tetra Tech, Inc.

SDG No.: UL20021 **Method Type:** CVAA **SOW No.:**

Contract: Joliet Chemical Fir **Lab Code:** Shealy **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
UL20021-001	MPGI-SF-Soil-09-121719	
UL20021-001S	MPGI-SF-Soil-09-121719S	Matrix Spike
UL20021-001SD	MPGI-SF-Soil-09-121719SD	Matrix Spike Duplicate
UL20021-002	MPGI-SF-Soil-10A-121719	
UL20021-003	MPGI-SF-Soil-10B-121719	
UL20021-004	MPGI-SF-Soil-10C-121719	
UL20021-005	MPGI-SF-Soil-11A-121919	
UL20021-006	MPGI-SF-Soil-11B-121919	
UL20021-007	MPGI-SF-Soil-11C-121919	
UL20021-008	MPGI-SF-Soil-12A-121919	
UL20021-009	MPGI-SF-Soil-12B-121819	
UL20021-010	MPGI-SF-Soil-12C-121919	
UL20021-011	MPGI-SF-Soil-13A-121719	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Tetra Tech, Inc.

SDG No.: UL20021 **Method Type:** CVAA **SOW No.:**

Contract: Joliet Chemical Fir **Lab Code:** Shealy **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
UL20021-012	MPGI-SF-Soil-13B-121719	
UL20021-013	MPGI-SF-Soil-14A-121919	
UL20021-014	MPGI-SF-Soil-14A-121919-	
UL20021-015	MPGI-SF-Soil-14B-121919	
UL20021-016	MPGI-SF-Soil-14C-121919	
UL20021-016S	MPGI-SF-Soil-14C-121919S	Matrix Spike
UL20021-016SD	MPGI-SF-Soil-14C-121919S	Matrix Spike Duplicate
UL20021-017	MPG1-RB-121719	

Were ICP interelement corrections applied?	Yes/No	Yes	
Were ICP background corrections applied?	Yes/No	Yes	
If yes - were raw data generated before applications of background corrections?	Yes/No	No	

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Mercury	0.010043	0.010000	100	90.0 - 110.0	CV	12/21/2019	09:15	HG4122119A
CCV1									
	Mercury	0.010291	0.010000	103	80.0 - 120.0	CV	12/21/2019	09:22	HG4122119A
CCV2									
	Mercury	0.010175	0.010000	102	80.0 - 120.0	CV	12/21/2019	09:50	HG4122119A
CCV3									
	Mercury	0.010340	0.010000	103	80.0 - 120.0	CV	12/21/2019	10:18	HG4122119A

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Mercury	0.001939	0.002000	97	90.0 - 110.0	CV	12/26/2019	19:44	HG4122619
CCV1									
	Mercury	0.002021	0.002000	101	80.0 - 120.0	CV	12/26/2019	19:51	HG4122619
CCV2									
	Mercury	0.001998	0.002000	100	80.0 - 120.0	CV	12/26/2019	21:53	HG4122619
CCV3									
	Mercury	0.002012	0.002000	101	80.0 - 120.0	CV	12/26/2019	22:23	HG4122619

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Mercury	0.010019	0.010000	100	90.0 - 110.0	CV	12/30/2019	18:23	HG4123019
CCV1									
	Mercury	0.010018	0.010000	100	80.0 - 120.0	CV	12/30/2019	18:30	HG4123019
CCV2									
	Mercury	0.010180	0.010000	102	80.0 - 120.0	CV	12/30/2019	18:58	HG4123019
CCV3									
	Mercury	0.010028	0.010000	100	80.0 - 120.0	CV	12/30/2019	19:15	HG4123019

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No:** **SAS No.:**

AA CRDL Standard Source:

ICP CRDL Standard Source:

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Advisory Limits (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV 19HG1976									
	Mercury	0.000878	0.001000	88	50 - 150	CV	12/21/2019	09:19	HG4122119A

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No:** **SAS No.:**

AA CRDL Standard Source:

ICP CRDL Standard Source:

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Advisory Limits (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV 19HG1994									
	Mercury	0.000202	0.000200	101	50 - 150	CV	12/26/2019	19:49	HG4122619

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No:** **SAS No.:**

AA CRDL Standard Source:

ICP CRDL Standard Source:

Sample ID	Analyte	Result mg/L	True Value mg/L	% Recovery	Advisory Limits (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV 19HG2017									
	Mercury	0.000914	0.001000	91	50 - 150	CV	12/30/2019	18:28	HG4123019

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	-0.000196	+/-0.001000	U	0.000240	0.001000	CV	12/21/2019	09:17	HG4122119A
CCB1	Mercury	-0.000183	+/-0.001000	U	0.000240	0.001000	CV	12/21/2019	09:24	HG4122119A
CCB2	Mercury	-0.000191	+/-0.001000	U	0.000240	0.001000	CV	12/21/2019	09:52	HG4122119A
CCB3	Mercury	-0.000180	+/-0.001000	U	0.000240	0.001000	CV	12/21/2019	10:21	HG4122119A

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	-0.000036	+/-0.000200	U	0.000091	0.000200	CV	12/26/2019	19:46	HG4122619
CCB1	Mercury	-0.000017	+/-0.000200	U	0.000091	0.000200	CV	12/26/2019	19:54	HG4122619
CCB2	Mercury	-0.000013	+/-0.000200	U	0.000091	0.000200	CV	12/26/2019	21:55	HG4122619
CCB3	Mercury	-0.000010	+/-0.000200	U	0.000091	0.000200	CV	12/26/2019	22:26	HG4122619

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech, Inc. **SDG No.:** UL20021

Contract: Joliet Chemical Fire PRP Clean UP **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	DL	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	-0.000185	+/-0.001000	U	0.000240	0.001000	CV	12/30/2019	18:25	HG4123019
CCB1	Mercury	-0.000169	+/-0.001000	U	0.000240	0.001000	CV	12/30/2019	18:32	HG4123019
CCB2	Mercury	-0.000173	+/-0.001000	U	0.000240	0.001000	CV	12/30/2019	19:01	HG4123019
CCB3	Mercury	-0.000173	+/-0.001000	U	0.000240	0.001000	CV	12/30/2019	19:17	HG4123019

9-IN

METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Shealy Environmental Services, I Contract: Joliet Chemical Fire PRP Clean UP

Lab Code: Shealy Case No.: _____ Mod. Ref. No.: _____ SDG No.: UL20021

Instrument Type: CV Instrument ID: Hg4 _____

Preparation Method: 7471B

Concentration Units (ug/L, mg/kg, or ug): MG/KG

Analyte	Wavelength/Mass	MDL
Mercury	253.70	0.020000

Comments: _____

9-IN

METHOD DETECTION LIMITS (MDL) (ANNUALLY)

Lab Name: Shealy Environmental Services, I Contract: Joliet Chemical Fire PRP Clean UP

Lab Code: Shealy Case No.: _____ Mod. Ref. No.: _____ SDG No.: UL20021

Instrument Type: CV Instrument ID: Hg4 _____

Preparation Method: 7470A

Concentration Units (ug/L, mg/kg, or ug): MG/L

Analyte	Wavelength/Mass	MDL
Mercury	253.70	0.000091

Comments: _____

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122119A

Start Date: 12/21/2019 End Date: 12/21/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0 19HG1975	1.00	0900																X									
S01 19HG1976	1.00	0903																X									
S02 19HG1977	1.00	0905																X									
S03 19HG1978	1.00	0908																X									
S04 19HG1979	1.00	0910																X									
S05 19HG1980	1.00	0912																X									
ICV1	1.00	0915																X									
ICB1	1.00	0917																X									
LLCCV 19HG1976	1.00	0919																X									
CCV1	1.00	0922																X									
CCB1	1.00	0924																X									
ZZZZZZ	1.00	0926																									
UO39735-001	1.00	0929																X									
UO39735-002	1.00	0931																X									
UL20021-010	1.00	0933																X									
UL20021-011	1.00	0936																X									
UL20021-012	1.00	0938																X									
UL20021-013	1.00	0941																X									
UL20021-014	1.00	0943																X									
UL20021-015	1.00	0945																X									
UL20021-016	1.00	0948																X									
CCV2	1.00	0950																X									
CCB2	1.00	0952																X									
UL20021-016S	1.00	0955																X									
UL20021-016SD	1.00	0957																X									
ZZZZZZ	1.00	1000																									
ZZZZZZ	1.00	1002																									
ZZZZZZ	1.00	1004																									
ZZZZZZ	1.00	1007																									
ZZZZZZ	1.00	1009																									
ZZZZZZ	1.00	1011																									
ZZZZZZ	1.00	1014																									
ZZZZZZ	1.00	1016																									
CCV3	1.00	1018																X									
CCB3	1.00	1021																X									
ZZZZZZ	1.00	1023																									

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122119A

Start Date: 12/21/2019 End Date: 12/21/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1025																								
ZZZZZZ	1.00	1028																								
ZZZZZZ	1.00	1030																								
ZZZZZZ	1.00	1033																								
ZZZZZZ	1.00	1035																								
ZZZZZZ	1.00	1037																								
ZZZZZZ	1.00	1040																								
ZZZZZZ	1.00	1042																								
ZZZZZZ	1.00	1044																								
ZZZZZZ	1.00	1047																								
ZZZZZZ	1.00	1049																								
ZZZZZZ	1.00	1051																								
ZZZZZZ	1.00	1054																								
ZZZZZZ	1.00	1056																								
ZZZZZZ	1.00	1059																								
ZZZZZZ	1.00	1101																								
ZZZZZZ	1.00	1103																								
ZZZZZZ	1.00	1106																								
ZZZZZZ	1.00	1108																								
ZZZZZZ	1.00	1110																								
ZZZZZZ	1.00	1113																								
ZZZZZZ	1.00	1115																								
ZZZZZZ	1.00	1117																								
ZZZZZZ	1.00	1120																								
ZZZZZZ	1.00	1122																								
ZZZZZZ	1.00	1125																								
ZZZZZZ	1.00	1127																								
ZZZZZZ	1.00	1129																								
ZZZZZZ	1.00	1132																								
ZZZZZZ	1.00	1134																								
ZZZZZZ	1.00	1136																								
ZZZZZZ	1.00	1139																								
ZZZZZZ	1.00	1141																								
ZZZZZZ	1.00	1144																								
ZZZZZZ	1.00	1146																								
ZZZZZZ	1.00	1148																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122119A

Start Date: 12/21/2019 End Date: 12/21/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1151																								
ZZZZZZ	1.00	1153																								
ZZZZZZ	1.00	1155																								
ZZZZZZ	1.00	1158																								
ZZZZZZ	1.00	1200																								
ZZZZZZ	1.00	1202																								
ZZZZZZ	1.00	1205																								
ZZZZZZ	1.00	1207																								
ZZZZZZ	1.00	1210																								
ZZZZZZ	1.00	1212																								
ZZZZZZ	1.00	1214																								
ZZZZZZ	1.00	1217																								
ZZZZZZ	1.00	1219																								
ZZZZZZ	1.00	1221																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122619

Start Date: 12/26/2019 End Date: 12/27/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0 19HG1992	1.00	1929																X								
S01 19HG1993	1.00	1931																X								
S02 19HG1994	1.00	1934																X								
S03 19HG1995	1.00	1936																X								
S04 19HG1996	1.00	1939																X								
S05 19HG1997	1.00	1941																X								
ICV1	1.00	1944																X								
ICB1	1.00	1946																X								
LLCCV 19HG1994	1.00	1949																X								
CCV1	1.00	1951																X								
CCB1	1.00	1954																X								
ZZZZZZ	1.00	1956																								
ZZZZZZ	1.00	1959																								
ZZZZZZ	1.00	2001																								
ZZZZZZ	1.00	2004																								
ZZZZZZ	1.00	2006																								
ZZZZZZ	1.00	2009																								
ZZZZZZ	1.00	2011																								
ZZZZZZ	1.00	2014																								
ZZZZZZ	1.00	2017																								
ZZZZZZ	1.00	2019																								
ZZZZZZ	1.00	2022																								
ZZZZZZ	1.00	2024																								
ZZZZZZ	1.00	2027																								
ZZZZZZ	1.00	2029																								
ZZZZZZ	1.00	2032																								
ZZZZZZ	1.00	2034																								
ZZZZZZ	1.00	2037																								
ZZZZZZ	1.00	2039																								
ZZZZZZ	1.00	2042																								
ZZZZZZ	1.00	2044																								
ZZZZZZ	1.00	2047																								
ZZZZZZ	1.00	2049																								
ZZZZZZ	1.00	2052																								
ZZZZZZ	1.00	2054																								
ZZZZZZ	1.00	2057																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122619

Start Date: 12/26/2019 End Date: 12/27/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	2059																										
ZZZZZZ	1.00	2102																										
ZZZZZZ	1.00	2104																										
ZZZZZZ	1.00	2107																										
ZZZZZZ	1.00	2110																										
ZZZZZZ	1.00	2112																										
ZZZZZZ	1.00	2115																										
ZZZZZZ	1.00	2117																										
ZZZZZZ	1.00	2120																										
ZZZZZZ	1.00	2122																										
ZZZZZZ	1.00	2125																										
ZZZZZZ	1.00	2127																										
ZZZZZZ	1.00	2130																										
ZZZZZZ	1.00	2132																										
ZZZZZZ	1.00	2135																										
ZZZZZZ	1.00	2137																										
ZZZZZZ	1.00	2140																										
ZZZZZZ	1.00	2142																										
ZZZZZZ	1.00	2145																										
ZZZZZZ	1.00	2148																										
ZZZZZZ	1.00	2150																										
CCV2	1.00	2153																X										
CCB2	1.00	2155																X										
ZZZZZZ	1.00	2158																										
ZZZZZZ	1.00	2200																										
ZZZZZZ	1.00	2203																										
ZZZZZZ	1.00	2205																										
ZZZZZZ	1.00	2208																										
ZZZZZZ	1.00	2210																										
ZZZZZZ	1.00	2213																										
UO39898-001	1.00	2215																X										
UO39898-002	1.00	2218																X										
UL20021-017	1.00	2221																X										
CCV3	1.00	2223																X										
CCB3	1.00	2226																X										
ZZZZZZ	1.00	2228																										

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122619

Start Date: 12/26/2019 End Date: 12/27/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	2231																								
ZZZZZZ	1.00	2233																								
ZZZZZZ	1.00	2236																								
ZZZZZZ	1.00	2238																								
ZZZZZZ	1.00	2241																								
ZZZZZZ	1.00	2243																								
ZZZZZZ	1.00	2246																								
ZZZZZZ	1.00	2248																								
ZZZZZZ	1.00	2251																								
ZZZZZZ	1.00	2253																								
ZZZZZZ	1.00	2256																								
ZZZZZZ	1.00	2258																								
ZZZZZZ	1.00	2301																								
ZZZZZZ	1.00	2304																								
ZZZZZZ	1.00	2306																								
ZZZZZZ	1.00	2309																								
ZZZZZZ	1.00	2311																								
ZZZZZZ	1.00	2314																								
ZZZZZZ	1.00	2316																								
ZZZZZZ	1.00	2319																								
ZZZZZZ	1.00	2321																								
ZZZZZZ	1.00	2324																								
ZZZZZZ	1.00	2326																								
ZZZZZZ	1.00	2329																								
ZZZZZZ	1.00	2331																								
ZZZZZZ	1.00	2334																								
ZZZZZZ	1.00	2336																								
ZZZZZZ	1.00	2339																								
ZZZZZZ	1.00	2341																								
ZZZZZZ	1.00	2344																								
ZZZZZZ	1.00	2347																								
ZZZZZZ	1.00	2349																								
ZZZZZZ	1.00	2352																								
ZZZZZZ	1.00	2354																								
ZZZZZZ	1.00	2357																								
ZZZZZZ	1.00	2359																								

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4122619

Start Date: 12/26/2019 End Date: 12/27/2019

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0002																										
ZZZZZZ	1.00	0004																										
ZZZZZZ	1.00	0007																										
ZZZZZZ	1.00	0009																										
ZZZZZZ	1.00	0012																										

14

ANALYSIS RUN LOG

Client: Tetra Tech, Inc. Contract: Joliet Chemical Fire PRP Clean U

Lab Code: Shealy Case No.: SAS No.: SDG No.: UL20021

Instrument ID Number: Hg4 Run Number: HG4123019

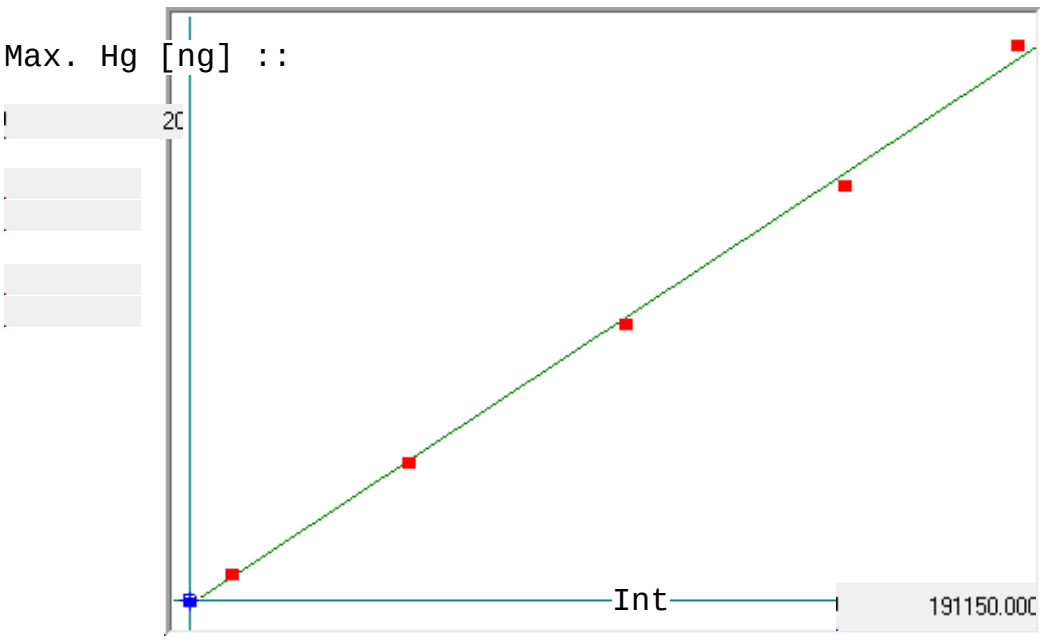
Start Date: 12/30/2019 End Date: 12/30/2019

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0 19HG2016	1.00	1809																X								
S01 19HG2017	1.00	1811																X								
S02 19HG2018	1.00	1814																X								
S03 19HG2019	1.00	1816																X								
S04 19HG2020	1.00	1818																X								
S05 19HG2021	1.00	1821																X								
ICV1	1.00	1823																X								
ICB1	1.00	1825																X								
LLCCV 19HG2017	1.00	1828																X								
CCV1	1.00	1830																X								
CCB1	1.00	1832																X								
ZZZZZZ	1.00	1835																								
UO40382-001	1.00	1837																X								
UO40382-002	1.00	1839																X								
UL20021-001	1.00	1842																X								
UL20021-001S	1.00	1844																X								
UL20021-001SD	1.00	1847																X								
UL20021-002	1.00	1849																X								
UL20021-003	1.00	1851																X								
UL20021-004	1.00	1854																X								
UL20021-005	1.00	1856																X								
CCV2	1.00	1858																X								
CCB2	1.00	1901																X								
UL20021-006	1.00	1903																X								
UL20021-007	1.00	1905																X								
UL20021-008	1.00	1908																X								
UL20021-009	1.00	1910																X								
ZZZZZZ	1.00	1913																								
CCV3	1.00	1915																X								
CCB3	1.00	1917																X								

Raw Sample Data

7471B

Linear



A= 0.0000e+000

B= 1.0277e-004

C= -1.2234e-001

Rho= 0.9991968

Accept= Accepted

Accepted Date=

12/21/19 09:15

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
S0 19HG1975 12/21/19	0.000	-0.144	-0.144	-210	0.000	-210		
S01 19HG1976 12/21/19	1.000	0.888	-0.112	9829	0.0 %	9829		
S02 19HG1977 12/21/19	5.000	5.077	0.077	50592	0.0 %	50592		
S03 19HG1978 12/21/19	10.000	10.216	0.216	100599	0.0 %	100599		
S04 19HG1979 12/21/19	15.000	15.442	0.442	151450	0.0 %	151450		
S05 19HG1980 12/21/19	20.000	19.522	-0.478	191150	0.0 %	191150		

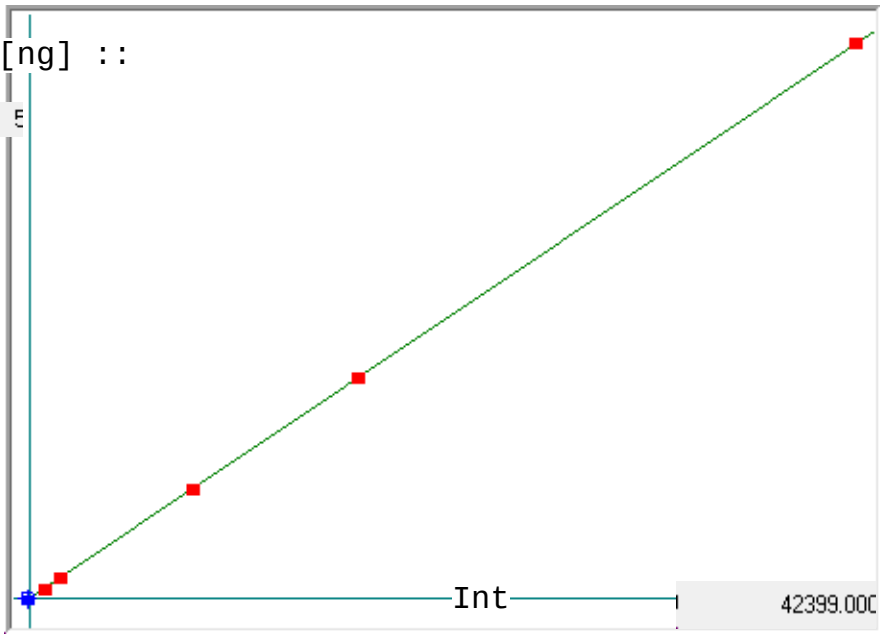
HG4122119A

Method: 7471B Operator: KSH2 Date of Analysis: 21 Dec 2019 09:00:54

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
S0 19HG1975 12/21/19 - 1		-	ppb	-210	21 Dec 2019 09:00:55
S01 19HG1976 12/21/19 - 1		-	ppb	9829	21 Dec 2019 09:03:17
S02 19HG1977 12/21/19 - 1		-	ppb	50592	21 Dec 2019 09:05:40
S03 19HG1978 12/21/19 - 1		-	ppb	100599	21 Dec 2019 09:08:03
S04 19HG1979 12/21/19 - 1		-	ppb	151450	21 Dec 2019 09:10:24
S05 19HG1980 12/21/19 - 1		-	ppb	191150	21 Dec 2019 09:12:45
ICV 19HG1981 12/21/19 - 1		100.4% 10.0431	ppb	98917	21 Dec 2019 09:15:05
ICB 19HG1975 12/21/19 - 1		-0.1959	ppb	-716	21 Dec 2019 09:17:26
LLCCV 19HG1976 12/21/19 - 1		87.8% 0.8779	ppb	9733	21 Dec 2019 09:19:49
CCV 19HG1978 12/21/19 - 1		102.9% 10.2911	ppb	101330	21 Dec 2019 09:22:12
CCB 19HG1975 12/21/19 - 1		-0.1830	ppb	-590	21 Dec 2019 09:24:33
SnCl2 - 1	IM9791-01	-0.1363	ppb	-136	21 Dec 2019 09:26:56
UQ39735001 - 1	PBS	-0.0924	ppb	291	21 Dec 2019 09:29:17
UQ39735002 - 1	LCS	10.1732	ppb	100183	21 Dec 2019 09:31:38
UL20021010 - 1	MPGI-SF-Soil-12C-121919	0.1977	ppb	3114	21 Dec 2019 09:33:59
UL20021011 - 1	MPGI-SF-Soil-13A-121719	0.3703	ppb	4794	21 Dec 2019 09:36:20
UL20021012 - 1	MPGI-SF-Soil-13B-121719	0.4978	ppb	6034	21 Dec 2019 09:38:42
UL20021013 - 1	MPGI-SF-Soil-14A-121919	0.3747	ppb	4837	21 Dec 2019 09:41:03
UL20021014 - 1	MPGI-SF-Soil-14A-121919-D	0.3497	ppb	4593	21 Dec 2019 09:43:24
UL20021015 - 1	MPGI-SF-Soil-14B-121919	0.2573	ppb	3694	21 Dec 2019 09:45:46
UL20021016 - 1	MPGI-SF-Soil-14C-121919	0.3042	ppb	4151	21 Dec 2019 09:48:08
CCV 19HG1978 12/21/19 - 1		101.7% 10.1746	ppb	100197	21 Dec 2019 09:50:31
CCB 19HG1975 12/21/19 - 1		-0.1914	ppb	-672	21 Dec 2019 09:52:52
UL20021016S - 1	MPGI-SF-Soil-14C-121919S	11.6706	ppb	114754	21 Dec 2019 09:55:15
UL20021016SD - 1	MPGI-SF-Soil-14C-121919SD	11.3870	ppb	111994	21 Dec 2019 09:57:38
UL20030001 - 1	PSS Treated	-0.1229	ppb	-5	21 Dec 2019 10:00:01
UL20031001 - 1	PSN Treated	-0.1127	ppb	94	21 Dec 2019 10:02:22
UL20034001 - 1	PSN Sludge	-0.0639	ppb	569	21 Dec 2019 10:04:43
UL20036001 - 1	PSS Sludge	-0.0698	ppb	511	21 Dec 2019 10:07:04
UL20038001 - 1	PSS Water - Run as High Solids	-0.0861	ppb	353	21 Dec 2019 10:09:25
UL20039001 - 1	PSN Water - Run as High Solids	-0.0831	ppb	382	21 Dec 2019 10:11:46
UL20003001 - 1	Hunter Dairy (High Point)	-0.0865	ppb	349	21 Dec 2019 10:14:07
UQ39543001 - 1	PBS	-0.1349	ppb	-122	21 Dec 2019 10:16:28
CCV 19HG1978 12/21/19 - 1		103.4% 10.3398	ppb	101804	21 Dec 2019 10:18:50
CCB 19HG1975 12/21/19 - 1		-0.1800	ppb	-561	21 Dec 2019 10:21:12
UQ39543002 - 1	LCS	9.7471	ppb	96037	21 Dec 2019 10:23:35
UL18074001 - 1	NW	0.1287	ppb	2443	21 Dec 2019 10:25:57
UL18074002 - 1	SE	0.3509	ppb	4605	21 Dec 2019 10:28:20
UL18074003 - 1	SW	0.4957	ppb	6014	21 Dec 2019 10:30:42
UL18074004 - 1	Center	0.2335	ppb	3463	21 Dec 2019 10:33:05
UL18074005 - 1	Stockpile	0.4694	ppb	5758	21 Dec 2019 10:35:26
UL18033001 - 1	Easley MB	0.0072	ppb	1261	21 Dec 2019 10:37:47
UL18034001 - 1	Easley GC	0.1592	ppb	2740	21 Dec 2019 10:40:09
UL18035001 - 1	SS-1	0.1231	ppb	2388	21 Dec 2019 10:42:31
UL18035002 - 1	SS-2	0.1629	ppb	2776	21 Dec 2019 10:44:52
CCV 19HG1978 12/21/19 - 1		103.5% 10.3485	ppb	101889	21 Dec 2019 10:47:13
CCB 19HG1975 12/21/19 - 1		-0.1850	ppb	-610	21 Dec 2019 10:49:35
UL18035003 - 1	SS-3	0.0509	ppb	1686	21 Dec 2019 10:51:58
UL18035004 - 1	SS-4	-0.0327	ppb	872	21 Dec 2019 10:54:19
UL18035005 - 1	SS-5	0.0339	ppb	1520	21 Dec 2019 10:56:41
UL18035005S - 1	SS-5S	11.2341	ppb	110506	21 Dec 2019 10:59:03
UL18035005SD - 1	SS-5SD	11.3730	ppb	111858	21 Dec 2019 11:01:25
UL19002001 - 1	TYSON Wilsboror	-0.1618	ppb	-384	21 Dec 2019 11:03:48
UL19002002 - 1	TYSON Harmony	-0.1211	ppb	12	21 Dec 2019 11:06:11
UQ39645001 - 1	PBS	-0.1503	ppb	-272	21 Dec 2019 11:08:32
UQ39645002 - 1	LCS	9.5685	ppb	94299	21 Dec 2019 11:10:54
UL19163001 - 1	Mallard 1 of 4 NM	1.1003	ppb	11897	21 Dec 2019 11:13:15
CCV 19HG1978 12/21/19 - 1		105.6% 10.5632	ppb	103978	21 Dec 2019 11:15:37
CCB 19HG1975 12/21/19 - 1		-0.1841	ppb	-601	21 Dec 2019 11:17:59
UL19142001 - 1	CPA-5-SB (2-2.5')	0.0499	ppb	1676	21 Dec 2019 11:20:22
UL19142002 - 1	CPA-5-SB (4-4.5')	-0.0042	ppb	1150	21 Dec 2019 11:22:43
UL19142003 - 1	CPA-5-SB (8-9')	-0.1335	ppb	-109	21 Dec 2019 11:25:05
UL19142004 - 1	CPA-5-SB (11-12')	-0.1334	ppb	-108	21 Dec 2019 11:27:27
UL19142005 - 1	CPA-5-SB (14-15')	-0.1409	ppb	-181	21 Dec 2019 11:29:48
UL19142006 - 1	CPA-5-SB (17-18')	-0.1402	ppb	-174	21 Dec 2019 11:32:10
UL19142007 - 1	CPA-5-SB (24-25')	-0.1421	ppb	-192	21 Dec 2019 11:34:33
UL19142008 - 1	CPA-5-SB (134-135')	-0.1386	ppb	-158	21 Dec 2019 11:36:56
UL19142009 - 1	CPA-6-SB (2-2.5')	-0.1258	ppb	-34	21 Dec 2019 11:39:19
UL19142010 - 1	CPA-6-SB (4-4.5')	-0.0838	ppb	375	21 Dec 2019 11:41:41
CCV 19HG1978 12/21/19 - 1		105.3% 10.5272	ppb	103628	21 Dec 2019 11:44:02
CCB 19HG1975 12/21/19 - 1		-0.1791	ppb	-552	21 Dec 2019 11:46:24
UL19142011 - 1	CPA-6-SB (6-8')	0.1132	ppb	2292	21 Dec 2019 11:48:47
UL19142012 - 1	CPA-6-SB (10-12')	-0.0045	ppb	1147	21 Dec 2019 11:51:08
UL19142013 - 1	CPA-6-SB (14-16')	-0.1425	ppb	-196	21 Dec 2019 11:53:30
UL19142014 - 1	CPA-6-SB (18-20')	-0.1398	ppb	-170	21 Dec 2019 11:55:52
UL19142015 - 1	CPA-6-SB (34-36')	-0.1341	ppb	-114	21 Dec 2019 11:58:13
UL19142016 - 1	CPA-6-SB (77-78')	-0.1348	ppb	-121	21 Dec 2019 12:00:35
UL19142017 - 1	CPA-DUP-SB	-0.1332	ppb	-106	21 Dec 2019 12:02:57
UL19142017S - 1	CPA-DUP-SBS	10.5693	ppb	104037	21 Dec 2019 12:05:18
UL19142017SD - 1	CPA-DUP-SBSD	10.6111	ppb	104444	21 Dec 2019 12:07:41
UL19179001 - 1	Pond A	0.2870	ppb	3983	21 Dec 2019 12:10:03
CCV 19HG1978 12/21/19 - 1		104.8% 10.4802	ppb	103170	21 Dec 2019 12:12:26
CCB 19HG1975 12/21/19 - 1		-0.1926	ppb	-684	21 Dec 2019 12:14:48
UL19179002 - 1	Pond B	0.3349	ppb	4449	21 Dec 2019 12:17:12
CCV 19HG1978 12/21/19 - 1		104.6% 10.4643	ppb	103016	21 Dec 2019 12:19:33
CCB 19HG1975 12/21/19 - 1		-0.1948	ppb	-705	21 Dec 2019 12:21:55

7470A/245.1

Linear



A= 0.0000e+000

B= 1.1778e-004

C= 8.4633e-003

Rho= 0.9999963

Accept= Accepted

Accepted Date=

12/26/19 19:44

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4
S0 19HG1992 12/27/19	0.000	-0.006	-0.006	-124	0.000	-124			
S01 19HG1993 12/27/19	0.100	0.107	0.007	836	0.0 %	836			
S02 19HG1994 12/27/19	0.200	0.204	0.004	1663	0.0 %	1663			
S03 19HG1995 12/27/19	1.000	0.998	-0.002	8398	0.0 %	8398			
S04 19HG1996 12/27/19	2.000	1.995	-0.005	16870	0.0 %	16870			
S05 19HG1997 12/27/19	5.000	5.002	0.002	42399	0.0 %	42399			

HG4122619

Method: 7470A/245.1 Operator: JMH Date of Analysis: 26 Dec 2019 19:28:49

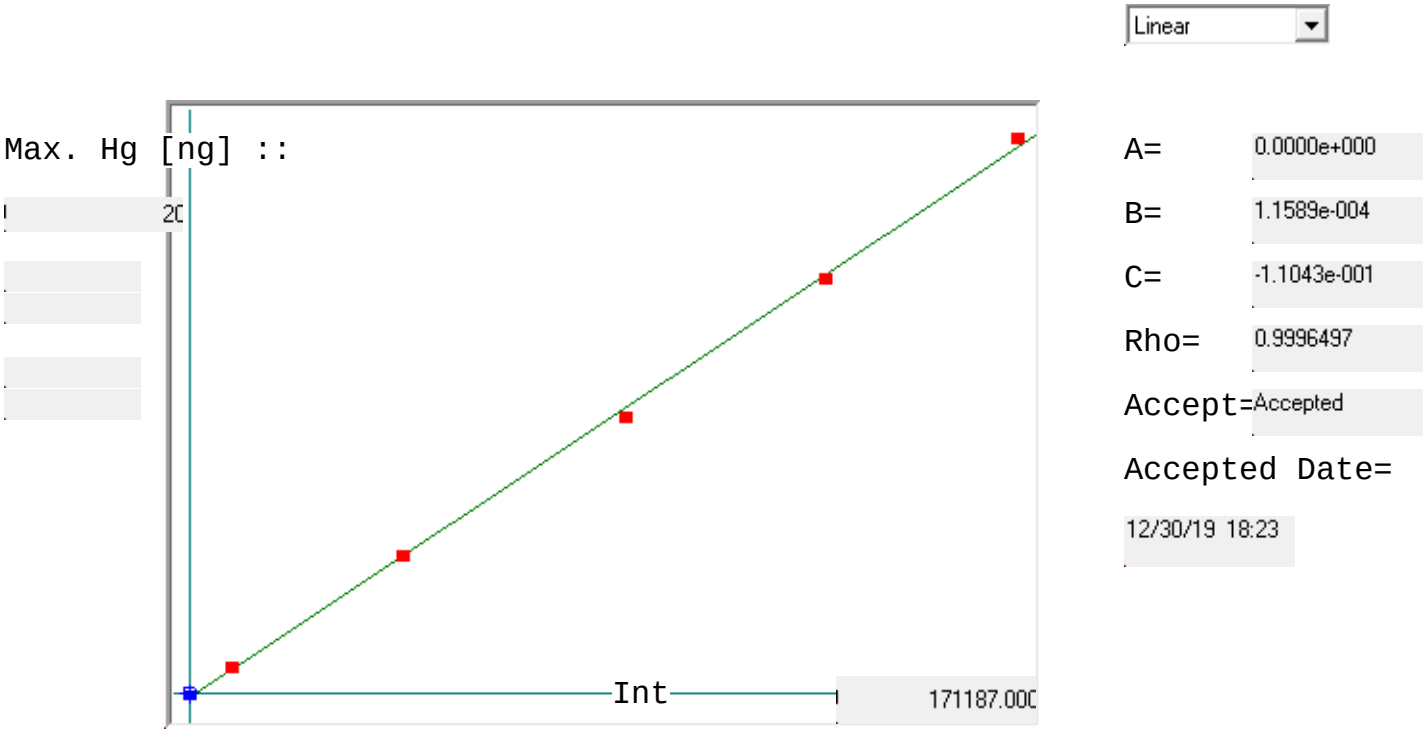
Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
S0 19HG1992 12/27/19 - 1		-	ppb	-124	26 Dec 2019 19:29:03
S01 19HG1993 12/27/19 - 1		-	ppb	836	26 Dec 2019 19:31:35
S02 19HG1994 12/27/19 - 1		-	ppb	1663	26 Dec 2019 19:34:07
S03 19HG1995 12/27/19 - 1		-	ppb	8398	26 Dec 2019 19:36:38
S04 19HG1996 12/27/19 - 1		-	ppb	16870	26 Dec 2019 19:39:09
S05 19HG1997 12/27/19 - 1		-	ppb	42399	26 Dec 2019 19:41:40
ICV 19HG1998 12/27/19 - 1		97.0% 1.9390	ppb	16392	26 Dec 2019 19:44:12
ICB 19HG1992 12/27/19 - 1		-0.0361	ppb	-378	26 Dec 2019 19:46:45
LLCCV 19HG1994 12/27/19 - 1		101.0% 0.2021	ppb	1644	26 Dec 2019 19:49:18
CCV 19HG1996 12/27/19 - 1		101.1% 2.0210	ppb	17088	26 Dec 2019 19:51:50
CCB 19HG1992 12/27/19 - 1		-0.0165	ppb	-212	26 Dec 2019 19:54:19
SnCl2 - 1	IM9798-01	-0.0236	ppb	-272	26 Dec 2019 19:56:53
UQ39901001 - 1	PBW	-0.0200	ppb	-242	26 Dec 2019 19:59:23
UQ39901002 - 1	LCS	1.9788	ppb	16730	26 Dec 2019 20:01:54
UL19119001 - 1	Outfall 001	-0.0321	ppb	-344	26 Dec 2019 20:04:24
UL19133001 - 1	Effluent Grab	-0.0252	ppb	-286	26 Dec 2019 20:06:56
UL19133001MS - 1	Effluent GrabS	1.9417	ppb	16415	26 Dec 2019 20:09:26
UL19133001MD - 1	Effluent GrabSD	1.9534	ppb	16514	26 Dec 2019 20:11:57
UL19164001 - 1	Waste Water Tank 9	-0.0311	ppb	-336	26 Dec 2019 20:14:30
UL19171001 - 1	Cormetech	-0.0056	ppb	-119	26 Dec 2019 20:17:04
UL19172001 - 1	Waste Water Tank 7	-0.0064	ppb	-126	26 Dec 2019 20:19:35
CCV 19HG1996 12/27/19 - 1		99.9% 1.9985	ppb	16897	26 Dec 2019 20:22:06
CCB 19HG1992 12/27/19 - 1		-0.0253	ppb	-287	26 Dec 2019 20:24:37
UL20083001 - 1	Glenmark	-0.0152	ppb	-201	26 Dec 2019 20:27:10
UL20088001 - 1	Effluent	-0.0178	ppb	-223	26 Dec 2019 20:29:42
UL20088001MS - 1	EffluentS	1.7773	ppb	15019	26 Dec 2019 20:32:14
UL20109001 - 1	Pipe 101	-0.0482	ppb	-481	26 Dec 2019 20:34:44
UL20109003 - 1	Pipe 102	-0.0198	ppb	-240	26 Dec 2019 20:37:17
UL20110001 - 1	SMYRNA CHURCH ROAD	-0.0117	ppb	-171	26 Dec 2019 20:39:48
UL20110002 - 1	BEAR CREEK AT BEAR CREEK ROAD	-0.0088	ppb	-147	26 Dec 2019 20:42:18
UL20110003 - 1	SAWNEYS CREEK AT MOOD HARRISON ROAD	-0.0066	ppb	-128	26 Dec 2019 20:44:48
UL20110004 - 1	SAWNEYS CREEK AT HWY 34	-0.0140	ppb	-191	26 Dec 2019 20:47:18
UL20110005 - 1	SAWNEYS CREEK AT PARK ROAD	-0.0018	ppb	-87	26 Dec 2019 20:49:49
CCV 19HG1996 12/27/19 - 1		98.4% 1.9685	ppb	16642	26 Dec 2019 20:52:21
CCB 19HG1992 12/27/19 - 1		-0.0225	ppb	-263	26 Dec 2019 20:54:50
UL20110006 - 1	POND A	-0.0220	ppb	-259	26 Dec 2019 20:57:24
UL20110007 - 1	POND B	-0.0138	ppb	-189	26 Dec 2019 20:59:56
UL20110008 - 1	POND C	-0.0125	ppb	-178	26 Dec 2019 21:02:27
UL20110009 - 1	VENABLE POND	-0.0070	ppb	-131	26 Dec 2019 21:04:59
UL20110010 - 1	COLLINS POND	-0.0011	ppb	-81	26 Dec 2019 21:07:32
UQ40091001TC - 1	PBW	0.0135	ppb	43	26 Dec 2019 21:10:02
UQ40091002TC - 1	LCS	1.9671	ppb	16630	26 Dec 2019 21:12:33
UL14023001TC - 1	67IDW01SO20191213	-0.0056	ppb	-119	26 Dec 2019 21:15:03
UL16044002TC - 1	IDW-2	0.0042	ppb	-36	26 Dec 2019 21:17:36
UL16044002MSTC - 1	IDW-2S	1.9819	ppb	16756	26 Dec 2019 21:20:07
CCV 19HG1996 12/27/19 - 1		98.8% 1.9763	ppb	16708	26 Dec 2019 21:22:37
CCB 19HG1992 12/27/19 - 1		-0.0266	ppb	-298	26 Dec 2019 21:25:09
UL16044002MDTC - 1	IDW-2SD	1.9801	ppb	16741	26 Dec 2019 21:27:43
UQ40093001TC - 1	PBW	0.0072	ppb	-11	26 Dec 2019 21:30:14
UQ40093002TC - 1	LCS	1.9765	ppb	16710	26 Dec 2019 21:32:47
UL16044005TC - 1	IDW-1- TCLP	-0.0025	ppb	-93	26 Dec 2019 21:35:18
UL16044005MSTC - 1	IDW-1- TCLPS	2.0911	ppb	17683	26 Dec 2019 21:37:51
UL16044005MDTC - 1	IDW-1- TCLPSD	2.0820	ppb	17606	26 Dec 2019 21:40:23
UQ40096001TC - 1	PBW	0.0152	ppb	57	26 Dec 2019 21:42:58
UQ40096002TC - 1	LCS	1.9344	ppb	16353	26 Dec 2019 21:45:30
UL20018004TC - 1	CCGE01-MW01A(121919)	0.0781	ppb	591	26 Dec 2019 21:48:01
UL20018005TC - 1	CCGE01-EB06(121919)	0.0311	ppb	192	26 Dec 2019 21:50:34
CCV 19HG1996 12/27/19 - 1		99.9% 1.9983	ppb	16895	26 Dec 2019 21:53:05
CCB 19HG1992 12/27/19 - 1		-0.0134	ppb	-186	26 Dec 2019 21:55:35
UL20018005MSTC - 1	CCGE01-EB06(121919)S	1.9657	ppb	16618	26 Dec 2019 21:58:08
UL20018005MDTC - 1	CCGE01-EB06(121919)SD	1.9320	ppb	16332	26 Dec 2019 22:00:39
UQ40090001TC - 1	PBW	-0.0318	ppb	-342	26 Dec 2019 22:03:13
UQ40090002TC - 1	LCS	1.8995	ppb	16056	26 Dec 2019 22:05:47
UL13056001TC - 1	DRUM 001	-0.0403	ppb	-414	26 Dec 2019 22:08:17
UL13056001MSTC - 1	DRUM 001S	1.9582	ppb	16555	26 Dec 2019 22:10:51
UL13056001MDTC - 1	DRUM 001SD	1.9158	ppb	16195	26 Dec 2019 22:13:23
UQ39898001 - 1	PBW	0.0312	ppb	193	26 Dec 2019 22:15:58
UQ39898002 - 1	LCS	2.0013	ppb	16921	26 Dec 2019 22:18:32
UL20021017 - 1	MPG1-RB-121719	0.0559	ppb	403	26 Dec 2019 22:21:02
CCV 19HG1996 12/27/19 - 1		100.6% 2.0116	ppb	17008	26 Dec 2019 22:23:36
CCB 19HG1992 12/27/19 - 1		-0.0100	ppb	-157	26 Dec 2019 22:26:06
UL20041001 - 1	PSS Water - Run as Low Solids	-0.0020	ppb	-89	26 Dec 2019 22:28:39
UL20043001 - 1	PSN Water - Run as Low Solids	-0.0033	ppb	-100	26 Dec 2019 22:31:10
UL21020008 - 1	TMW-1	0.1798	ppb	1455	26 Dec 2019 22:33:41
UL21020008MS - 1	TMW-1S	2.1401	ppb	18099	26 Dec 2019 22:36:12
UL21020008MD - 1	TMW-1SD	2.1199	ppb	17928	26 Dec 2019 22:38:43
UL21020009 - 1	TMW-1-D	0.1239	ppb	980	26 Dec 2019 22:41:15
UL21020010 - 1	Equipment Blank	0.0202	ppb	100	26 Dec 2019 22:43:49
UL19142018 - 1	Equipment Blank	0.0228	ppb	122	26 Dec 2019 22:46:20
UL21005001 - 1	Eff	0.0035	ppb	-42	26 Dec 2019 22:48:52
UL19062027 - 1	TA-GW-MW-309B	0.0205	ppb	102	26 Dec 2019 22:51:23
CCV 19HG1996 12/27/19 - 1		99.5% 1.9909	ppb	16832	26 Dec 2019 22:53:55
CCB 19HG1992 12/27/19 - 1		-0.0237	ppb	-273	26 Dec 2019 22:56:25
UQ39899001 - 1	PBW	0.0226	ppb	120	26 Dec 2019 22:58:59
UQ39899002 - 1	LCS	1.9666	ppb	16626	26 Dec 2019 23:01:30
UL19062001 - 1	TA-GW-MW-315D	0.0384	ppb	254	26 Dec 2019 23:04:00
UL19062002 - 1	TA-GW-MW-315S	0.1373	ppb	1094	26 Dec 2019 23:06:34
UL19062003 - 1	TA-GW-MW-317A	0.0637	ppb	469	26 Dec 2019 23:09:05
UL19062004 - 1	TA-GW-MW-317B	0.0030	ppb	-46	26 Dec 2019 23:11:36
UL19062005 - 1	TA-GW-MW-312	0.0178	ppb	79	26 Dec 2019 23:14:07
UL19062008 - 1	TA-GW-MW-311A	0.0148	ppb	54	26 Dec 2019 23:16:38
UL19062009 - 1	TA-GW-MW-311B	0.0045	ppb	-34	26 Dec 2019 23:19:10

HG4122619

Method: 7470A/245.1 Operator: JMH Date of Analysis: 26 Dec 2019 19:28:49

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
UL19062010 - 1	TA-GW-MW-311C	0.0039	ppb	-39	26 Dec 2019 23:21:41
CCV 19HG1996 12/27/19 - 1		99.7% 1.9943	ppb	16861	26 Dec 2019 23:24:13
CCB 19HG1992 12/27/19 - 1		-0.0247	ppb	-282	26 Dec 2019 23:26:44
UL19062011 - 1	TA-GW-MW-317D	0.0012	ppb	-62	26 Dec 2019 23:29:18
UL19062011MS - 1	TA-GW-MW-317DS	1.9534	ppb	16514	26 Dec 2019 23:31:50
UL19062011MD - 1	TA-GW-MW-317DSD	1.9886	ppb	16813	26 Dec 2019 23:34:21
UL19062012 - 1	TA-GW-MW-317C	-0.0219	ppb	-258	26 Dec 2019 23:36:54
UL19062013 - 1	TA-GW-MW-317C DUP	-0.0032	ppb	-99	26 Dec 2019 23:39:27
UL19062016 - 1	TA-GW-MW-310A	-0.0026	ppb	-94	26 Dec 2019 23:41:58
UL19062017 - 1	TA-GW-MW-309D	-0.0032	ppb	-99	26 Dec 2019 23:44:30
UL19062018 - 1	TA-GW-MW-310B	0.0010	ppb	-63	26 Dec 2019 23:47:01
UL19062019 - 1	TA-GW-MW-309C	0.0005	ppb	-68	26 Dec 2019 23:49:32
UL19062020 - 1	TA-GW-MW-310C	0.0047	ppb	-32	26 Dec 2019 23:52:03
CCV 19HG1996 12/27/19 - 1		99.4% 1.9876	ppb	16804	26 Dec 2019 23:54:35
CCB 19HG1992 12/27/19 - 1		-0.0288	ppb	-316	26 Dec 2019 23:57:05
UL19062021 - 1	TA-GW-MW-309A	-0.0056	ppb	-119	26 Dec 2019 23:59:39
UL19062024 - 1	TA-GW-MW-313A	0.0040	ppb	-38	27 Dec 2019 00:02:10
UL19062025 - 1	TA-GW-MW-313C	-0.0116	ppb	-170	27 Dec 2019 00:04:42
UL19062026 - 1	TA-GW-MW-313B	-0.0038	ppb	-104	27 Dec 2019 00:07:14
CCV 19HG1996 12/27/19 - 1		99.1% 1.9825	ppb	16761	27 Dec 2019 00:09:45
CCB 19HG1992 12/27/19 - 1		-0.0273	ppb	-304	27 Dec 2019 00:12:15
CCV 19HG1996 12/27/19 - 1		99.3% 1.9870	ppb	16799	27 Dec 2019 13:11:31
CCB 19HG1992 12/27/19 - 1		-0.0280	ppb	-310	27 Dec 2019 13:14:00
UQ40126001 - 1	PBW	-0.0117	ppb	-171	27 Dec 2019 13:16:33
UQ40126002 - 1	LCS	1.9432	ppb	16427	27 Dec 2019 13:19:03
UL23008001 - 1	19122004	-0.0133	ppb	-185	27 Dec 2019 13:21:33
UL23008001DIS - 1	19122004	-0.0012	ppb	-82	27 Dec 2019 13:24:06
UL23009001 - 1	19122005	0.0112	ppb	23	27 Dec 2019 13:26:37
UL23009001DIS - 1	19122005	-0.0020	ppb	-89	27 Dec 2019 13:29:07
UL23010001 - 1	19122006	0.0494	ppb	348	27 Dec 2019 13:31:38
UL23010001DIS - 1	19122006	0.0060	ppb	-21	27 Dec 2019 13:34:08
UL23010001SDIS - 1	19122006S	1.6393	ppb	13847	27 Dec 2019 13:36:39
UL23010001SDDIS - 1	19122006SD	1.5728	ppb	13282	27 Dec 2019 13:39:11
CCV 19HG1996 12/27/19 - 1		96.7% 1.9335	ppb	16345	27 Dec 2019 13:41:47
CCB 19HG1992 12/27/19 - 1		-0.0251	ppb	-285	27 Dec 2019 13:44:21
UL26024005 - 1	RAS	1.3431	ppb	11332	27 Dec 2019 13:46:54
UQ40167001TC - 1	PBW	0.0081	ppb	-3	27 Dec 2019 13:49:26
UQ40167002TC - 1	LCS	2.0628	ppb	17443	27 Dec 2019 13:51:59
UL19168001TC - 1	Parts Washer Solids	0.0173	ppb	75	27 Dec 2019 13:54:30
UL20030001TC - 1	PSS Treated	0.0226	ppb	120	27 Dec 2019 13:57:03
UL20030001MSTC - 1	PSS TreatedS	1.8454	ppb	15597	27 Dec 2019 13:59:33
UL20030001MDTC - 1	PSS TreatedSD	1.8306	ppb	15471	27 Dec 2019 14:02:03
CCV 19HG1996 12/27/19 - 1		100.5% 2.0095	ppb	16990	27 Dec 2019 14:04:35
CCB 19HG1992 12/27/19 - 1		-0.0151	ppb	-200	27 Dec 2019 14:07:07

7471B



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
S0 19HG2016 12/31/19	0.000	-0.115	-0.115	-37	0.000	-37		
S01 19HG2017 12/31/19	1.000	0.922	-0.078	8905	0.0 %	8905		
S02 19HG2018 12/31/19	5.000	5.001	0.001	44103	0.0 %	44103		
S03 19HG2019 12/31/19	10.000	10.335	0.335	90136	0.0 %	90136		
S04 19HG2020 12/31/19	15.000	15.129	0.129	131505	0.0 %	131505		
S05 19HG2021 12/31/19	20.000	19.728	-0.272	171187	0.0 %	171187		

HG4123019

Method: 7471B Operator: JMH Date of Analysis: 30 Dec 2019 17:39:31

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
S0 19HG2016 12/31/19 - 1		-	ppb	-37	30 Dec 2019 18:09:16
S01 19HG2017 12/31/19 - 1		-	ppb	8905	30 Dec 2019 18:11:39
S02 19HG2018 12/31/19 - 1		-	ppb	44103	30 Dec 2019 18:14:01
S03 19HG2019 12/31/19 - 1		-	ppb	90136	30 Dec 2019 18:16:24
S04 19HG2020 12/31/19 - 1		-	ppb	131505	30 Dec 2019 18:18:45
S05 19HG2021 12/31/19 - 1		-	ppb	171187	30 Dec 2019 18:21:06
ICV 19HG2022 12/31/19 - 1		100.2% 10.0191	ppb	87408	30 Dec 2019 18:23:26
ICB 19HG2016 12/31/19 - 1		-0.1849	ppb	-643	30 Dec 2019 18:25:47
LLCCV 19HG2017 12/31/19 - 1		91.4% 0.9144	ppb	8843	30 Dec 2019 18:28:10
CCV 19HG2019 12/31/19 - 1		100.2% 10.0179	ppb	87398	30 Dec 2019 18:30:33
CCB 19HG2016 12/31/19 - 1		-0.1692	ppb	-507	30 Dec 2019 18:32:53
SnCl2 - 1	IM9803-01	-0.1152	ppb	-41	30 Dec 2019 18:35:16
UQ40382001 - 1	PBS	-0.1008	ppb	83	30 Dec 2019 18:37:37
UQ40382002 - 1	LCS	9.9377	ppb	86706	30 Dec 2019 18:39:58
UL20021001 - 1	MPGI-SF-Soil-09-121719	0.2897	ppb	3453	30 Dec 2019 18:42:19
UL20021001MS - 1	MPGI-SF-Soil-09-121719S	11.9523	ppb	104090	30 Dec 2019 18:44:40
UL20021001MD - 1	MPGI-SF-Soil-09-121719SD	11.7844	ppb	102641	30 Dec 2019 18:47:01
UL20021002 - 1	MPGI-SF-Soil-10A-121719	0.2088	ppb	2755	30 Dec 2019 18:49:23
UL20021003 - 1	MPGI-SF-Soil-10B-121719	0.2755	ppb	3330	30 Dec 2019 18:51:45
UL20021004 - 1	MPGI-SF-Soil-10C-121719	0.2692	ppb	3276	30 Dec 2019 18:54:06
UL20021005 - 1	MPGI-SF-Soil-11A-121919	0.3739	ppb	4179	30 Dec 2019 18:56:28
CCV 19HG2019 12/31/19 - 1		101.8% 10.1802	ppb	88798	30 Dec 2019 18:58:51
CCB 19HG2016 12/31/19 - 1		-0.1731	ppb	-541	30 Dec 2019 19:01:13
UL20021006 - 1	MPGI-SF-Soil-11B-121919	0.3486	ppb	3961	30 Dec 2019 19:03:35
UL20021007 - 1	MPGI-SF-Soil-11C-121919	0.3095	ppb	3624	30 Dec 2019 19:05:58
UL20021008 - 1	MPGI-SF-Soil-12A-121919	0.2916	ppb	3469	30 Dec 2019 19:08:22
UL20021009 - 1	MPGI-SF-Soil-12B-121819	0.1895	ppb	2588	30 Dec 2019 19:10:43
UL26016001 - 1	CP-8SB (38-40)	-0.1037	ppb	58	30 Dec 2019 19:13:04
CCV 19HG2019 12/31/19 - 1		100.3% 10.0275	ppb	87481	30 Dec 2019 19:15:25
CCB 19HG2016 12/31/19 - 1		-0.1731	ppb	-541	30 Dec 2019 19:17:46

Raw Supportive Data

Analyst: RTL **Level 2 Analyst:** KSH2

Status: Level 2 review released

Matrix: ERROR

Printed: 01/21/20 1117

Prep Batch: 39699

7471B-P - Mercury Preparation Linked: 245.5,7471B and 7471A-P

Start Date: 12/20/2019 1404

End Date: 12/20/2019 1434

Digestion Cup ID: 19-2486

Ext Solvent: HNO3-HCl/KMnO4/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.5, 7.5, 3.0

Chem ID: IM9792, IM9776-01, IM9761-01

Hot Block ID: Hot Block # 11

Start Temperature (°C): 93

Thermometer ID: 1134

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ89699-004	Standard	Conc = 0.0 mg/L	1	7471B	0.600	19HG1975	0.0	50			CAL 0
UQ89699-104	Standard	Conc = 0.0010 mg/L	1	7471B	0.600	19HG1976	0.0	50			12/21/19
UQ89699-204	Standard	Conc = 0.0050 mg/L	1	7471B	0.600	19HG1977	0.0	50			12/21/19
UQ89699-304	Standard	Conc = 0.010 mg/L	1	7471B	0.600	19HG1978	0.0	50			12/21/19
UQ89699-404	Standard	Conc = 0.015 mg/L	1	7471B	0.600	19HG1979	0.0	50			12/21/19
UQ89699-504	Standard	Conc = 0.020 mg/L	1	7471B	0.600	19HG1980	0.0	50			12/21/19
UQ89699-604	Standard	Conc = 0.0 mg/L	1	7471B	0.600	19HG1975	0.0	50			CCB
UQ89699-704	Standard	Conc = 0.010 mg/L	1	7471B	0.600	19HG1978	0.0	50			CCV
UQ89699-804	Standard	Conc = 0.0 mg/L	1	7471B	0.600	19HG1975	0.0	50			ICB
UQ89699-904	Standard	Conc = 0.010 mg/L	1	7471B	0.600	19HG1981	0.0	50			ICV

(end of report) **Total Samples: 0**

Analyst: RTL **Level 2 Analyst:** KSH2

Status: Level 2 review released

Matrix: Solid

Printed: 01/21/20 1116

Prep Batch: 39735

7471B-P - Mercury Preparation Linked: 245.5,7471B and 7471A-P

Start Date: 12/20/2019 1708

End Date: 12/20/2019 1738

Digestion Cup ID: 19-2486

Ext Solvent: HNO3-HCl/KMnO4/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.5, 7.5, 3.0

Chem ID: IM9789-01, IM9776-01, IM9761-01

Hot Block ID: Hot Block # 10

Balance ID: Balance # 19-0318

Thermometer ID: 1172

Start Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ89735-001	MB	PBS	1	7471B	0.600		0.0	50			LCS/MS/MSD PIPET ID 388
UQ89735-002	LCS	LCS	1	7471B	0.600	19HG1855	0.5	50			
UL20021-010	Sample	MRGI-SF-Soil-12C-121919	1	7471B	0.655		0.0	50	01/16/2020 2359	12/23/2019	
UL20021-011	Sample	MRGI-SF-Soil-13A-121719	1	7471B	0.685		0.0	50	01/14/2020 2359	12/23/2019	
UL20021-012	Sample	MRGI-SF-Soil-13B-121719	1	7471B	0.638		0.0	50	01/14/2020 2359	12/23/2019	
UL20021-013	Sample	MRGI-SF-Soil-14A-121919	1	7471B	0.657		0.0	50	01/16/2020 2359	12/23/2019	
UL20021-014	Sample	MRGI-SF-Soil-14A-121919-D	1	7471B	0.625		0.0	50	01/16/2020 2359	12/23/2019	
UL20021-015	Sample	MRGI-SF-Soil-14B-121919	1	7471B	0.603		0.0	50	01/16/2020 2359	12/23/2019	
UL20021-016	Sample	MRGI-SF-Soil-14C-121919	1	7471B	0.690		0.0	50	01/16/2020 2359	12/23/2019	
UL20021-016MS	MS	MRGI-SF-Soil-14C-121919S	1	7471B	0.606	19HG1855	0.5	50			
UL20021-016MD	MSD	MRGI-SF-Soil-14C-121919SD	1	7471B	0.604	19HG1855	0.5	50			
UL20030-001	Sample	PSS Treated	1	7471B	0.631		0.0	50	01/16/2020 2359	12/26/2019	
UL20031-001	Sample	PSN Treated	1	7471B	0.623		0.0	50	01/16/2020 2359	12/26/2019	
UL20034-001	Sample	PSN Sludge	1	7471B	0.677		0.0	50	01/16/2020 2359	12/26/2019	
UL20036-001	Sample	PSS Sludge	1	7471B	0.615		0.0	50	01/16/2020 2359	12/26/2019	
UL20038-001	Sample	PSS Water - Run as High Solids	1	7471B	0.667		0.0	50	01/16/2020 2359	12/26/2019	
UL20039-001	Sample	PSN Water - Run as High Solids	1	7471B	0.623		0.0	50	01/16/2020 2359	12/26/2019	
UL20003-001	Sample	Hunter Dairy (High Point)	1	7471B	0.659		0.0	50	01/16/2020 2359	12/30/2019	
UQ89735-004	Standard	Conc = 0.0 mg/L	1	7471B	0.600		0.0	50			PB 39699

(end of report) **Total Samples: 14**

Analyst: RTL **Level 2 Analyst:** NJT

Status: Level 2 review released

Matrix: Aqueous

Printed: 01/21/20 1338

Prep Batch: 39898

7470A-P - Mercury Preparation Linked: 7470A,245.1 and 7470A-P Draper

Start Date: 12/26/2019 1256

End Date: 12/26/2019 1456

Digestion Cup ID: 19-2731

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 9

Chem ID: 19-1862, IM9789-01, IM9776-01, IM9757-01, IM9761-01

Start Temperature (°C): 93

Thermometer ID: 326394

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ89898-001	MB	PBW	1	7470A	40.000		0.0	50			LCS/MS/MSD PIPET ID 388
UQ89898-002	LCS	LCS	1	7470A	40.000	19HG1990	0.8	50			
UL20021-017	Sample	MPG1-RB-121719	1	7470A	40.000		0.0	50	01/16/2020 2359	12/26/2019	
UL20041-001	Sample	PSS Water - Run as Low Solids	1	7470A	40.000		0.0	50	01/16/2020 2359	12/30/2019	
UL20043-001	Sample	PSN Water - Run as Low Solids	1	7470A	40.000		0.0	50	01/16/2020 2359	12/30/2019	
UL21020-008	Sample	TMW-1	1	7470A	40.000		0.0	50	01/16/2020 2359	12/30/2019	
UL21020-008MS	MS	TMW-1S	1	7470A	40.000	19HG1990	0.8	50			
UL21020-008MD	MSD	TMW-1SD	1	7470A	40.000	19HG1990	0.8	50			
UL21020-009	Sample	TMW-1-D	1	7470A	40.000		0.0	50	01/16/2020 2359	12/30/2019	
UL21020-010	Sample	Equipment Blank	1	7470A	40.000		0.0	50	01/16/2020 2359	12/30/2019	
UL19142-018	Sample	Equipment Blank	1	7470A	40.000		0.0	50	01/08/2020 2359	12/31/2019	
UL21005-001	Sample	Eff	1	7470A	40.000		0.0	50	01/17/2020 2359	12/31/2019	
UL19062-027	Sample	TA-GW-MW-309B	1	7470A	40.000		0.0	50	01/17/2020 2359	12/31/2019	
UQ89898-004	Standard	Conc = 0.0 mg/L	1	7470A	40.000		0.0	50			PB 40098

(end of report) **Total Samples: 9**

Analyst: RTL **Level 2 Analyst:** NJT

Status: Level 2 review released

Matrix: ERROR

Printed: 01/21/20 1338

Prep Batch: 40098

7470A-P - Mercury Preparation Linked: 7470A,245.1 and 7470A-P Draper

Start Date: 12/26/2019 1256

End Date: 12/26/2019 1456

Digestion Cup ID: 19-2731

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 9

Chem ID: 19-1862, IM9789-01, IM9776-01, IM9757-01, IM9761-01

Start Temperature (°C): 93

Thermometer ID: 326394

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ40098-004	Standard	Conc = 0.0 mg/L	1	245.1	40.000	19HG1992	0.0	50			CAL 0
UQ40098-104	Standard	Conc = 0.00010 mg/L	1	245.1	40.000	19HG1993	0.0	50			12/27/19
UQ40098-204	Standard	Conc = 0.00020 mg/L	1	245.1	40.000	19HG1994	0.0	50			12/27/19
UQ40098-304	Standard	Conc = 0.0010 mg/L	1	245.1	40.000	19HG1995	0.0	50			12/27/19
UQ40098-404	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	19HG1996	0.0	50			12/27/19
UQ40098-504	Standard	Conc = 0.0050 mg/L	1	245.1	40.000	19HG1997	0.0	50			12/27/19
UQ40098-604	Standard	Conc = 0.0 mg/L	1	245.1	40.000	19HG1992	0.0	50			CCB
UQ40098-704	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	19HG1996	0.0	50			CCV
UQ40098-804	Standard	Conc = 0.0 mg/L	1	245.1	40.000	19HG1992	0.0	50			ICB
UQ40098-904	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	19HG1998	0.0	50			ICV

(end of report) **Total Samples: 0**

Analyst: RTL **Level 2 Analyst:** KSH2

Status: Level 2 review released

Matrix: Solid

Printed: 01/21/20 1122

Prep Batch: 40382

7471B-P - Mercury Preparation Linked: 245.5,7471B and 7471A-P

Start Date: 12/30/2019 1349

End Date: 12/30/2019 1419

Digestion Cup ID: 19-2731

Ext Solvent: HNO3-HCl/KMnO4/NaCl-NH2OH-HCL

Reagents Vol. (mL): 2.5, 7.5, 3.0

Chem ID: IM9801-01, IM9776-01, IM9796-01

Hot Block ID: Hot Block # 9

Balance ID: Balance # 19-0318

Thermometer ID: 326394

Start Temperature (°C): 93

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ40382-001	MB	PBS	1	7471B	0.600		0.0	50			LCS/MS/MSD PIPET ID 388
UQ40382-002	LCS	LCS	1	7471B	0.600	19HG1855	0.5	50			
UL20021-001	Sample	MRGI-SF-Soil-09-121719	1	7471B	0.672		0.0	50	01/14/2020 2359	12/26/2019	
UL20021-001MS	MS	MRGI-SF-Soil-09-121719S	1	7471B	0.618	19HG1855	0.5	50			
UL20021-001MD	MSD	MRGI-SF-Soil-09-121719SD	1	7471B	0.638	19HG1855	0.5	50			
UL20021-002	Sample	MRGI-SF-Soil-10A-121719	1	7471B	0.603		0.0	50	01/14/2020 2359	12/26/2019	
UL20021-003	Sample	MRGI-SF-Soil-10B-121719	1	7471B	0.624		0.0	50	01/14/2020 2359	12/26/2019	
UL20021-004	Sample	MRGI-SF-Soil-10C-121719	1	7471B	0.659		0.0	50	01/14/2020 2359	12/26/2019	
UL20021-005	Sample	MRGI-SF-Soil-11A-121919	1	7471B	0.678		0.0	50	01/16/2020 2359	12/26/2019	
UL20021-006	Sample	MRGI-SF-Soil-11B-121919	1	7471B	0.651		0.0	50	01/16/2020 2359	12/26/2019	
UL20021-007	Sample	MRGI-SF-Soil-11C-121919	1	7471B	0.603		0.0	50	01/16/2020 2359	12/26/2019	
UL20021-008	Sample	MRGI-SF-Soil-12A-121919	1	7471B	0.648		0.0	50	01/16/2020 2359	12/26/2019	
UL20021-009	Sample	MRGI-SF-Soil-12B-121819	1	7471B	0.636		0.0	50	01/15/2020 2359	12/26/2019	
UL26016-001	Sample	CP-8SB (38-40)	1	7471B	0.631		0.0	50	01/17/2020 2359	01/06/2020	
UQ40382-004	Standard	Conc = 0.0 mg/L	1	7471B	0.600		0.0	50			PB 40421

(end of report) **Total Samples: 10**

Analyst: RTL **Level 2 Analyst:** KSH2

Status: Level 2 review released

Matrix: ERROR

Printed: 01/21/20 1124

Prep Batch: 40421

7471B-P - Mercury Preparation Linked: 245.5,7471B and 7471A-P

Start Date: 12/30/2019 1349

End Date: 12/30/2019 1419

Digestion Cup ID: 19-2731

Ext Solvent: HNO3-HCl/KMnO4/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.5, 7.5, 3.0

Chem ID: IM9801-01, IM9776-01, IM9796-01

Hot Block ID: Hot Block #9

Start Temperature (°C): 93

Thermometer ID: 326394

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Wt. (g)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
UQ40421-004	Standard	Conc = 0.0 mg/L	1	7471B	0.600	19HG2016	0.0	50			CAL 0
UQ40421-104	Standard	Conc = 0.0010 mg/L	1	7471B	0.600	19HG2017	0.0	50			12/31/19
UQ40421-204	Standard	Conc = 0.0050 mg/L	1	7471B	0.600	19HG2018	0.0	50			12/31/19
UQ40421-304	Standard	Conc = 0.010 mg/L	1	7471B	0.600	19HG2019	0.0	50			12/31/19
UQ40421-404	Standard	Conc = 0.015 mg/L	1	7471B	0.600	19HG2020	0.0	50			12/31/19
UQ40421-504	Standard	Conc = 0.020 mg/L	1	7471B	0.600	19HG2021	0.0	50			12/31/19
UQ40421-604	Standard	Conc = 0.0 mg/L	1	7471B	0.600	19HG2016	0.0	50			CCB
UQ40421-704	Standard	Conc = 0.010 mg/L	1	7471B	0.600	19HG2019	0.0	50			CCV
UQ40421-804	Standard	Conc = 0.0 mg/L	1	7471B	0.600	19HG2016	0.0	50			ICB
UQ40421-904	Standard	Conc = 0.010 mg/L	1	7471B	0.600	19HG2022	0.0	50			ICV

(end of report) **Total Samples: 0**

Report of Analysis

Tetra Tech, Inc.
One S. Wacker Drive, Suite 3700
Chicago, IL 60606
Attention: Bruce Welch

Project Name: Joliet Chemical Fire PRP Clean UP

Project Number: 103X903100690002AJ001

Lot Number:**UL20021**

Date Completed:12/27/2019
Revision Date: 02/25/2020

N. Saikaly

02/25/2020 3:52 PM
Approved and released by:
Project Manager: **Nisreen Saikaly**

The electronic signature above is the equivalent of a handwritten signature.
This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

Pace Analytical Services, LLC (*formerly Shealy Environmental Services, Inc.*)
106 Vantage Point Drive West Columbia, SC 29172
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

Case Narrative
Tetra Tech, Inc.
Lot Number: UL20021

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

TPH-DRO
Sample -017 was extracted using SW-846 prep method 3510C: separatory funnel liquid-liquid extraction instead of method 3520C: continuous liquid-liquid extraction.

The laboratory control sample (LCS) and matrix spike/matrix spike duplicate (MS/MSD) associated with batch 40144 had TPH-DRO recovered below the acceptance limits. There was insufficient sample volume remaining for re-extraction/re-analysis.

The MS/MSD associated with sample -001 had TPH-DRO recovered outside of the acceptance limits. The LCS was recovered within the required acceptance limits; therefore, this likely demonstrates a matrix effect.

Samples -006, -011, and -012 had the surrogate recovered outside of the acceptance limits due to confirmed matrix interference.

Sample -017 had the surrogate recovered outside of the acceptance limits. There was insufficient sample volume remaining for re-extraction/re-analysis.

Sample -017 was not preserved to a pH<2; the pH was adjusted in the laboratory.

TAL Metals
The method blank associated with batch 39905 had cadmium detected at a concentration that was below ½ the LOQ. All samples associated with this method blank that have detections for cadmium have been flagged with a “B” qualifier.

Report Revision (02/25/2020)

This report supersedes and replaces any prior reports issued under this lot number. The details of the applicable revisions are detailed in a Report Revision Notice provided under separate cover.

Sample Summary

Tetra Tech, Inc.

Lot Number: UL20021

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MPGI-SF-Soil-09-121719	Solid	12/17/2019 0940	12/20/2019
002	MPGI-SF-Soil-10A-121719	Solid	12/17/2019 1140	12/20/2019
003	MPGI-SF-Soil-10B-121719	Solid	12/17/2019 1144	12/20/2019
004	MPGI-SF-Soil-10C-121719	Solid	12/17/2019 1146	12/20/2019
005	MPGI-SF-Soil-11A-121919	Solid	12/19/2019 1240	12/20/2019
006	MPGI-SF-Soil-11B-121919	Solid	12/19/2019 1242	12/20/2019
007	MPGI-SF-Soil-11C-121919	Solid	12/19/2019 1244	12/20/2019
008	MPGI-SF-Soil-12A-121919	Solid	12/19/2019 1310	12/20/2019
009	MPGI-SF-Soil-12B-121819	Solid	12/18/2019 1001	12/20/2019
010	MPGI-SF-Soil-12C-121919	Solid	12/19/2019 1312	12/20/2019
011	MPGI-SF-Soil-13A-121719	Solid	12/17/2019 1410	12/20/2019
012	MPGI-SF-Soil-13B-121719	Solid	12/17/2019 1414	12/20/2019
013	MPGI-SF-Soil-14A-121919	Solid	12/19/2019 1210	12/20/2019
014	MPGI-SF-Soil-14A-121919-D	Solid	12/19/2019 1212	12/20/2019
015	MPGI-SF-Soil-14B-121919	Solid	12/19/2019 1214	12/20/2019
016	MPGI-SF-Soil-14C-121919	Solid	12/19/2019 1216	12/20/2019
017	MPGI-RB-121719	Aqueous	12/19/2019 1330	12/20/2019

(17 samples)

Detection Summary

Tetra Tech, Inc.

Lot Number: UL20021

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MPGI-SF-Soil-09-121719	Solid	TPH-DRO	8015C	41000		ug/kg	13
001	MPGI-SF-Soil-09-121719	Solid	Aluminum	6010D	21000		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Arsenic	6010D	14		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Barium	6010D	220		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Beryllium	6010D	0.98		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Cadmium	6010D	0.47		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Calcium	6010D	16000		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Chromium	6010D	27		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Cobalt	6010D	15		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Copper	6010D	26		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Iron	6010D	26000		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Lead	6010D	27		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Magnesium	6010D	11000		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Manganese	6010D	1700		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Mercury	7471B	0.028	J	mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Nickel	6010D	34		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Potassium	6010D	3200		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Sodium	6010D	130	J	mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Vanadium	6010D	46		mg/kg	14
001	MPGI-SF-Soil-09-121719	Solid	Zinc	6010D	99		mg/kg	14
002	MPGI-SF-Soil-10A-121719	Solid	TPH-DRO	8015C	16000		ug/kg	15
002	MPGI-SF-Soil-10A-121719	Solid	Aluminum	6010D	18000		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Arsenic	6010D	20		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Barium	6010D	180		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Beryllium	6010D	1.0		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Cadmium	6010D	0.52	J	mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Calcium	6010D	3300		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Chromium	6010D	25		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Cobalt	6010D	18		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Copper	6010D	29		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Iron	6010D	37000		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Lead	6010D	28		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Magnesium	6010D	4200		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Manganese	6010D	1900		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Nickel	6010D	43		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Potassium	6010D	3000		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Selenium	6010D	0.99	J	mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Sodium	6010D	140	J	mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Vanadium	6010D	46		mg/kg	16
002	MPGI-SF-Soil-10A-121719	Solid	Zinc	6010D	86		mg/kg	16
003	MPGI-SF-Soil-10B-121719	Solid	TPH-DRO	8015C	41000		ug/kg	17
003	MPGI-SF-Soil-10B-121719	Solid	Aluminum	6010D	15000		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Arsenic	6010D	13		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Barium	6010D	110		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Beryllium	6010D	0.78		mg/kg	18

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	MPGI-SF-Soil-10B-121719	Solid	Cadmium	6010D	0.21	J	mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Calcium	6010D	13000		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Chromium	6010D	21		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Cobalt	6010D	14		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Copper	6010D	21		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Iron	6010D	24000		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Lead	6010D	22		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Magnesium	6010D	9400		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Manganese	6010D	940		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Mercury	7471B	0.027	J	mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Nickel	6010D	27		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Potassium	6010D	2700		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Sodium	6010D	130	J	mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Vanadium	6010D	36		mg/kg	18
003	MPGI-SF-Soil-10B-121719	Solid	Zinc	6010D	83		mg/kg	18
004	MPGI-SF-Soil-10C-121719	Solid	TPH-DRO	8015C	4900	J	ug/kg	19
004	MPGI-SF-Soil-10C-121719	Solid	Aluminum	6010D	18000		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Antimony	6010D	0.28	J	mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Arsenic	6010D	20		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Barium	6010D	330		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Beryllium	6010D	1.0		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Cadmium	6010D	0.49	J	mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Calcium	6010D	8500		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Chromium	6010D	26		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Cobalt	6010D	21		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Copper	6010D	28		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Iron	6010D	35000		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Lead	6010D	35		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Magnesium	6010D	6400		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Manganese	6010D	2800		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Mercury	7471B	0.025	J	mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Nickel	6010D	38		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Potassium	6010D	3500		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Silver	6010D	0.17	J	mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Sodium	6010D	280		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Vanadium	6010D	47		mg/kg	20
004	MPGI-SF-Soil-10C-121719	Solid	Zinc	6010D	130		mg/kg	20
005	MPGI-SF-Soil-11A-121919	Solid	TPH-DRO	8015C	6400	J	ug/kg	21
005	MPGI-SF-Soil-11A-121919	Solid	Aluminum	6010D	20000		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Arsenic	6010D	15		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Barium	6010D	120		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Beryllium	6010D	0.91		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Cadmium	6010D	0.20	J	mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Calcium	6010D	6000		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Chromium	6010D	25		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Cobalt	6010D	6.6		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Copper	6010D	20		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Iron	6010D	24000		mg/kg	22

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
005	MPGI-SF-Soil-11A-121919	Solid	Lead	6010D	23		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Magnesium	6010D	4300		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Manganese	6010D	470		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Mercury	7471B	0.035	J	mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Nickel	6010D	18		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Potassium	6010D	2700		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Selenium	6010D	0.60	J	mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Sodium	6010D	210	J	mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Vanadium	6010D	44		mg/kg	22
005	MPGI-SF-Soil-11A-121919	Solid	Zinc	6010D	76		mg/kg	22
006	MPGI-SF-Soil-11B-121919	Solid	Aluminum	6010D	19000		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Arsenic	6010D	17		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Barium	6010D	270		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Beryllium	6010D	0.90		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Cadmium	6010D	0.52		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Calcium	6010D	5400		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Chromium	6010D	24		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Cobalt	6010D	17		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Copper	6010D	21		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Iron	6010D	26000		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Lead	6010D	27		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Magnesium	6010D	4100		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Manganese	6010D	2200		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Mercury	7471B	0.033	J	mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Nickel	6010D	25		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Potassium	6010D	2400		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Sodium	6010D	170	J	mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Vanadium	6010D	46		mg/kg	24
006	MPGI-SF-Soil-11B-121919	Solid	Zinc	6010D	80		mg/kg	24
007	MPGI-SF-Soil-11C-121919	Solid	TPH-DRO	8015C	15000		ug/kg	25
007	MPGI-SF-Soil-11C-121919	Solid	Aluminum	6010D	19000		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Arsenic	6010D	22		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Barium	6010D	320		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Beryllium	6010D	0.95		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Cadmium	6010D	0.47	J	mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Calcium	6010D	7300		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Chromium	6010D	25		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Cobalt	6010D	16		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Copper	6010D	24		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Iron	6010D	35000		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Lead	6010D	30		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Magnesium	6010D	5100		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Manganese	6010D	1900		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Mercury	7471B	0.032	J	mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Nickel	6010D	25		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Potassium	6010D	2800		mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Sodium	6010D	130	J	mg/kg	26
007	MPGI-SF-Soil-11C-121919	Solid	Vanadium	6010D	49		mg/kg	26

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
007	MPGI-SF-Soil-11C-121919	Solid	Zinc	6010D	110		mg/kg	26
008	MPGI-SF-Soil-12A-121919	Solid	TPH-DRO	8015C	8300	J	ug/kg	27
008	MPGI-SF-Soil-12A-121919	Solid	Aluminum	6010D	19000		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Antimony	6010D	0.33	J	mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Arsenic	6010D	13		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Barium	6010D	140		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Beryllium	6010D	0.91		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Cadmium	6010D	0.30	J	mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Calcium	6010D	8700		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Chromium	6010D	25		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Cobalt	6010D	9.7		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Copper	6010D	25		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Iron	6010D	23000		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Lead	6010D	26		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Magnesium	6010D	6000		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Manganese	6010D	700		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Mercury	7471B	0.030	J	mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Nickel	6010D	21		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Potassium	6010D	3200		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Selenium	6010D	0.62	J	mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Sodium	6010D	120	J	mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Vanadium	6010D	43		mg/kg	28
008	MPGI-SF-Soil-12A-121919	Solid	Zinc	6010D	120		mg/kg	28
009	MPGI-SF-Soil-12B-121819	Solid	TPH-DRO	8015C	13000		ug/kg	29
009	MPGI-SF-Soil-12B-121819	Solid	Aluminum	6010D	17000		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Arsenic	6010D	17		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Barium	6010D	440		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Beryllium	6010D	0.89		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Cadmium	6010D	0.73		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Calcium	6010D	11000		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Chromium	6010D	23		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Cobalt	6010D	42		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Copper	6010D	23		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Iron	6010D	28000		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Lead	6010D	31		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Magnesium	6010D	7300		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Manganese	6010D	3900		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Nickel	6010D	33		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Potassium	6010D	2800		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Silver	6010D	0.35	J	mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Sodium	6010D	150	J	mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Vanadium	6010D	47		mg/kg	30
009	MPGI-SF-Soil-12B-121819	Solid	Zinc	6010D	110		mg/kg	30
010	MPGI-SF-Soil-12C-121919	Solid	TPH-DRO	8015C	12000		ug/kg	31
010	MPGI-SF-Soil-12C-121919	Solid	Aluminum	6010D	14000		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Arsenic	6010D	10		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Barium	6010D	110		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Beryllium	6010D	0.68		mg/kg	32

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
010	MPGI-SF-Soil-12C-121919	Solid	Cadmium	6010D	0.19	J	mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Calcium	6010D	12000		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Chromium	6010D	19		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Cobalt	6010D	7.1		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Copper	6010D	19		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Iron	6010D	18000		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Lead	6010D	20		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Magnesium	6010D	7100		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Manganese	6010D	580		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Nickel	6010D	16		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Potassium	6010D	2400		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Selenium	6010D	0.44	J	mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Sodium	6010D	84	J	mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Vanadium	6010D	33		mg/kg	32
010	MPGI-SF-Soil-12C-121919	Solid	Zinc	6010D	87		mg/kg	32
011	MPGI-SF-Soil-13A-121719	Solid	TPH-DRO	8015C	8300	J	ug/kg	33
011	MPGI-SF-Soil-13A-121719	Solid	Aluminum	6010D	19000		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Antimony	6010D	0.41	J	mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Arsenic	6010D	12		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Barium	6010D	110		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Beryllium	6010D	0.80		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Calcium	6010D	7600		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Chromium	6010D	23		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Cobalt	6010D	10		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Copper	6010D	21		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Iron	6010D	23000		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Lead	6010D	22		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Magnesium	6010D	6300		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Manganese	6010D	550		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Mercury	7471B	0.036	J	mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Nickel	6010D	22		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Potassium	6010D	3300		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Selenium	6010D	0.55	J	mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Vanadium	6010D	39		mg/kg	34
011	MPGI-SF-Soil-13A-121719	Solid	Zinc	6010D	74		mg/kg	34
012	MPGI-SF-Soil-13B-121719	Solid	TPH-DRO	8015C	5000	J	ug/kg	35
012	MPGI-SF-Soil-13B-121719	Solid	Aluminum	6010D	19000		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Antimony	6010D	0.35	J	mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Arsenic	6010D	12		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Barium	6010D	120		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Beryllium	6010D	0.85		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Cadmium	6010D	0.091	J	mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Calcium	6010D	8200		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Chromium	6010D	26		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Cobalt	6010D	9.3		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Copper	6010D	25		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Iron	6010D	22000		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Lead	6010D	27		mg/kg	36

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
012	MPGI-SF-Soil-13B-121719	Solid	Magnesium	6010D	6000		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Manganese	6010D	500		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Mercury	7471B	0.052	J	mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Nickel	6010D	21		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Potassium	6010D	3600		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Selenium	6010D	0.51	J	mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Vanadium	6010D	40		mg/kg	36
012	MPGI-SF-Soil-13B-121719	Solid	Zinc	6010D	82		mg/kg	36
013	MPGI-SF-Soil-14A-121919	Solid	TPH-DRO	8015C	8300		ug/kg	37
013	MPGI-SF-Soil-14A-121919	Solid	Aluminum	6010D	16000		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Arsenic	6010D	7.4		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Barium	6010D	96		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Beryllium	6010D	0.68		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Cadmium	6010D	0.12	J	mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Calcium	6010D	5800		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Chromium	6010D	20		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Cobalt	6010D	6.5		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Copper	6010D	16		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Iron	6010D	16000		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Lead	6010D	17		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Magnesium	6010D	4200		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Manganese	6010D	390		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Mercury	7471B	0.034	J	mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Nickel	6010D	14		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Potassium	6010D	2100		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Sodium	6010D	55	J	mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Vanadium	6010D	35		mg/kg	38
013	MPGI-SF-Soil-14A-121919	Solid	Zinc	6010D	71		mg/kg	38
014	MPGI-SF-Soil-14A-121919-D	Solid	TPH-DRO	8015C	10000		ug/kg	39
014	MPGI-SF-Soil-14A-121919-D	Solid	Aluminum	6010D	14000		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Arsenic	6010D	8.1		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Barium	6010D	98		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Beryllium	6010D	0.62		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Cadmium	6010D	0.18	J	mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Calcium	6010D	5200		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Chromium	6010D	17		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Cobalt	6010D	7.8		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Copper	6010D	15		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Iron	6010D	16000		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Lead	6010D	18		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Magnesium	6010D	3700		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Manganese	6010D	620		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Mercury	7471B	0.033	J	mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Nickel	6010D	15		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Potassium	6010D	1800		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Sodium	6010D	41	J	mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Vanadium	6010D	31		mg/kg	40
014	MPGI-SF-Soil-14A-121919-D	Solid	Zinc	6010D	66		mg/kg	40

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
015	MPGI-SF-Soil-14B-121919	Solid	TPH-DRO	8015C	23000		ug/kg	41
015	MPGI-SF-Soil-14B-121919	Solid	Aluminum	6010D	13000		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Arsenic	6010D	9.5		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Barium	6010D	93		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Beryllium	6010D	0.64		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Cadmium	6010D	0.16	J	mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Calcium	6010D	14000		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Chromium	6010D	17		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Cobalt	6010D	7.9		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Copper	6010D	18		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Iron	6010D	18000		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Lead	6010D	19		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Magnesium	6010D	8800		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Manganese	6010D	590		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Mercury	7471B	0.025	J	mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Nickel	6010D	17		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Potassium	6010D	2100		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Sodium	6010D	80	J	mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Vanadium	6010D	30		mg/kg	42
015	MPGI-SF-Soil-14B-121919	Solid	Zinc	6010D	99		mg/kg	42
016	MPGI-SF-Soil-14C-121919	Solid	TPH-DRO	8015C	13000		ug/kg	43
016	MPGI-SF-Soil-14C-121919	Solid	Aluminum	6010D	12000		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Arsenic	6010D	10		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Barium	6010D	110		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Beryllium	6010D	0.59		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Cadmium	6010D	0.22	J	mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Calcium	6010D	12000		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Chromium	6010D	16		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Cobalt	6010D	9.4		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Copper	6010D	17		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Iron	6010D	19000		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Lead	6010D	20		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Magnesium	6010D	6500		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Manganese	6010D	720		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Mercury	7471B	0.027	J	mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Nickel	6010D	17		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Potassium	6010D	2000		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Sodium	6010D	39	J	mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Vanadium	6010D	29		mg/kg	44
016	MPGI-SF-Soil-14C-121919	Solid	Zinc	6010D	81		mg/kg	44
017	MPGI-RB-121719	Aqueous	Arsenic	6010D	0.0031	J	mg/L	46
017	MPGI-RB-121719	Aqueous	Sodium	6010D	0.71	J	mg/L	46

(327 detections)

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-001
Description: MPGI-SF-Soil-09-121719
Matrix: Solid
Date Sampled: 12/17/2019 0940
% Solids: 76.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1137	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	41000		8600	4100	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-001
Description: MPGI-SF-Soil-09-121719
Matrix: Solid
Date Sampled: 12/17/2019 0940
% Solids: 76.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0658	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1842	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0823	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	21000		24	9.1	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	14		0.91	0.30	mg/kg	1
Barium	7440-39-3	6010D	220		1.6	0.40	mg/kg	1
Beryllium	7440-41-7	6010D	0.98		0.30	0.077	mg/kg	1
Cadmium	7440-43-9	6010D	0.47		0.30	0.077	mg/kg	1
Calcium	7440-70-2	6010D	16000		300	38	mg/kg	1
Chromium	7440-47-3	6010D	27		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	15		1.6	0.40	mg/kg	1
Copper	7440-50-8	6010D	26		0.61	0.27	mg/kg	1
Iron	7439-89-6	6010D	26000		6.1	2.8	mg/kg	1
Lead	7439-92-1	6010D	27		0.61	0.27	mg/kg	1
Magnesium	7439-95-4	6010D	11000		300	38	mg/kg	1
Manganese	7439-96-5	6010D	1700		1.8	0.72	mg/kg	2
Mercury	7439-97-6	7471B	0.028	J	0.097	0.023	mg/kg	1
Nickel	7440-02-0	6010D	34		2.4	0.64	mg/kg	1
Potassium	7440-09-7	6010D	3200		300	38	mg/kg	1
Selenium	7782-49-2	6010D	ND		2.4	0.99	mg/kg	2
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	130	J	300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.0	0.76	mg/kg	1
Vanadium	7440-62-2	6010D	46		3.0	0.76	mg/kg	1
Zinc	7440-66-6	6010D	99		3.0	0.76	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-002
Description: MPGI-SF-Soil-10A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1140
% Solids: 80.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1235	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	16000		8200	3900	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-002
Description: MPGI-SF-Soil-10A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1140
% Solids: 80.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0738	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1849	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0902	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	18000		24	9.1	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	20		1.8	0.61	mg/kg	2
Barium	7440-39-3	6010D	180		1.6	0.39	mg/kg	1
Beryllium	7440-41-7	6010D	1.0		0.30	0.076	mg/kg	1
Cadmium	7440-43-9	6010D	0.52	J	0.61	0.15	mg/kg	2
Calcium	7440-70-2	6010D	3300		300	38	mg/kg	1
Chromium	7440-47-3	6010D	25		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	18		1.6	0.39	mg/kg	1
Copper	7440-50-8	6010D	29		0.61	0.27	mg/kg	1
Iron	7439-89-6	6010D	37000		12	5.5	mg/kg	2
Lead	7439-92-1	6010D	28		1.2	0.55	mg/kg	2
Magnesium	7439-95-4	6010D	4200		300	38	mg/kg	1
Manganese	7439-96-5	6010D	1900		1.8	0.72	mg/kg	2
Mercury	7439-97-6	7471B	ND		0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	43		4.9	1.3	mg/kg	2
Potassium	7440-09-7	6010D	3000		300	38	mg/kg	1
Selenium	7782-49-2	6010D	0.99	J	2.4	0.99	mg/kg	2
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	140	J	300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		6.1	1.5	mg/kg	2
Vanadium	7440-62-2	6010D	46		6.1	1.5	mg/kg	2
Zinc	7440-66-6	6010D	86		3.0	0.76	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-003
Description: MPGI-SF-Soil-10B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1144
% Solids: 81.4 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1206	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	41000		8000	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		68	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-003
Description: MPGI-SF-Soil-10B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1144
% Solids: 81.4 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0744	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1851	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	15000		21	8.0	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.27	mg/kg	1
Arsenic	7440-38-2	6010D	13		0.80	0.27	mg/kg	1
Barium	7440-39-3	6010D	110		1.4	0.35	mg/kg	1
Beryllium	7440-41-7	6010D	0.78		0.27	0.067	mg/kg	1
Cadmium	7440-43-9	6010D	0.21	J	0.27	0.067	mg/kg	1
Calcium	7440-70-2	6010D	13000		270	33	mg/kg	1
Chromium	7440-47-3	6010D	21		0.53	0.13	mg/kg	1
Cobalt	7440-48-4	6010D	14		1.4	0.35	mg/kg	1
Copper	7440-50-8	6010D	21		0.53	0.24	mg/kg	1
Iron	7439-89-6	6010D	24000		5.3	2.4	mg/kg	1
Lead	7439-92-1	6010D	22		0.53	0.24	mg/kg	1
Magnesium	7439-95-4	6010D	9400		270	33	mg/kg	1
Manganese	7439-96-5	6010D	940		0.80	0.32	mg/kg	1
Mercury	7439-97-6	7471B	0.027	J	0.098	0.024	mg/kg	1
Nickel	7440-02-0	6010D	27		2.1	0.56	mg/kg	1
Potassium	7440-09-7	6010D	2700		270	33	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.43	mg/kg	1
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1
Sodium	7440-23-5	6010D	130	J	270	33	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.7	0.67	mg/kg	1
Vanadium	7440-62-2	6010D	36		2.7	0.67	mg/kg	1
Zinc	7440-66-6	6010D	83		2.7	0.67	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-004
Description: MPGI-SF-Soil-10C-121719
Matrix: Solid
Date Sampled: 12/17/2019 1146
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1254	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	4900	J	8200	3900	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-004
Description: MPGI-SF-Soil-10C-121719
Matrix: Solid
Date Sampled: 12/17/2019 1146
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0749	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1854	JMH	12/30/2019 1349	40382
2	3050B	6010D	2	12/31/2019 0907	LLL	12/30/2019 0956	40381
3	3050B	6010D	4	12/31/2019 0913	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	18000		22	8.2	mg/kg	1
Antimony	7440-36-0	6010D	0.28	J	1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	20		1.6	0.55	mg/kg	2
Barium	7440-39-3	6010D	330		1.4	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	1.0		0.27	0.069	mg/kg	1
Cadmium	7440-43-9	6010D	0.49	J	0.55	0.14	mg/kg	2
Calcium	7440-70-2	6010D	8500		270	34	mg/kg	1
Chromium	7440-47-3	6010D	26		0.55	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	21		1.4	0.36	mg/kg	1
Copper	7440-50-8	6010D	28		0.55	0.25	mg/kg	1
Iron	7439-89-6	6010D	35000		11	5.0	mg/kg	2
Lead	7439-92-1	6010D	35		1.1	0.49	mg/kg	2
Magnesium	7439-95-4	6010D	6400		270	34	mg/kg	1
Manganese	7439-96-5	6010D	2800		3.3	1.3	mg/kg	3
Mercury	7439-97-6	7471B	0.025	J	0.093	0.022	mg/kg	1
Nickel	7440-02-0	6010D	38		4.4	1.2	mg/kg	2
Potassium	7440-09-7	6010D	3500		270	34	mg/kg	1
Selenium	7782-49-2	6010D	ND		4.4	1.8	mg/kg	3
Silver	7440-22-4	6010D	0.17	J	0.55	0.14	mg/kg	1
Sodium	7440-23-5	6010D	280		270	34	mg/kg	1
Thallium	7440-28-0	6010D	ND		5.5	1.4	mg/kg	2
Vanadium	7440-62-2	6010D	47		5.5	1.4	mg/kg	2
Zinc	7440-66-6	6010D	130		2.7	0.69	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-005
Description: MPGI-SF-Soil-11A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1240
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1244	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	6400	J	8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		65	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-005
Description: MPGI-SF-Soil-11A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1240
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0755	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1856	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	20000		23	8.5	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	15		0.85	0.28	mg/kg	1
Barium	7440-39-3	6010D	120		1.5	0.37	mg/kg	1
Beryllium	7440-41-7	6010D	0.91		0.28	0.071	mg/kg	1
Cadmium	7440-43-9	6010D	0.20	J	0.28	0.071	mg/kg	1
Calcium	7440-70-2	6010D	6000		280	35	mg/kg	1
Chromium	7440-47-3	6010D	25		0.57	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	6.6		1.5	0.37	mg/kg	1
Copper	7440-50-8	6010D	20		0.57	0.25	mg/kg	1
Iron	7439-89-6	6010D	24000		5.7	2.6	mg/kg	1
Lead	7439-92-1	6010D	23		0.57	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	4300		280	35	mg/kg	1
Manganese	7439-96-5	6010D	470		0.85	0.33	mg/kg	1
Mercury	7439-97-6	7471B	0.035	J	0.093	0.022	mg/kg	1
Nickel	7440-02-0	6010D	18		2.3	0.59	mg/kg	1
Potassium	7440-09-7	6010D	2700		280	35	mg/kg	1
Selenium	7782-49-2	6010D	0.60	J	1.1	0.46	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	7440-23-5	6010D	210	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.71	mg/kg	1
Vanadium	7440-62-2	6010D	44		2.8	0.71	mg/kg	1
Zinc	7440-66-6	6010D	76		2.8	0.71	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-006
Description: MPGI-SF-Soil-11B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1242
% Solids: 80.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1303	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		8100	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	51	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-006
Description: MPGI-SF-Soil-11B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1242
% Solids: 80.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0801	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1903	JMH	12/30/2019 1349	40382
2	3050B	6010D	3	12/31/2019 0957	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		22	8.4	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	17		0.84	0.28	mg/kg	1
Barium	7440-39-3	6010D	270		1.5	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	0.90		0.28	0.071	mg/kg	1
Cadmium	7440-43-9	6010D	0.52		0.28	0.071	mg/kg	1
Calcium	7440-70-2	6010D	5400		280	35	mg/kg	1
Chromium	7440-47-3	6010D	24		0.56	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	17		1.5	0.36	mg/kg	1
Copper	7440-50-8	6010D	21		0.56	0.25	mg/kg	1
Iron	7439-89-6	6010D	26000		5.6	2.6	mg/kg	1
Lead	7439-92-1	6010D	27		0.56	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	4100		280	35	mg/kg	1
Manganese	7439-96-5	6010D	2200		2.5	1.0	mg/kg	2
Mercury	7439-97-6	7471B	0.033	J	0.095	0.023	mg/kg	1
Nickel	7440-02-0	6010D	25		2.2	0.59	mg/kg	1
Potassium	7440-09-7	6010D	2400		280	35	mg/kg	1
Selenium	7782-49-2	6010D	ND		3.4	1.4	mg/kg	2
Silver	7440-22-4	6010D	ND		0.56	0.14	mg/kg	1
Sodium	7440-23-5	6010D	170	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.70	mg/kg	1
Vanadium	7440-62-2	6010D	46		2.8	0.70	mg/kg	1
Zinc	7440-66-6	6010D	80		2.8	0.70	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-007
Description: MPGI-SF-Soil-11C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1244
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1333	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	15000		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-007
Description: MPGI-SF-Soil-11C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1244
% Solids: 79.2 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0806	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1905	JMH	12/30/2019 1349	40382
2	3050B	6010D	3	12/31/2019 0924	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		25	9.5	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.3	0.32	mg/kg	1
Arsenic	7440-38-2	6010D	22		2.8	0.95	mg/kg	2
Barium	7440-39-3	6010D	320		1.6	0.41	mg/kg	1
Beryllium	7440-41-7	6010D	0.95		0.32	0.079	mg/kg	1
Cadmium	7440-43-9	6010D	0.47	J	0.95	0.24	mg/kg	2
Calcium	7440-70-2	6010D	7300		320	39	mg/kg	1
Chromium	7440-47-3	6010D	25		0.63	0.16	mg/kg	1
Cobalt	7440-48-4	6010D	16		1.6	0.41	mg/kg	1
Copper	7440-50-8	6010D	24		0.63	0.28	mg/kg	1
Iron	7439-89-6	6010D	35000		19	8.6	mg/kg	2
Lead	7439-92-1	6010D	30		1.9	0.85	mg/kg	2
Magnesium	7439-95-4	6010D	5100		320	39	mg/kg	1
Manganese	7439-96-5	6010D	1900		2.8	1.1	mg/kg	2
Mercury	7439-97-6	7471B	0.032	J	0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	25		7.6	2.0	mg/kg	2
Potassium	7440-09-7	6010D	2800		320	39	mg/kg	1
Selenium	7782-49-2	6010D	ND		3.8	1.5	mg/kg	2
Silver	7440-22-4	6010D	ND		0.63	0.16	mg/kg	1
Sodium	7440-23-5	6010D	130	J	320	39	mg/kg	1
Thallium	7440-28-0	6010D	ND		9.5	2.4	mg/kg	2
Vanadium	7440-62-2	6010D	49		9.5	2.4	mg/kg	2
Zinc	7440-66-6	6010D	110		3.2	0.79	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-008
Description: MPGI-SF-Soil-12A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1310
% Solids: 74.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1341	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300	J	9000	4300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		55	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-008
Description: MPGI-SF-Soil-12A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1310
% Solids: 74.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0812	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1908	JMH	12/30/2019 1349	40382

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		26	9.8	mg/kg	1
Antimony	7440-36-0	6010D	0.33	J	1.3	0.33	mg/kg	1
Arsenic	7440-38-2	6010D	13		0.98	0.33	mg/kg	1
Barium	7440-39-3	6010D	140		1.7	0.43	mg/kg	1
Beryllium	7440-41-7	6010D	0.91		0.33	0.083	mg/kg	1
Cadmium	7440-43-9	6010D	0.30	J	0.33	0.083	mg/kg	1
Calcium	7440-70-2	6010D	8700		330	41	mg/kg	1
Chromium	7440-47-3	6010D	25		0.66	0.16	mg/kg	1
Cobalt	7440-48-4	6010D	9.7		1.7	0.43	mg/kg	1
Copper	7440-50-8	6010D	25		0.66	0.30	mg/kg	1
Iron	7439-89-6	6010D	23000		6.6	3.0	mg/kg	1
Lead	7439-92-1	6010D	26		0.66	0.30	mg/kg	1
Magnesium	7439-95-4	6010D	6000		330	41	mg/kg	1
Manganese	7439-96-5	6010D	700		0.98	0.39	mg/kg	1
Mercury	7439-97-6	7471B	0.030	J	0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	21		2.6	0.69	mg/kg	1
Potassium	7440-09-7	6010D	3200		330	41	mg/kg	1
Selenium	7782-49-2	6010D	0.62	J	1.3	0.53	mg/kg	1
Silver	7440-22-4	6010D	ND		0.66	0.16	mg/kg	1
Sodium	7440-23-5	6010D	120	J	330	41	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.3	0.82	mg/kg	1
Vanadium	7440-62-2	6010D	43		3.3	0.82	mg/kg	1
Zinc	7440-66-6	6010D	120		3.3	0.82	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-009
Description: MPGI-SF-Soil-12B-121819
Matrix: Solid
Date Sampled: 12/18/2019 1001
% Solids: 73.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1401	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	13000		8900	4200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		74	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-009
Description: MPGI-SF-Soil-12B-121819
Matrix: Solid
Date Sampled: 12/18/2019 1001
% Solids: 73.3 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/31/2019 0817	LLL	12/30/2019 0956	40381
1	7471B	7471B	1	12/30/2019 1910	JMH	12/30/2019 1349	40382
2	3050B	6010D	5	12/31/2019 0946	LLL	12/30/2019 0956	40381

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	17000		25	9.2	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	17		0.92	0.31	mg/kg	1
Barium	7440-39-3	6010D	440		1.6	0.40	mg/kg	1
Beryllium	7440-41-7	6010D	0.89		0.31	0.077	mg/kg	1
Cadmium	7440-43-9	6010D	0.73		0.31	0.077	mg/kg	1
Calcium	7440-70-2	6010D	11000		310	38	mg/kg	1
Chromium	7440-47-3	6010D	23		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	42		1.6	0.40	mg/kg	1
Copper	7440-50-8	6010D	23		0.61	0.28	mg/kg	1
Iron	7439-89-6	6010D	28000		6.1	2.8	mg/kg	1
Lead	7439-92-1	6010D	31		0.61	0.28	mg/kg	1
Magnesium	7439-95-4	6010D	7300		310	38	mg/kg	1
Manganese	7439-96-5	6010D	3900		4.6	1.8	mg/kg	2
Mercury	7439-97-6	7471B	ND		0.11	0.026	mg/kg	1
Nickel	7440-02-0	6010D	33		2.5	0.64	mg/kg	1
Potassium	7440-09-7	6010D	2800		310	38	mg/kg	1
Selenium	7782-49-2	6010D	ND		6.1	2.5	mg/kg	2
Silver	7440-22-4	6010D	0.35	J	0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	150	J	310	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.1	0.77	mg/kg	1
Vanadium	7440-62-2	6010D	47		3.1	0.77	mg/kg	1
Zinc	7440-66-6	6010D	110		3.1	0.77	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-010
Description: MPGI-SF-Soil-12C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1312
% Solids: 80.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	3550C	8015C	1	12/26/2019 1352	CHG	12/25/2019 1907	40054

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	12000		8400	4000	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
o - Terphenyl		62	55-120

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-010
Description: MPGI-SF-Soil-12C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1312
% Solids: 80.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0655	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0933	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	14000		21	8.0	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.27	mg/kg	1
Arsenic	7440-38-2	6010D	10		0.80	0.27	mg/kg	1
Barium	7440-39-3	6010D	110		1.4	0.35	mg/kg	1
Beryllium	7440-41-7	6010D	0.68		0.27	0.067	mg/kg	1
Cadmium	7440-43-9	6010D	0.19	J	0.27	0.067	mg/kg	1
Calcium	7440-70-2	6010D	12000		270	33	mg/kg	1
Chromium	7440-47-3	6010D	19		0.53	0.13	mg/kg	1
Cobalt	7440-48-4	6010D	7.1		1.4	0.35	mg/kg	1
Copper	7440-50-8	6010D	19		0.53	0.24	mg/kg	1
Iron	7439-89-6	6010D	18000		5.3	2.4	mg/kg	1
Lead	7439-92-1	6010D	20		0.53	0.24	mg/kg	1
Magnesium	7439-95-4	6010D	7100		270	33	mg/kg	1
Manganese	7439-96-5	6010D	580		0.80	0.31	mg/kg	1
Mercury	7439-97-6	7471B	ND		0.095	0.023	mg/kg	1
Nickel	7440-02-0	6010D	16		2.1	0.56	mg/kg	1
Potassium	7440-09-7	6010D	2400		270	33	mg/kg	1
Selenium	7782-49-2	6010D	0.44	J	1.1	0.43	mg/kg	1
Silver	7440-22-4	6010D	ND		0.53	0.13	mg/kg	1
Sodium	7440-23-5	6010D	84	J	270	33	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.7	0.66	mg/kg	1
Vanadium	7440-62-2	6010D	33		2.7	0.66	mg/kg	1
Zinc	7440-66-6	6010D	87		2.7	0.66	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-011
Description: MPGI-SF-Soil-13A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1410
% Solids: 74.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1439	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300	J	8900	4300	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	44	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-011
Description: MPGI-SF-Soil-13A-121719
Matrix: Solid
Date Sampled: 12/17/2019 1410
% Solids: 74.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0701	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0936	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		26	9.6	mg/kg	1
Antimony	7440-36-0	6010D	0.41	J	1.3	0.32	mg/kg	1
Arsenic	7440-38-2	6010D	12		0.96	0.32	mg/kg	1
Barium	7440-39-3	6010D	110		1.7	0.42	mg/kg	1
Beryllium	7440-41-7	6010D	0.80		0.32	0.081	mg/kg	1
Cadmium	7440-43-9	6010D	ND		0.32	0.081	mg/kg	1
Calcium	7440-70-2	6010D	7600		320	40	mg/kg	1
Chromium	7440-47-3	6010D	23		0.64	0.16	mg/kg	1
Cobalt	7440-48-4	6010D	10		1.7	0.42	mg/kg	1
Copper	7440-50-8	6010D	21		0.64	0.29	mg/kg	1
Iron	7439-89-6	6010D	23000		6.4	2.9	mg/kg	1
Lead	7439-92-1	6010D	22		0.64	0.29	mg/kg	1
Magnesium	7439-95-4	6010D	6300		320	40	mg/kg	1
Manganese	7439-96-5	6010D	550		0.96	0.38	mg/kg	1
Mercury	7439-97-6	7471B	0.036	J	0.098	0.024	mg/kg	1
Nickel	7440-02-0	6010D	22		2.6	0.67	mg/kg	1
Potassium	7440-09-7	6010D	3300		320	40	mg/kg	1
Selenium	7782-49-2	6010D	0.55	J	1.3	0.52	mg/kg	1
Silver	7440-22-4	6010D	ND		0.64	0.16	mg/kg	1
Sodium	7440-23-5	6010D	ND		320	40	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.2	0.80	mg/kg	1
Vanadium	7440-62-2	6010D	39		3.2	0.80	mg/kg	1
Zinc	7440-66-6	6010D	74		3.2	0.80	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-012
Description: MPGI-SF-Soil-13B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1414
% Solids: 75.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1458	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	5000	J	8800	4200	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	41	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-012
Description: MPGI-SF-Soil-13B-121719
Matrix: Solid
Date Sampled: 12/17/2019 1414
% Solids: 75.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0706	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0938	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	19000		24	9.1	mg/kg	1
Antimony	7440-36-0	6010D	0.35	J	1.2	0.31	mg/kg	1
Arsenic	7440-38-2	6010D	12		0.91	0.30	mg/kg	1
Barium	7440-39-3	6010D	120		1.6	0.40	mg/kg	1
Beryllium	7440-41-7	6010D	0.85		0.30	0.077	mg/kg	1
Cadmium	7440-43-9	6010D	0.091	J	0.30	0.077	mg/kg	1
Calcium	7440-70-2	6010D	8200		300	38	mg/kg	1
Chromium	7440-47-3	6010D	26		0.61	0.15	mg/kg	1
Cobalt	7440-48-4	6010D	9.3		1.6	0.40	mg/kg	1
Copper	7440-50-8	6010D	25		0.61	0.27	mg/kg	1
Iron	7439-89-6	6010D	22000		6.1	2.8	mg/kg	1
Lead	7439-92-1	6010D	27		0.61	0.27	mg/kg	1
Magnesium	7439-95-4	6010D	6000		300	38	mg/kg	1
Manganese	7439-96-5	6010D	500		0.91	0.36	mg/kg	1
Mercury	7439-97-6	7471B	0.052	J	0.10	0.025	mg/kg	1
Nickel	7440-02-0	6010D	21		2.4	0.64	mg/kg	1
Potassium	7440-09-7	6010D	3600		300	38	mg/kg	1
Selenium	7782-49-2	6010D	0.51	J	1.2	0.49	mg/kg	1
Silver	7440-22-4	6010D	ND		0.61	0.15	mg/kg	1
Sodium	7440-23-5	6010D	ND		300	38	mg/kg	1
Thallium	7440-28-0	6010D	ND		3.0	0.76	mg/kg	1
Vanadium	7440-62-2	6010D	40		3.0	0.76	mg/kg	1
Zinc	7440-66-6	6010D	82		3.0	0.76	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-013
Description: MPGI-SF-Soil-14A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1210
% Solids: 82.8 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1517	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	8300		7900	3800	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-013
Description: MPGI-SF-Soil-14A-121919
Matrix: Solid
Date Sampled: 12/19/2019 1210
% Solids: 82.8 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0723	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0941	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	16000		23	8.6	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.29	mg/kg	1
Arsenic	7440-38-2	6010D	7.4		0.86	0.29	mg/kg	1
Barium	7440-39-3	6010D	96		1.5	0.37	mg/kg	1
Beryllium	7440-41-7	6010D	0.68		0.29	0.072	mg/kg	1
Cadmium	7440-43-9	6010D	0.12	J	0.29	0.072	mg/kg	1
Calcium	7440-70-2	6010D	5800		290	36	mg/kg	1
Chromium	7440-47-3	6010D	20		0.57	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	6.5		1.5	0.37	mg/kg	1
Copper	7440-50-8	6010D	16		0.57	0.26	mg/kg	1
Iron	7439-89-6	6010D	16000		5.7	2.6	mg/kg	1
Lead	7439-92-1	6010D	17		0.57	0.26	mg/kg	1
Magnesium	7439-95-4	6010D	4200		290	36	mg/kg	1
Manganese	7439-96-5	6010D	390		0.86	0.34	mg/kg	1
Mercury	7439-97-6	7471B	0.034	J	0.092	0.022	mg/kg	1
Nickel	7440-02-0	6010D	14		2.3	0.60	mg/kg	1
Potassium	7440-09-7	6010D	2100		290	36	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.47	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	7440-23-5	6010D	55	J	290	36	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.9	0.72	mg/kg	1
Vanadium	7440-62-2	6010D	35		2.9	0.72	mg/kg	1
Zinc	7440-66-6	6010D	71		2.9	0.72	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-014
Description: MPGI-SF-Soil-14A-121919-D
Matrix: Solid
Date Sampled: 12/19/2019 1212
% Solids: 84.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1537	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	10000		7800	3700	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		64	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-014
Description: MPGI-SF-Soil-14A-121919-D
Matrix: Solid
Date Sampled: 12/19/2019 1212
% Solids: 84.0 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0728	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0943	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	14000		22	8.3	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	8.1		0.83	0.28	mg/kg	1
Barium	7440-39-3	6010D	98		1.4	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	0.62		0.28	0.069	mg/kg	1
Cadmium	7440-43-9	6010D	0.18	J	0.28	0.069	mg/kg	1
Calcium	7440-70-2	6010D	5200		280	34	mg/kg	1
Chromium	7440-47-3	6010D	17		0.55	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	7.8		1.4	0.36	mg/kg	1
Copper	7440-50-8	6010D	15		0.55	0.25	mg/kg	1
Iron	7439-89-6	6010D	16000		5.5	2.5	mg/kg	1
Lead	7439-92-1	6010D	18		0.55	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	3700		280	34	mg/kg	1
Manganese	7439-96-5	6010D	620		0.83	0.33	mg/kg	1
Mercury	7439-97-6	7471B	0.033	J	0.095	0.023	mg/kg	1
Nickel	7440-02-0	6010D	15		2.2	0.58	mg/kg	1
Potassium	7440-09-7	6010D	1800		280	34	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.45	mg/kg	1
Silver	7440-22-4	6010D	ND		0.55	0.14	mg/kg	1
Sodium	7440-23-5	6010D	41	J	280	34	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.69	mg/kg	1
Vanadium	7440-62-2	6010D	31		2.8	0.69	mg/kg	1
Zinc	7440-66-6	6010D	66		2.8	0.69	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-015
Description: MPGI-SF-Soil-14B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1214
% Solids: 85.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1556	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	23000		7600	3600	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		65	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-015
Description: MPGI-SF-Soil-14B-121919
Matrix: Solid
Date Sampled: 12/19/2019 1214
% Solids: 85.7 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0734	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0945	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	13000		22	8.3	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.28	mg/kg	1
Arsenic	7440-38-2	6010D	9.5		0.83	0.28	mg/kg	1
Barium	7440-39-3	6010D	93		1.4	0.36	mg/kg	1
Beryllium	7440-41-7	6010D	0.64		0.28	0.070	mg/kg	1
Cadmium	7440-43-9	6010D	0.16	J	0.28	0.070	mg/kg	1
Calcium	7440-70-2	6010D	14000		280	35	mg/kg	1
Chromium	7440-47-3	6010D	17		0.55	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	7.9		1.4	0.36	mg/kg	1
Copper	7440-50-8	6010D	18		0.55	0.25	mg/kg	1
Iron	7439-89-6	6010D	18000		5.5	2.5	mg/kg	1
Lead	7439-92-1	6010D	19		0.55	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	8800		280	35	mg/kg	1
Manganese	7439-96-5	6010D	590		0.83	0.33	mg/kg	1
Mercury	7439-97-6	7471B	0.025	J	0.096	0.023	mg/kg	1
Nickel	7440-02-0	6010D	17		2.2	0.58	mg/kg	1
Potassium	7440-09-7	6010D	2100		280	35	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.45	mg/kg	1
Silver	7440-22-4	6010D	ND		0.55	0.14	mg/kg	1
Sodium	7440-23-5	6010D	80	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.69	mg/kg	1
Vanadium	7440-62-2	6010D	30		2.8	0.69	mg/kg	1
Zinc	7440-66-6	6010D	99		2.8	0.69	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH - DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-016
Description: MPGI-SF-Soil-14C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1216
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3550C	8015C	1	12/24/2019 1615	CHG	12/23/2019 2339	39962

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	13000		8200	3900	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl		57	55-120

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-016
Description: MPGI-SF-Soil-14C-121919
Matrix: Solid
Date Sampled: 12/19/2019 1216
% Solids: 81.5 12/20/2019 2143
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3050B	6010D	1	12/26/2019 0739	LLL	12/24/2019 0905	39838
1	7471B	7471B	1	12/21/2019 0948	KSH2	12/20/2019 1708	39735

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	12000		23	8.5	mg/kg	1
Antimony	7440-36-0	6010D	ND		1.1	0.29	mg/kg	1
Arsenic	7440-38-2	6010D	10		0.85	0.28	mg/kg	1
Barium	7440-39-3	6010D	110		1.5	0.37	mg/kg	1
Beryllium	7440-41-7	6010D	0.59		0.28	0.071	mg/kg	1
Cadmium	7440-43-9	6010D	0.22	J	0.28	0.071	mg/kg	1
Calcium	7440-70-2	6010D	12000		280	35	mg/kg	1
Chromium	7440-47-3	6010D	16		0.57	0.14	mg/kg	1
Cobalt	7440-48-4	6010D	9.4		1.5	0.37	mg/kg	1
Copper	7440-50-8	6010D	17		0.57	0.25	mg/kg	1
Iron	7439-89-6	6010D	19000		5.7	2.6	mg/kg	1
Lead	7439-92-1	6010D	20		0.57	0.25	mg/kg	1
Magnesium	7439-95-4	6010D	6500		280	35	mg/kg	1
Manganese	7439-96-5	6010D	720		0.85	0.34	mg/kg	1
Mercury	7439-97-6	7471B	0.027	J	0.089	0.021	mg/kg	1
Nickel	7440-02-0	6010D	17		2.3	0.59	mg/kg	1
Potassium	7440-09-7	6010D	2000		280	35	mg/kg	1
Selenium	7782-49-2	6010D	ND		1.1	0.46	mg/kg	1
Silver	7440-22-4	6010D	ND		0.57	0.14	mg/kg	1
Sodium	7440-23-5	6010D	39	J	280	35	mg/kg	1
Thallium	7440-28-0	6010D	ND		2.8	0.71	mg/kg	1
Vanadium	7440-62-2	6010D	29		2.8	0.71	mg/kg	1
Zinc	7440-66-6	6010D	81		2.8	0.71	mg/kg	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TPH-DRO

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-017
Description: MPGI-RB-121719
Matrix: Aqueous
Date Sampled: 12/19/2019 1330
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8015C	1	12/27/2019 1102	CHG	12/26/2019 1928	40144

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
TPH-DRO		8015C	ND		200	43	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
o - Terphenyl	N	48	53-118

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals

Client: Tetra Tech, Inc.
Laboratory ID: UL20021-017
Description: MPGI-RB-121719
Matrix: Aqueous
Date Sampled: 12/19/2019 1330
Date Received: 12/20/2019

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		7470A	1	12/26/2019 2221	JMH	12/26/2019 1256	39898
1	3005A	6010D	1	12/26/2019 1107	LLL	12/24/2019 1021	39905

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
Aluminum	7429-90-5	6010D	ND		0.40	0.10	mg/L	1
Antimony	7440-36-0	6010D	ND		0.020	0.0070	mg/L	1
Arsenic	7440-38-2	6010D	0.0031	J	0.015	0.0025	mg/L	1
Barium	7440-39-3	6010D	ND		0.025	0.0031	mg/L	1
Beryllium	7440-41-7	6010D	ND		0.0050	0.00060	mg/L	1
Cadmium	7440-43-9	6010D	ND		0.0050	0.00060	mg/L	1
Calcium	7440-70-2	6010D	ND		5.0	0.63	mg/L	1
Chromium	7440-47-3	6010D	ND		0.010	0.0013	mg/L	1
Cobalt	7440-48-4	6010D	ND		0.025	0.0031	mg/L	1
Copper	7440-50-8	6010D	ND		0.010	0.0020	mg/L	1
Iron	7439-89-6	6010D	ND		0.10	0.040	mg/L	1
Lead	7439-92-1	6010D	ND		0.010	0.0047	mg/L	1
Magnesium	7439-95-4	6010D	ND		5.0	0.63	mg/L	1
Manganese	7439-96-5	6010D	ND		0.015	0.0019	mg/L	1
Mercury	7439-97-6	7470A	ND		0.00020	0.000091	mg/L	1
Nickel	7440-02-0	6010D	ND		0.040	0.0050	mg/L	1
Potassium	7440-09-7	6010D	ND		5.0	0.63	mg/L	1
Selenium	7782-49-2	6010D	ND		0.020	0.0085	mg/L	1
Silver	7440-22-4	6010D	ND		0.010	0.0021	mg/L	1
Sodium	7440-23-5	6010D	0.71	J	5.0	0.63	mg/L	1
Thallium	7440-28-0	6010D	ND		0.050	0.0063	mg/L	1
Vanadium	7440-62-2	6010D	ND		0.050	0.0063	mg/L	1
Zinc	7440-66-6	6010D	ND		0.020	0.0025	mg/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
H = Out of holding time
W = Reported on wet weight basis

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

TPH - DRO - MB

Sample ID: UQ39962-001
Batch: 39962
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/23/2019 2339

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/24/2019 1011

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		101	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - LCS

Sample ID: UQ39962-002
Batch: 39962
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/23/2019 2339

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	75000		1	91	70-130	12/24/2019 1030

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		106	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MB

Sample ID: UQ40054-001
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	6700	3200	ug/kg	12/26/2019 1021

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		100	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - LCS

Sample ID: UQ40054-002
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	83000	78000		1	93	70-130	12/26/2019 1040

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		108	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MS

Sample ID: UL20021-001MS
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	41000	110000	69000	N	1	26	70-130	12/26/2019 1157

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		69	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH - DRO - MSD

Sample ID: UL20021-001MD
Batch: 40054
Analytical Method: 8015C

Matrix: Solid
Prep Method: 3550C
Prep Date: 12/25/2019 1907

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	41000	110000	74000	N	1	30	6.4	70-130	20	12/26/2019 1216

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		58	55-120

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - MB

Sample ID: UQ40144-001
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
TPH-DRO	ND		1	200	43	ug/L	12/27/2019 1024

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		74	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - LCS

Sample ID: UQ40144-002
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	2000	1200	N	1	60	70-130	12/27/2019 1043

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		81	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - MS

Sample ID: UL20021-017MS
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
TPH-DRO	ND	2000	1100	N	1	57	70-130	12/27/2019 1121

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		74	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TPH-DRO - MSD

Sample ID: UL20021-017MD
Batch: 40144
Analytical Method: 8015C

Matrix: Aqueous
Prep Method: 3520C
Prep Date: 12/26/2019 1928

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
TPH-DRO	ND	2000	1300	N	1	63	11	70-130	20	12/27/2019 1140

Surrogate	Q	% Rec	Acceptance Limit
o - Terphenyl		84	53-118

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39838-001
Batch: 39838
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/24/2019 0905

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	20	7.5	mg/kg	12/26/2019 0644
Antimony	ND		1	1.0	0.25	mg/kg	12/26/2019 0644
Arsenic	ND		1	0.75	0.25	mg/kg	12/26/2019 0644
Barium	ND		1	1.3	0.33	mg/kg	12/26/2019 0644
Beryllium	ND		1	0.25	0.063	mg/kg	12/26/2019 0644
Cadmium	ND		1	0.25	0.063	mg/kg	12/26/2019 0644
Calcium	ND		1	250	31	mg/kg	12/26/2019 0644
Chromium	ND		1	0.50	0.13	mg/kg	12/26/2019 0644
Cobalt	ND		1	1.3	0.33	mg/kg	12/26/2019 0644
Copper	ND		1	0.50	0.23	mg/kg	12/26/2019 0644
Iron	ND		1	5.0	2.3	mg/kg	12/26/2019 0644
Lead	ND		1	0.50	0.23	mg/kg	12/26/2019 0644
Magnesium	ND		1	250	31	mg/kg	12/26/2019 0644
Manganese	ND		1	0.75	0.30	mg/kg	12/26/2019 0644
Nickel	ND		1	2.0	0.53	mg/kg	12/26/2019 0644
Potassium	ND		1	250	31	mg/kg	12/26/2019 0644
Selenium	ND		1	1.0	0.41	mg/kg	12/26/2019 0644
Silver	ND		1	0.50	0.13	mg/kg	12/26/2019 0644
Sodium	ND		1	250	31	mg/kg	12/26/2019 0644
Thallium	ND		1	2.5	0.63	mg/kg	12/26/2019 0644
Vanadium	ND		1	2.5	0.63	mg/kg	12/26/2019 0644
Zinc	ND		1	2.5	0.63	mg/kg	12/26/2019 0644

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39838-002
Batch: 39838
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/24/2019 0905

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	1000	960		1	96	80-120	12/26/2019 0650
Antimony	50	48		1	97	80-120	12/26/2019 0650
Arsenic	250	250		1	102	80-120	12/26/2019 0650
Barium	500	490		1	98	80-120	12/26/2019 0650
Beryllium	100	100		1	100	80-120	12/26/2019 0650
Cadmium	50	47		1	93	80-120	12/26/2019 0650
Calcium	2000	2000		1	98	80-120	12/26/2019 0650
Chromium	250	240		1	97	80-120	12/26/2019 0650
Cobalt	100	98		1	98	80-120	12/26/2019 0650
Copper	100	98		1	98	80-120	12/26/2019 0650
Iron	1000	960		1	96	80-120	12/26/2019 0650
Lead	250	250		1	98	80-120	12/26/2019 0650
Magnesium	2000	1900		1	97	80-120	12/26/2019 0650
Manganese	100	97		1	97	80-120	12/26/2019 0650
Nickel	100	98		1	98	80-120	12/26/2019 0650
Potassium	2000	2000		1	100	80-120	12/26/2019 0650
Selenium	50	49		1	97	80-120	12/26/2019 0650
Silver	50	47		1	94	80-120	12/26/2019 0650
Sodium	2000	2000		1	98	80-120	12/26/2019 0650
Thallium	40	40		1	99	80-120	12/26/2019 0650
Vanadium	100	95		1	95	80-120	12/26/2019 0650
Zinc	100	97		1	97	80-120	12/26/2019 0650

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ39905-001
Batch: 39905
Analytical Method: 6010D

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 12/24/2019 1021

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	0.40	0.10	mg/L	12/26/2019 0955
Antimony	ND		1	0.020	0.0070	mg/L	12/26/2019 0955
Arsenic	ND		1	0.015	0.0025	mg/L	12/26/2019 0955
Barium	ND		1	0.025	0.0031	mg/L	12/26/2019 0955
Beryllium	ND		1	0.0050	0.00060	mg/L	12/26/2019 0955
Cadmium	0.00060	J	1	0.0050	0.00060	mg/L	12/26/2019 0955
Calcium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Chromium	ND		1	0.010	0.0013	mg/L	12/26/2019 0955
Cobalt	ND		1	0.025	0.0031	mg/L	12/26/2019 0955
Copper	ND		1	0.010	0.0020	mg/L	12/26/2019 0955
Iron	ND		1	0.10	0.040	mg/L	12/26/2019 0955
Lead	ND		1	0.010	0.0047	mg/L	12/26/2019 0955
Magnesium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Manganese	ND		1	0.015	0.0019	mg/L	12/26/2019 0955
Nickel	ND		1	0.040	0.0050	mg/L	12/26/2019 0955
Potassium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Selenium	ND		1	0.020	0.0085	mg/L	12/26/2019 0955
Silver	ND		1	0.010	0.0021	mg/L	12/26/2019 0955
Sodium	ND		1	5.0	0.63	mg/L	12/26/2019 0955
Thallium	ND		1	0.050	0.0063	mg/L	12/26/2019 0955
Vanadium	ND		1	0.050	0.0063	mg/L	12/26/2019 0955
Zinc	ND		1	0.020	0.0025	mg/L	12/26/2019 0955

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals - LCS

Sample ID: UQ39905-002
Batch: 39905
Analytical Method: 6010D

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 12/24/2019 1021

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	20	21		1	103	80-120	12/26/2019 1000
Antimony	0.40	0.39		1	96	80-120	12/26/2019 1000
Arsenic	0.40	0.42		1	105	80-120	12/26/2019 1000
Barium	2.0	2.1		1	106	80-120	12/26/2019 1000
Beryllium	2.0	2.1		1	107	80-120	12/26/2019 1000
Cadmium	0.40	0.40		1	99	80-120	12/26/2019 1000
Calcium	40	41		1	103	80-120	12/26/2019 1000
Chromium	2.0	2.1		1	104	80-120	12/26/2019 1000
Cobalt	2.0	2.0		1	100	80-120	12/26/2019 1000
Copper	2.0	2.1		1	103	80-120	12/26/2019 1000
Iron	20	20		1	102	80-120	12/26/2019 1000
Lead	0.40	0.41		1	102	80-120	12/26/2019 1000
Magnesium	40	41		1	101	80-120	12/26/2019 1000
Manganese	2.0	2.1		1	104	80-120	12/26/2019 1000
Nickel	2.0	2.0		1	99	80-120	12/26/2019 1000
Potassium	40	43		1	107	80-120	12/26/2019 1000
Selenium	0.40	0.40		1	101	80-120	12/26/2019 1000
Silver	0.40	0.42		1	104	80-120	12/26/2019 1000
Sodium	40	44		1	109	80-120	12/26/2019 1000
Thallium	0.80	0.84		1	105	80-120	12/26/2019 1000
Vanadium	2.0	2.1		1	104	80-120	12/26/2019 1000
Zinc	2.0	2.0		1	99	80-120	12/26/2019 1000

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ40381-001
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Aluminum	ND		1	20	7.5	mg/kg	12/31/2019 0647
Antimony	ND		1	1.0	0.25	mg/kg	12/31/2019 0647
Arsenic	ND		1	0.75	0.25	mg/kg	12/31/2019 0647
Barium	ND		1	1.3	0.33	mg/kg	12/31/2019 0647
Beryllium	ND		1	0.25	0.063	mg/kg	12/31/2019 0647
Cadmium	ND		1	0.25	0.063	mg/kg	12/31/2019 0647
Calcium	ND		1	250	31	mg/kg	12/31/2019 0647
Chromium	ND		1	0.50	0.13	mg/kg	12/31/2019 0647
Cobalt	ND		1	1.3	0.33	mg/kg	12/31/2019 0647
Copper	ND		1	0.50	0.23	mg/kg	12/31/2019 0647
Iron	ND		1	5.0	2.3	mg/kg	12/31/2019 0647
Lead	ND		1	0.50	0.23	mg/kg	12/31/2019 0647
Magnesium	ND		1	250	31	mg/kg	12/31/2019 0647
Manganese	ND		1	0.75	0.30	mg/kg	12/31/2019 0647
Nickel	ND		1	2.0	0.53	mg/kg	12/31/2019 0647
Potassium	ND		1	250	31	mg/kg	12/31/2019 0647
Selenium	ND		1	1.0	0.41	mg/kg	12/31/2019 0647
Silver	ND		1	0.50	0.13	mg/kg	12/31/2019 0647
Sodium	ND		1	250	31	mg/kg	12/31/2019 0647
Thallium	ND		1	2.5	0.63	mg/kg	12/31/2019 0647
Vanadium	ND		1	2.5	0.63	mg/kg	12/31/2019 0647
Zinc	ND		1	2.5	0.63	mg/kg	12/31/2019 0647

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ40381-002
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	1000	1000		1	100	80-120	12/31/2019 0652
Antimony	50	48		1	96	80-120	12/31/2019 0652
Arsenic	250	260		1	103	80-120	12/31/2019 0652
Barium	500	510		1	101	80-120	12/31/2019 0652
Beryllium	100	100		1	105	80-120	12/31/2019 0652
Cadmium	50	47		1	94	80-120	12/31/2019 0652
Calcium	2000	2000		1	100	80-120	12/31/2019 0652
Chromium	250	260		1	102	80-120	12/31/2019 0652
Cobalt	100	100		1	100	80-120	12/31/2019 0652
Copper	100	100		1	102	80-120	12/31/2019 0652
Iron	1000	1000		1	100	80-120	12/31/2019 0652
Lead	250	250		1	101	80-120	12/31/2019 0652
Magnesium	2000	2000		1	100	80-120	12/31/2019 0652
Manganese	100	100		1	102	80-120	12/31/2019 0652
Nickel	100	99		1	99	80-120	12/31/2019 0652
Potassium	2000	2000		1	98	80-120	12/31/2019 0652
Selenium	50	49		1	99	80-120	12/31/2019 0652
Silver	50	49		1	98	80-120	12/31/2019 0652
Sodium	2000	2000		1	100	80-120	12/31/2019 0652
Thallium	40	41		1	102	80-120	12/31/2019 0652
Vanadium	100	100		1	102	80-120	12/31/2019 0652
Zinc	100	99		1	99	80-120	12/31/2019 0652

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-001MS
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Aluminum	21000	1300	30000	N	1	705	75-125	12/31/2019 0704
Antimony	ND	66	28	N	1	42	75-125	12/31/2019 0704
Arsenic	14	330	370		1	108	75-125	12/31/2019 0704
Barium	220	660	850		1	95	75-125	12/31/2019 0704
Beryllium	0.98	130	140		1	106	75-125	12/31/2019 0704
Cadmium	0.47	66	67		1	101	75-125	12/31/2019 0704
Calcium	16000	2600	14000	N	1	-105	75-125	12/31/2019 0704
Chromium	27	330	360		1	101	75-125	12/31/2019 0704
Cobalt	15	130	140		1	98	75-125	12/31/2019 0704
Copper	26	130	160		1	105	75-125	12/31/2019 0704
Iron	26000	1300	28000	N	1	140	75-125	12/31/2019 0704
Lead	27	330	350		1	100	75-125	12/31/2019 0704
Magnesium	11000	2600	11000	N	1	0.094	75-125	12/31/2019 0704
Manganese	1700	130	930	N	2	-566	75-125	12/31/2019 0839
Nickel	34	130	160		1	93	75-125	12/31/2019 0704
Potassium	3200	2600	7900	N	1	177	75-125	12/31/2019 0704
Selenium	ND	66	66		2	100	75-125	12/31/2019 0839
Silver	ND	66	67		1	103	75-125	12/31/2019 0704
Sodium	130	2600	2900		1	104	75-125	12/31/2019 0704
Thallium	ND	53	48		1	92	75-125	12/31/2019 0704
Vanadium	46	130	190		1	110	75-125	12/31/2019 0704
Zinc	99	130	230		1	97	75-125	12/31/2019 0704

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-001MD
Batch: 40381
Analytical Method: 6010D

Matrix: Solid
Prep Method: 3050B
Prep Date: 12/30/2019 0956

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Aluminum	21000	1300	30000	N	1	721	0.38	75-125	20	12/31/2019 0710
Antimony	ND	63	27	N	1	42	4.3	75-125	20	12/31/2019 0710
Arsenic	14	320	360		1	108	3.4	75-125	20	12/31/2019 0710
Barium	220	630	810		1	92	4.8	75-125	20	12/31/2019 0710
Beryllium	0.98	130	130		1	105	4.1	75-125	20	12/31/2019 0710
Cadmium	0.47	63	64		1	101	3.4	75-125	20	12/31/2019 0710
Calcium	16000	2500	14000	N	1	-98	1.9	75-125	20	12/31/2019 0710
Chromium	27	320	350		1	101	3.2	75-125	20	12/31/2019 0710
Cobalt	15	130	140		1	97	3.5	75-125	20	12/31/2019 0710
Copper	26	130	160		1	105	3.5	75-125	20	12/31/2019 0710
Iron	26000	1300	28000		1	105	1.8	75-125	20	12/31/2019 0710
Lead	27	320	340		1	99	4.1	75-125	20	12/31/2019 0710
Magnesium	11000	2500	11000	N	1	-1.8	0.43	75-125	20	12/31/2019 0710
Manganese	1700	130	840	N	2	-662	11	75-125	20	12/31/2019 0845
Nickel	34	130	150		1	93	2.8	75-125	20	12/31/2019 0710
Potassium	3200	2500	7900	N	1	184	0.20	75-125	20	12/31/2019 0710
Selenium	ND	63	65		2	103	1.0	75-125	20	12/31/2019 0845
Silver	ND	63	65		1	103	3.6	75-125	20	12/31/2019 0710
Sodium	130	2500	2800		1	106	1.6	75-125	20	12/31/2019 0710
Thallium	ND	51	47		1	93	2.6	75-125	20	12/31/2019 0710
Vanadium	46	130	190		1	110	2.7	75-125	20	12/31/2019 0710
Zinc	99	130	220		1	98	1.4	75-125	20	12/31/2019 0710

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals - MB

Sample ID: UQ39735-001
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	12/21/2019 0929

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39735-002
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.85		1	102	80-120	12/21/2019 0931

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MS

Sample ID: UL20021-016MS
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.027	1.0	1.2		1	114	80-120	12/21/2019 0955

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-016MD
Batch: 39735
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/20/2019 1708

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.027	1.0	1.2		1	111	2.1	80-120	20	12/21/2019 0957

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals - MB

Sample ID: UQ39898-001
Batch: 39898
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 12/26/2019 1256

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.00020	0.000091	mg/L	12/26/2019 2215

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ39898-002
Batch: 39898
Analytical Method: 7470A

Matrix: Aqueous
Prep Method:
Prep Date: 12/26/2019 1256

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0020	0.0020		1	100	80-120	12/26/2019 2218

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MB

Sample ID: UQ40382-001
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
Mercury	ND		1	0.083	0.020	mg/kg	12/30/2019 1837

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - LCS

Sample ID: UQ40382-002
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.83	0.83		1	99	80-120	12/30/2019 1839

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

TAL Metals - MS

Sample ID: UL20021-001MS
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.028	1.1	1.3		1	117	80-120	12/30/2019 1844

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

TAL Metals - MSD

Sample ID: UL20021-001MD
Batch: 40382
Analytical Method: 7471B

Matrix: Solid
Prep Method: 7471B
Prep Date: 12/30/2019 1349

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.028	1.0	1.2		1	115	4.6	80-120	20	12/30/2019 1847

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
ND = Not detected at or above the DL

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Chain of Custody

and

Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Chain of Custody Record

Number

Client: Tetra Tech	Report to Contact: Andre Baker and Brendan Martin	Telephone No. / E-mail: andre.baker@tetratech.com, brendan.martin@tetratech.com	Quote No. 221613
Address: 1 S. Wacker Drive, Suite 3700	Sampler's Signature: x Brendan Martin	Analysis (Attach list if more space is needed)	Page 1 of 2
City: Chicago / State: IL / Zip Code: 60606	Printed Name: Brendan Martin		
Project Name: Joliet Chemical Fire PRP Cleanup Site			
Project Number: 103X9031006900C2AJ001	P.O. No.: SHLY-1		

UL20021

NM&

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Solid	Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	TPH-DRO/SW-846 8015C	TAL Metals (with mercury)/SW-846 6010D/7470A/7471B	Remarks / Cooler I.D.
MPGI-SF-Soil-09-121719	121719	0940			X		2								X	X	Extra Volume for MS/MSD
MPGI-SF-Soil-10A-121719	121719	1140			X		1								X	X	
MPGI-SF-Soil-10B-121719	121719	1144			X		1								X	X	
MPGI-SF-Soil-10C-121719	121719	1146			X		1								X	X	
MPGI-SF-Soil-11A-121919	121919	1240			X		1								X	X	
MPGI-SF-Soil-11B-121919	121919	1242			X		1								X	X	
MPGI-SF-Soil-11C-121919	121919	1244			X		1								X	X	
MPGI-SF-Soil-12A-121919	121919	1310			X		1								X	X	
MPGI-SF-Soil-12B-121819	121819	1001			X		1								X	X	
MPGI-SF-Soil-12C-121919	121919	1312			X		1								X	X	

Turn Around Time Required (Prior lab approval required for expedited TAT)

☐ Standard ☒ Rush (Please Specify) 2/3 day

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab

Possible Hazard Identification (List any known hazards in the remarks)

☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown

QC Requirements

	Date	Time
1. Relinquished by: Brendan Martin Brendan Martin	121919	1430
2. Relinquished by:		
3. Relinquished by:		
4. Relinquished by: FedEx	12.20.19	1308

	Date	Time
1. Received by		
2. Received by		
3. Received by		
4. Laboratory Received by: Erin Brown	12.20.19	1308

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack
Receipt Temp. 3.1 °C

Document Number: ME0020W-01

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number

Client: Tetra Tech	Report to Contact: Andre Baker and Brendan Martin	Telephone No. / E-mail: andre.baker@tetratech.com, brendan.martin@tetratech.com	Quote No.
Address: S. Wacker Drive, Suite 3700	Sampler's Signature: x [signature]	Analysis (Attach list if more space is needed)	Page 2 of 2
City: Chicago; State: IL; Zip Code: 60606	Printed Name: Brendan Martin		UL20021
Project Name: Joliet Chemical Fire PRP Cleanup Site			NI/S
Project Number: 03X9031006900002AJ001; P.O No.: SHLY-1			

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non-Aqueous	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	5035 Kit	TCL VOCs/SW-846 8260C	TCL SVOCs/SW-846 8270D	TPH-DRO/SW-846 8015C	TAL Metals (with mercury)/SW-846 6010D/7470A/7471B	Remarks / Cooler I.D.
MPGI-SF-Soil-13A-121719	121719	1410			X		1								X	X	
MPGI-SF-Soil-13B-121719	121719	1414			X		1								X	X	
MPGI-SF-Soil-14A-121919	121919	1210			X		1								X	X	
MPGI-SF-Soil-14A-121919-D	121919	1212			X		1								X	X	
MPGI-SF-Soil-14B-121919	121919	1214			X		1								X	X	
MPGI-SF-Soil-14C-121919	121919	1216			X		1								X	X	
MPGI-RB-121719	121719	1330		X			1								X	X	Rinsate Blank

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	Possible Hazard Identification (List any known hazards in the remarks)	QC Requirements
☐ Standard ☒ Rush (Please Specify) 2/3 day	☐ Return to Client ☒ Disposal by Lab	☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ SDS provided ☐ Unknown	

	Date	Time		Date	Time
1. Relinquished by: [signature] Brendan Martin	121919	1430	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: FedEx	12-20-19	1308	4. Laboratory Received by: [signature]	12-20-19	1308

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Y ☐ N ☐ Ice Pack
Receipt Temp. 3.1 °C

Document Number: ME002OW-01

Shealy Environmental Services, Inc.
Document Number: MF0018C-14

Page: 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Tetra Tech Cooler Inspected by/date: JSH / 12/20/19 Lot #: UL20021

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 19-2313

3.1 / 3.1 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☐ Yes	☑ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 22663

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JSH Date: 12/20/19

Comments:

Report Revision Notice

Revision Date:	02/21/2020
Initial Report Submission Date:	12/08/2019
Lot Number:	UL03011
Client:	TetraTech
PM:	NMS
Classification of Report Revision:	XClient identified ☐Non-conformance

What changed from original report: (please be specific)

The AIM LCS Summary forms are removed from this level 4 report.

The initial calibration verification (ICV) analyzed on 12/5/19 at 16:39 was not processed correctly. An revised ICV form is included in this report.

The sample ID for UL03011-003 is updated from MPG1-22-Water-RW-120219 to from MPGI-22-Water-RW-120219.

Report Revision Notice

Revision Date:	02/25/2020
Initial Report Submission Date:	12/27/2019
Lot Number:	UL20021
Client:	Tetra Tech
PM:	NMS
Classification of Report Revision:	XClient identified ☐Non-conformance

What changed from original report: (please be specific)

This report is revised to update the sample ID for UL20021-017. It was entered as MPG1-RB-121719 and is updated to MPGI-RB-121719.

13-Nov-2019

Andre Baker
Tetra Tech EM Inc.
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

Re: **Joliet Chemical Fire PRP Clean UP** Work Order: **19110801**

Dear Andre,

ALS Environmental received 6 samples on 09-Nov-2019 11:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 15.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 13-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: **19110801**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19110801-01	MPGI-I80-Soil-01-110819	Soil		11/8/2019 13:10	11/9/2019 11:30	☐
19110801-02	MPGI-I80-Soil-02-110819	Soil		11/8/2019 13:12	11/9/2019 11:30	☐
19110801-03	MPGI-I80-Soil-03-110819	Soil		11/8/2019 13:14	11/9/2019 11:30	☐
19110801-04	MPGI-I80-Soil-04-110819	Soil		11/8/2019 13:16	11/9/2019 11:30	☐
19110801-05	MPGI-I80-Soil-05-110819	Soil		11/8/2019 13:18	11/9/2019 11:30	☐
19110801-06	MPGI-RB-01-110819	Water		11/8/2019 13:20	11/9/2019 11:30	☐

Client:	Tetra Tech EM Inc.
Project:	Joliet Chemical Fire PRP Clean UP
Work Order:	19110801

Case Narrative

Samples for the above noted Work Order were received on 11/09/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-01-110819
Collection Date: 11/8/2019 01:10 PM

Work Order: 19110801
Lab ID: 19110801-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**9.2**		**3.6**	**6.4**	**mg/Kg-dry**	1	11/12/2019 20:55
Surr: 4-Terphenyl-d14	*66.4*			*33-111*	*%REC*	1	11/12/2019 20:55
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**22**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-02-110819
Collection Date: 11/8/2019 01:12 PM

Work Order: 19110801
Lab ID: 19110801-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**12**		**3.6**	**6.3**	**mg/Kg-dry**	1	11/13/2019 04:40
Surr: 4-Terphenyl-d14	*65.0*			*33-111*	*%REC*	1	11/13/2019 04:40
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**21**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-03-110819
Collection Date: 11/8/2019 01:14 PM

Work Order: 19110801
Lab ID: 19110801-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**6.3**	J	**3.8**	**6.6**	**mg/Kg-dry**	1	11/13/2019 05:09
Surr: 4-Terphenyl-d14	*63.5*			*33-111*	*%REC*	1	11/13/2019 05:09
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**25**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-04-110819
Collection Date: 11/8/2019 01:16 PM

Work Order: 19110801
Lab ID: 19110801-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**7.3**		**3.7**	**6.5**	**mg/Kg-dry**	1	11/13/2019 05:38
Surr: 4-Terphenyl-d14	*67.5*			*33-111*	*%REC*	1	11/13/2019 05:38
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**25**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *13-Nov-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-I80-Soil-05-110819
Collection Date: 11/8/2019 01:18 PM

Work Order: 19110801
Lab ID: 19110801-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 11/12/19		Analyst: **BCM**
DRO (C10-C28)	**18**		**3.6**	**6.3**	**mg/Kg-dry**	1	11/13/2019 06:07
Surr: 4-Terphenyl-d14	*69.6*			*33-111*	*%REC*	1	11/13/2019 06:07
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**22**		**0.10**	**0.10**	**% of sample**	1	11/11/2019 17:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-RB-01-110819
Collection Date: 11/8/2019 01:20 PM

Work Order: 19110801
Lab ID: 19110801-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW3511 / 11/11/19		Analyst: **BCM**
DRO (C10-C28)	**0.080**	J	**0.040**	**0.10**	**mg/L**	1	11/12/2019 09:01
Surr: 4-Terphenyl-d14	*83.1*			*35-161*	*%REC*	1	11/12/2019 09:01

Note: See Qualifiers page for a list of qualifiers and their definitions.

QC BATCH REPORT

Batch ID: **145429** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **dblks1-145429-145429** Units: **mg/Kg** Analysis Date: **11/12/2019 06:58 P**

Client ID: Run ID: **GC8_191112A** SeqNo: **6053407** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.167*	0	*3.33*	0	*65.1*	*33-111*	0			

LCS Sample ID: **DLCSS1-145429-145429** Units: **mg/Kg** Analysis Date: **11/12/2019 07:27 P**

Client ID: Run ID: **GC8_191112A** SeqNo: **6053408** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	355.2	5.0	333	0	107	58-111	0			
Surr: 4-Terphenyl-d14	*2.087*	0	*3.33*	0	*62.7*	*33-111*	0			

MS Sample ID: **19110801-01A MS** Units: **mg/Kg** Analysis Date: **11/12/2019 07:57 P**

Client ID: **MPGI-I80-Soil-01-110819** Run ID: **GC8_191112A** SeqNo: **6053409** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	352.2	5.0	329.8	7.202	105	58-111	0			
Surr: 4-Terphenyl-d14	*2.005*	0	*3.298*	0	*60.8*	*33-111*	0			

MSD Sample ID: **19110801-01A MSD** Units: **mg/Kg** Analysis Date: **11/12/2019 08:26 P**

Client ID: **MPGI-I80-Soil-01-110819** Run ID: **GC8_191112A** SeqNo: **6053410** Prep Date: **11/12/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	343.3	5.0	331.5	7.202	101	58-111	343.3	0	30	
Surr: 4-Terphenyl-d14	*1.903*	0	*3.315*	0	*57.4*	*33-111*	1.903	*0*	*30*	

The following samples were analyzed in this batch:

19110801-01A	19110801-02A	19110801-03A
19110801-04A	19110801-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19110801
Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **145430** Instrument ID **GC8** Method: **SW8015C**

MBLK Sample ID: **DBLKW1-145430-145430** Units: **mg/L** Analysis Date: **11/12/2019 06:36 A**
Client ID: Run ID: **GC8_191111D** SeqNo: **6052425** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	0.10								
Surr: 4-Terphenyl-d14	*0.03033*	0	*0.0417*	0	*72.7*	*35-161*	0			

LCS Sample ID: **DLCSW1-145430-145430** Units: **mg/L** Analysis Date: **11/12/2019 07:34 A**
Client ID: Run ID: **GC8_191111D** SeqNo: **6052427** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.328	0.10	4.17	0	104	60-150	0			
Surr: 4-Terphenyl-d14	*0.033*	0	*0.0417*	0	*79.1*	*35-161*	0			

MS Sample ID: **19110801-06A MS** Units: **mg/L** Analysis Date: **11/12/2019 08:03 A**
Client ID: **MPGI-RB-01-110819** Run ID: **GC8_191111D** SeqNo: **6052428** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.458	0.10	4.17	0.08	105	60-150	0			
Surr: 4-Terphenyl-d14	*0.0345*	0	*0.0417*	0	*82.7*	*35-161*	0			

MSD Sample ID: **19110801-06A MSD** Units: **mg/L** Analysis Date: **11/12/2019 08:32 A**
Client ID: **MPGI-RB-01-110819** Run ID: **GC8_191111D** SeqNo: **6052429** Prep Date: **11/11/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	4.633	0.10	4.17	0.08	109	60-150	4.458	3.84	30	
Surr: 4-Terphenyl-d14	*0.03483*	0	*0.0417*	0	*83.5*	*35-161*	0.0345	*0.962*	*30*	

The following samples were analyzed in this batch: 19110801-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19110801
Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **R275058** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R275058** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048372** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R275058** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048371** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19110833-04A DUP** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048368** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.18	0.10	0	0	0	0-0	11.34	1.42	10	H

DUP Sample ID: **19110833-05A DUP** Units: **% of sample** Analysis Date: **11/11/2019 05:11 P**
Client ID: Run ID: **MOIST_191111E** SeqNo: **6048370** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	13.53	0.10	0	0	0	0-0	13.05	3.61	10	H

The following samples were analyzed in this batch:

19110801-01A	19110801-02A	19110801-03A
19110801-04A	19110801-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

19110801

ALS Environmental

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☐ Standard TAT (List due date):
OFFICE:		☒ Non Standard or urgent TAT (List due date): 24 hour
PROJECT: 103x903160690002aj001	ALS QUOTE NO.:	
ORDER NUMBER:		
PROJECT MANAGER: Andre Baker	CONTACT PH: 8353793749	
SAMPLER: Brendan Martin	SAMPLER MOBILE:	
COC emailed to ALS? (~~YES~~) NO	EDD FORMAT (or default):	
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com		
Email Invoice to (will default to PM if no other addresses are listed):		

COC SEQUENCE NUMBER (Circle)
COC: 1 2 3 4 5 6 7
OF: 1 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Brendan Martin	FED EX	FED EX	
DATE/TIME: 11/08/19 1400	DATE/TIME:	DATE/TIME:	DATE/TIME: 11/9/19 1130

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SR2 4.4°C

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO(SW846 8015	Percent Solids							
1	MPGI-I80-Soil-01-110819	110819 1310	Soil	None	1	X	X							
2	MPGI-I80-Soil-02-110819	110819 1312	Soil		1	X	X							
3	MPGI-I80-Soil-03-110819	110819 1314	Soil		1	X	X							
4	MPGI-I80-Soil-04-110819	110819 1316	Soil		1	X	X							
5	MPGI-I80-Soil-05-110819	110819 1318	Soil		1	X	X							Dup of Sample "02"
	~~MPGI-I80-Soil-06-110819~~	~~110819~~	~~Soil~~		~~1~~	~~X~~	~~X~~	BR						
6	MPGI-RB-01-110819	110819 1320	Water		1	X	X							Rinsate Blank
				TOTAL	6	BR								

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

2

ALS Group, USA

Sample Receipt Checklist

Client Name: **TETRATECH-EM-CHI** Date/Time Received: **09-Nov-19 11:30**

Work Order: **19110801** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 11-Nov-19 (Date) Reviewed by: Chad Whelton (eSignature) 12-Nov-19 (Date)

Matrices: Soil, Water

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.4/4.4 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	11/11/2019 1:14:46 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order: 19101800

Project Name:

Joliet Chemical Fire PRP Clean UP

Tetra Tech EM Inc.

Andre Baker

1 South Wacker Dr

Suite 3700

Chicago, IL 60606

14-Nov-2019

Certificate No: MN 026-999-449

Contents

Section I: Case Narrative

Section II: Sample Receipt

Section III: Analytical Data

Section IV: Attachments

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com
RIGHT SOLUTIONS

Section I

CASE NARRATIVE

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

ALS Group, USA

Date: 14-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: 19101800

Case Narrative

Samples for the above noted Work Order were received on 10/23/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:

Batch 144450, Method DRO_8015_S, Sample 19101800-03A: DRO surrogate recovery high due to matrix interference.

Wet Chemistry:
No other deviations or anomalies were noted.

Section II

SAMPLE RECEIPT

-Sample Summary

-Shipping Documents*

-Chain of Custody

-Receipt Checklist

(* = As applicable)

ALS Group, USA

Date: 14-Nov-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: **19101800**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19101800-01	MPGI-102219-01	Soil		10/22/2019 09:30	10/23/2019 09:30	☐
19101800-02	MPGI-102219-01D	Soil		10/22/2019 09:30	10/23/2019 09:30	☐
19101800-03	MPGI-102219-02	Soil		10/22/2019 09:35	10/23/2019 09:30	☐
19101800-04	MPGI-102219-03	Soil		10/22/2019 09:37	10/23/2019 09:30	☐

19101800

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS : ☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE:	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: 103x903100690002aj001	ALS QUOTE NO.:	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Andre Baker CONTACT PH: 6303793749	OF: 1 2 3 4 5 6 7	Other comment:

SAMPLER: Andre Baker SAMPLER MOBILE:	RELINQUISHED BY: Andre Baker	RECEIVED BY: FED EX	RELINQUISHED BY: FED EX	RECEIVED BY:
COC emailed to ALS? (YES) EDD FORMAT (or default):				
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com	DATE/TIME: 10/22/19	DATE/TIME:	DATE/TIME:	DATE/TIME: 10/23/19 0930
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: SDZ 4.6°c

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO/SW8660 8015	Percent Solids							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MPGI-102218-01	10-22-19 0930	S	No Preserve	1	X	X							
2	MPGI-102219-01D	10-22-19 0930	S	No Preserve	1	X	X							
3	MPGI-102219-02	10-22-19 0935	S	No Preserve	1	X	X							
4	MPGI-102219-03	10-22-19 0937	S	No Preserve	1	X	X							
				TOTAL	4									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

ALS Group, USA

Sample Receipt Checklist

Client Name: ***TETRATECH-EM-CHI*** Date/Time Received: ***23-Oct-19 09:30***

Work Order: ***19101800*** Received by: ***DS***

Checklist completed by Diane Shaw (eSignature) 23-Oct-19 (Date) Reviewed by: Chad Whelton (eSignature) 23-Oct-19 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6/4.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/23/2019 12:42:53 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Section III

Analytical Data

-Analysis Data Sheet

-QC Summary

-QC Batch Report

-Summary Forms (if applicable)

-Raw Data

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

Raw Data Format

Organic Ordering

-Field Sample Data

-Calibration Data

-Initial

-Continuing

-Instrument QC Data (BFB, DFTPP, etc. as applicable)

-QC Data

-Sequence Logs

-Extraction Logs

Inorganic Ordering

-Instrument Data

-Digestion/Preparation Data

-Calculation Data (if applicable)

Organic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

GC
Semi-Volatile Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Diesel Range Organics

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-102219-01

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-01A

Sample wt/vol: 15.17 (g/mL) g Lab File ID:

% Moisture: not dec. 18 Date Received: 10/23/2019

Extraction Type: Date Extracted 10/23/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/24/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	16	

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-102219-01D

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-02A

Sample wt/vol: 15.33 (g/mL) g Lab File ID:

% Moisture: not dec. 21 Date Received: 10/23/2019

Extraction Type: Date Extracted 10/23/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/24/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	23	

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-102219-02

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-03A

Sample wt/vol: 15.57 (g/mL) g Lab File ID:

% Moisture: not dec. 17 Date Received: 10/23/2019

Extraction Type: Date Extracted 10/23/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/24/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	1,900	

1D CLIENT SAMPLE NO.

DIESEL RANGE ORGANICS BY GC-FID ANALYSIS DATA SHEET

MPGI-102219-03

Lab Name: ALS Group, USA

Lab Code: MI01262 SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-04A

Sample wt/vol: 15.25 (g/mL) g Lab File ID:

% Moisture: not dec. 21 Date Received: 10/23/2019

Extraction Type: Date Extracted 10/23/2019

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/24/2019

Injection Volume: 1 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 0

CONCENTRATION UNITS: mg/Kg-dry

CAS NO.	COMPOUND		Q
DROC10C28	DRO (C10-C28)	31	

ALS Group, USA

Date: 14-Nov-19

Client: Tetra Tech EM Inc.

QC BATCH REPORT

Work Order: 19101800

Project: Joliet Chemical Fire PRP Clean UP

Batch ID: **144450** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-144450-144450** Units: **mg/Kg** Analysis Date: **10/24/2019 10:10 A**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009800** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.23*	0	*3.33*	0	*67*	*33-111*	0			

LCS Sample ID: **DLCSS1-144450-144450** Units: **mg/Kg** Analysis Date: **10/24/2019 10:40 A**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009801** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	307.8	5.0	333	0	92.4	58-111	0			
Surr: 4-Terphenyl-d14	*2.111*	0	*3.33*	0	*63.4*	*33-111*	0			

MS Sample ID: **19101554-14B MS** Units: **mg/Kg** Analysis Date: **10/24/2019 01:34 P**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009808** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	284.9	4.9	323.9	2.756	87.1	58-111	0			
Surr: 4-Terphenyl-d14	*2.088*	0	*3.239*	0	*64.5*	*33-111*	0			

MSD Sample ID: **19101554-14B MSD** Units: **mg/Kg** Analysis Date: **10/24/2019 02:03 P**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009809** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	298.4	4.9	328.7	2.756	89.9	58-111	284.9	4.63	30	
Surr: 4-Terphenyl-d14	*2.232*	0	*3.287*	0	*67.9*	*33-111*	2.088	*6.62*	*30*	

The following samples were analyzed in this batch:

19101800-01A	19101800-02A	19101800-03A
19101800-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT12.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 11:09 am
Operator : KJB
Sample : 19101800-01A
Misc :
ALS Vial : 103 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:10:07 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

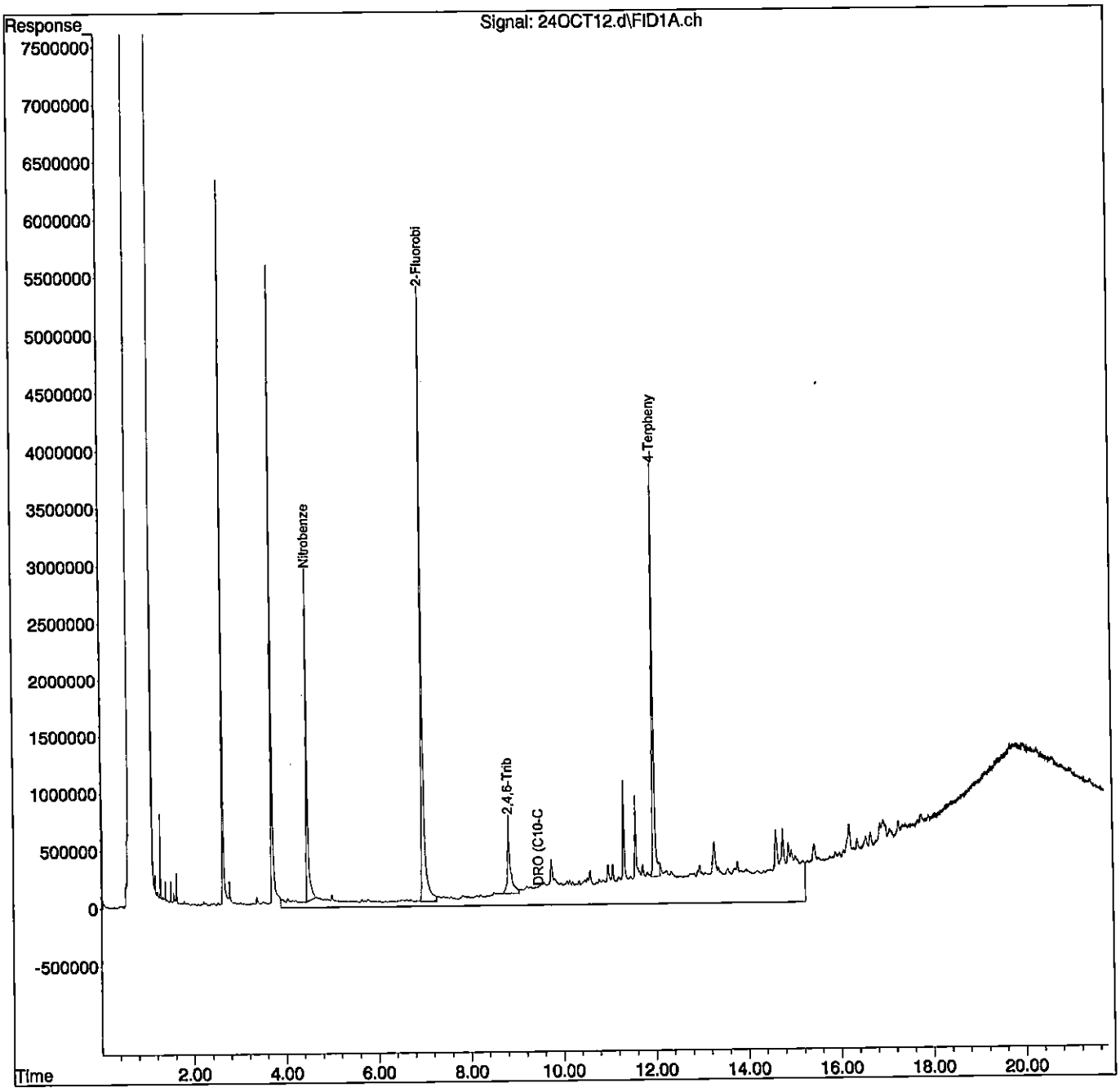
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.462	60060973	8.276	ug/mLm
2) S	2-Fluorobipehenyl	6.964	130790030	58.991	ug/mLm
3) S	2,4,6-Tribromophenol	8.819	27902683	1.820	ug/mLm
4) S	4-Terphenyl-d14	11.967	87817767	33.141	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	947932322	200.650	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT12.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 11:09 am
Operator : KJB
Sample : 19101800-01A
Misc :
ALS Vial : 103 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:10:07 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT14.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 11:38 am
Operator : KJB
Sample : 19101800-02A
Misc :
ALS Vial : 104 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:10:47 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

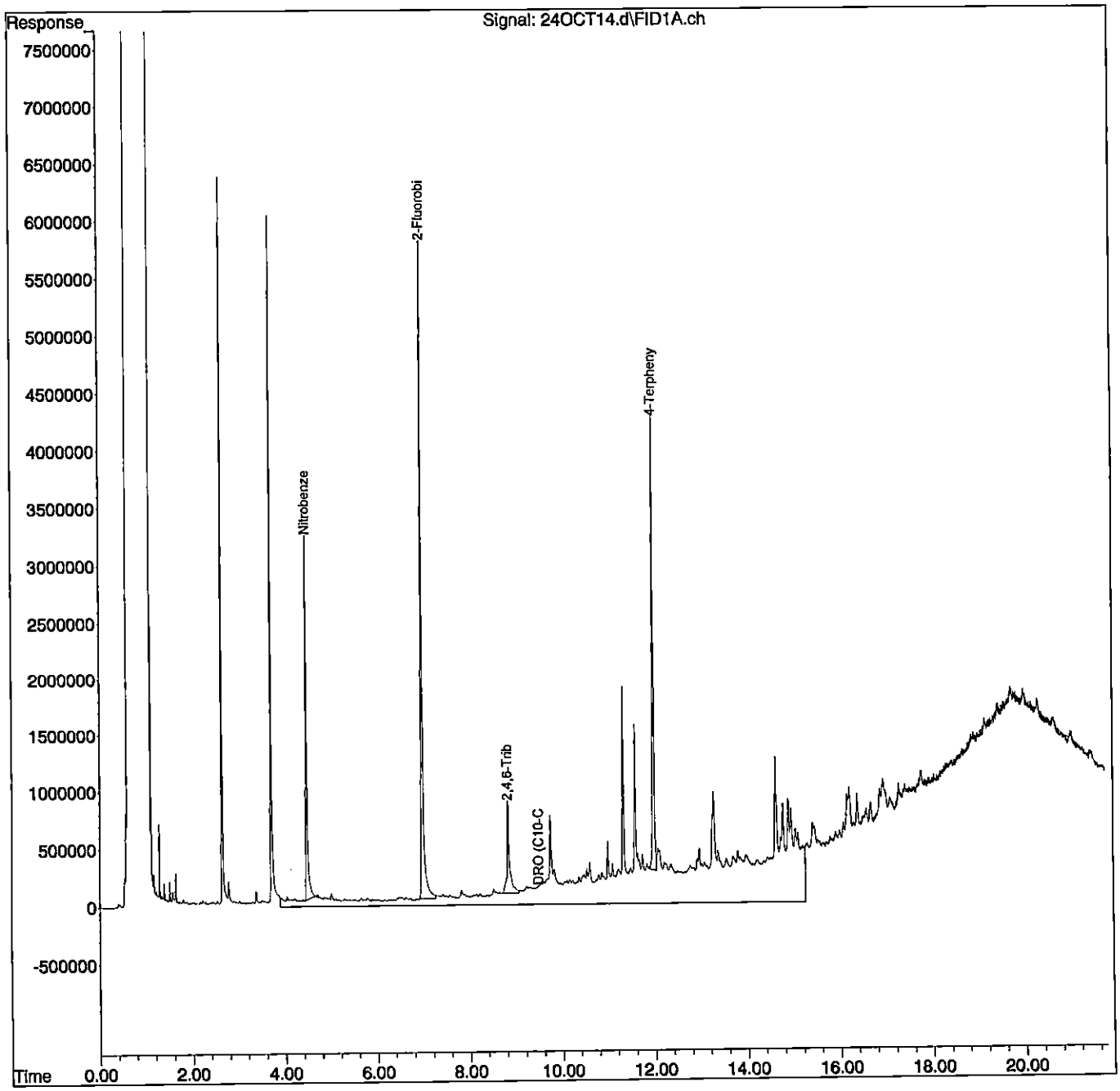
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.462	60994862	8.404	ug/mLm
2) S	2-Fluorobipehenyl	6.967	131064780	59.413	ug/mLm
3) S	2,4,6-Tribromophenol	8.814	30312758	1.934	ug/mLm
4) S	4-Terphenyl-d14	11.969	87248635	32.926	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	1332437700	281.226	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT14.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 11:38 am
Operator : KJB
Sample : 19101800-02A
Misc :
ALS Vial : 104 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:10:47 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT16.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 12:07 pm
Operator : KJB
Sample : 19101800-03A
Misc :
ALS Vial : 105 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:11:22 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

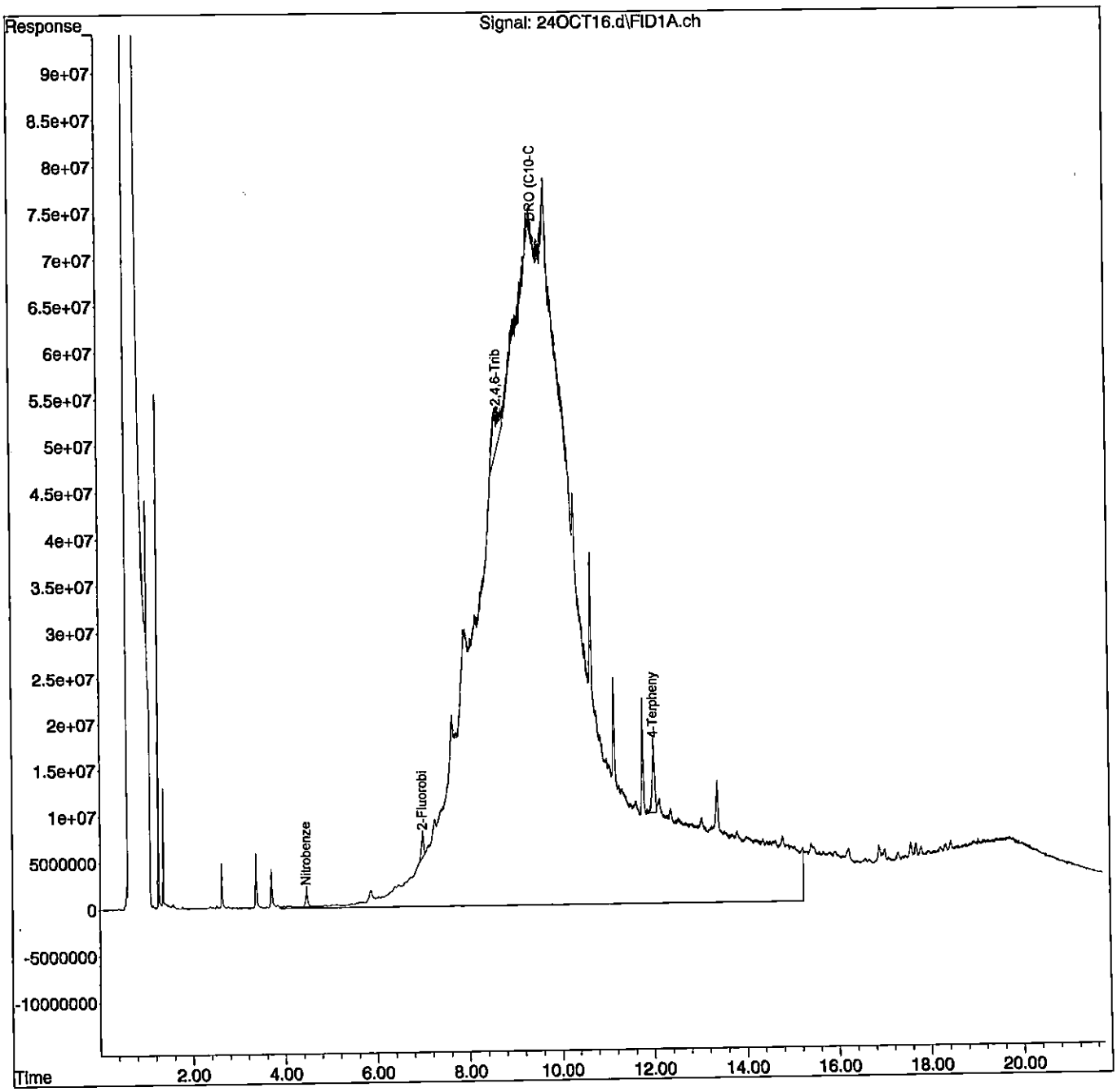
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.474	60718009	8.366	ug/mLm
2) S	2-Fluorobipehenyl	7.003	85920821	28.599	ug/mLm
3) S	2,4,6-Tribromophenol	8.687	463574430	25.846	ug/mLm
4) S	4-Terphenyl-d14	12.016	288440938	108.937	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	1.19482e+011	25040.444	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT16.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 12:07 pm
Operator : KJB
Sample : 19101800-03A
Misc :
ALS Vial : 105 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:11:22 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT18.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 12:36 pm
Operator : KJB
Sample : 19101800-04A
Misc :
ALS Vial : 106 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:11:50 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

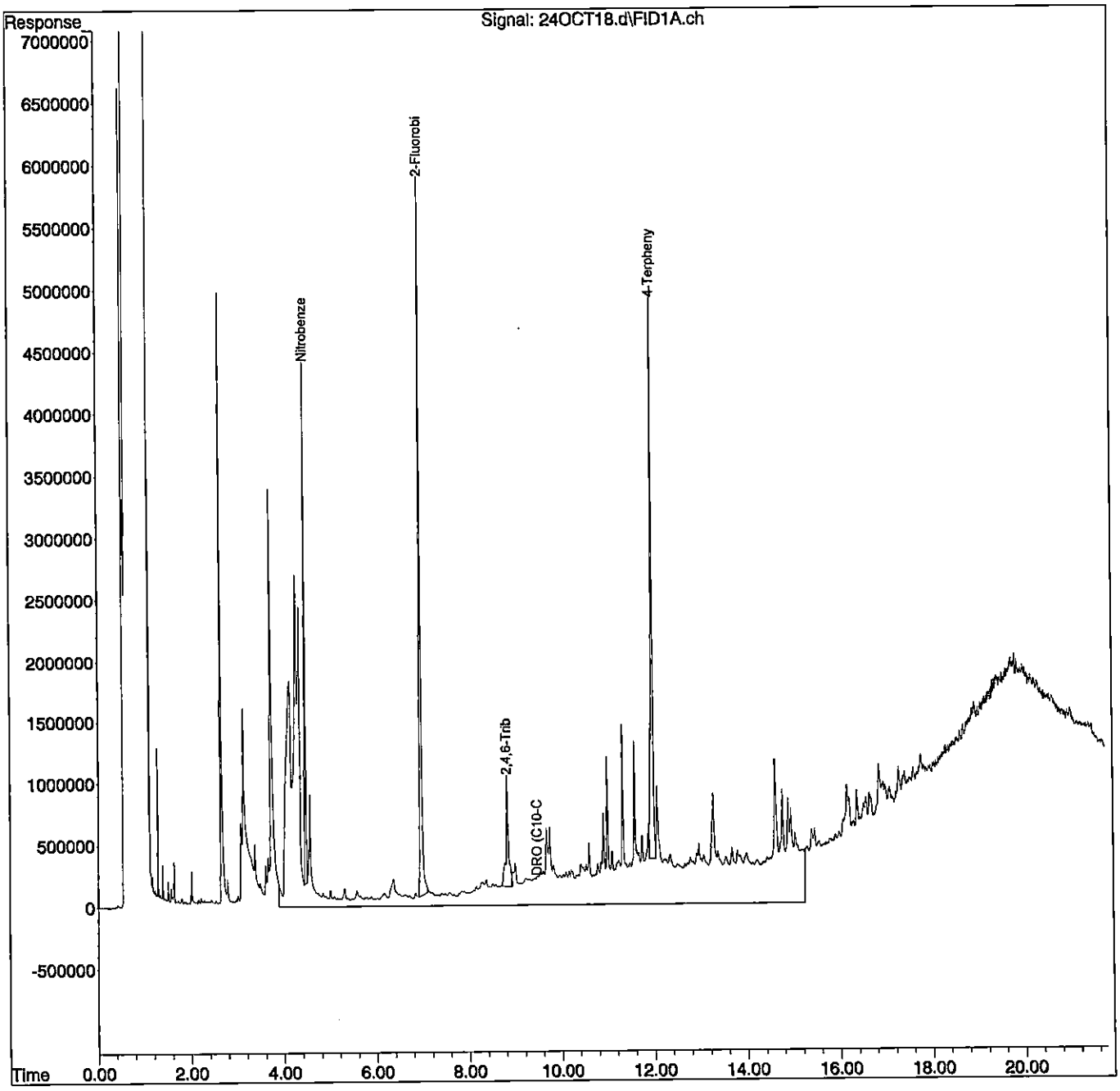
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.465	63853584	8.797	ug/mLm
2) S	2-Fluorobipehenyl	6.969	132684184	62.292	ug/mLm
3) S	2,4,6-Tribromophenol	8.815	33057902	2.064	ug/mLm
4) S	4-Terphenyl-d14	11.970	121022059	45.686	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	1789962591	377.104	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT18.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 12:36 pm
Operator : KJB
Sample : 19101800-04A
Misc :
ALS Vial : 106 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:11:50 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Method Path : E:\
Method File : DRO191002.M
Title :
Last Update : Wed Oct 02 17:16:11 2019
Response Via : Initial Calibration

Calibration Files
50 =02OCT16.d 100 =02OCT18.d 250 =02OCT20.d
500 =02OCT22.d 1000 =02OCT24.d 2500 =02OCT26.d

		Compound	50	100	250	500	1000	2500	Avg		%RSD
1)	S	Nitrobenzene-d5	7.727	7.714	6.789	7.399	7.092	6.869	7.108	E6	7.17
2)	S	2-Fluorobipeh...	4.617	4.452	4.120	4.072	3.783	2.956	3.350	E6	31.94
3)	S	2,4,6-Tribrom...	1.983	2.087	2.002	1.967	1.984	1.741	1.753	E7	20.16
4)	S	4-Terphenyl-d14	3.668	3.336	2.712	2.587	2.436	2.594	2.832	E6	13.90
5)	H	DRO (C10-C20)	3.321	3.180	3.062	3.101	3.019	3.067	3.120	E6	3.05
6)	H	ORO (C20-C34)	3.281	2.955	2.776	2.652	2.686	2.652	2.804	E6	7.10
7)	H	DRO (C10-C28)	5.229	4.926	4.638	4.694	4.534	4.600	4.736	E6	4.69
8)	H	ORO (C28-C40)	3.478	2.578	2.113	2.099	1.989	2.014	2.288	E6	19.77
9)	H	ORO (C20-C40)	4.905	4.201	3.566	3.615	3.494	3.524	3.808	E6	11.75
10)	H	ORO (C28-C35)	1.749	1.486	1.336	1.327	1.327	1.346	1.407	E6	9.66
11)	H	ERO (C8-C40)	4.358	3.737	3.329	3.371	3.252	3.310	3.497	E6	9.63
12)	H	DIESEL (IOWA)	5.205	4.865	4.628	4.643	4.576	4.621	4.730	E6	4.23
13)	H	OIL (IOWA)	3.357	2.556	2.138	2.042	1.974	1.973	2.266	E6	18.75

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method Path : E:\
Method File : DRO191002.M
Title :
Last Update : Wed Oct 02 17:16:11 2019
Response Via : Initial Calibration

Calibration Files
50 =02OCT16 100 =02OCT18 250 =02OCT20 500 =02OCT22 1000=02OCT24
2500=02OCT26 5000=02OCT28 10K =02OCT30 50K =02OCT34 25K =02OCT32

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	S	Nitrobenzene-d5	Lin	-8.4432 e4	7.2678 e6	-----	0.9944
2)	S	2-Fluorobipehenyl	Quad	-1.4978 e6	3.8229 e6	-2.6790 e4	0.9956
3)	S	2,4,6-Tribromophenol	Quad	-1.0980 e7	2.1589 e7	-1.2490 e5	0.9943
4)	S	4-Terphenyl-d14	Lin	9.7950 e4	2.6469 e6	-----	0.9971
5)	H	DRO (C10-C20)	Lin	-7.1238 e6	3.1473 e6	-----	0.9992
6)	H	ORO (C20-C34)	Lin	-4.2073 e6	2.8202 e6	-----	0.9983
7)	H	DRO (C10-C28)	Lin	-9.5566 e6	4.7719 e6	-----	0.9988
8)	H	ORO (C28-C40)	Lin	1.8463 e7	2.2187 e6	-----	0.9974
9)	H	ORO (C20-C40)	Lin	8.9770 e4	3.8077 e6	-----	0.9976
10)	H	ORO (C28-C35)	Lin	-3.2137 e6	1.4194 e6	-----	0.9971
11)	H	ERO (C8-C40)	Lin	1.6859 e7	3.4651 e6	-----	0.9985
12)	H	DIESEL (IOWA)	Lin	-5.1312 e6	4.7492 e6	-----	0.9990
13)	H	OIL (IOWA)	Lin	6.9903 e6	2.2396 e6	-----	0.9959

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT02.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 9:10 am
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 10:03:32 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Thu Sep 26 09:16:21 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

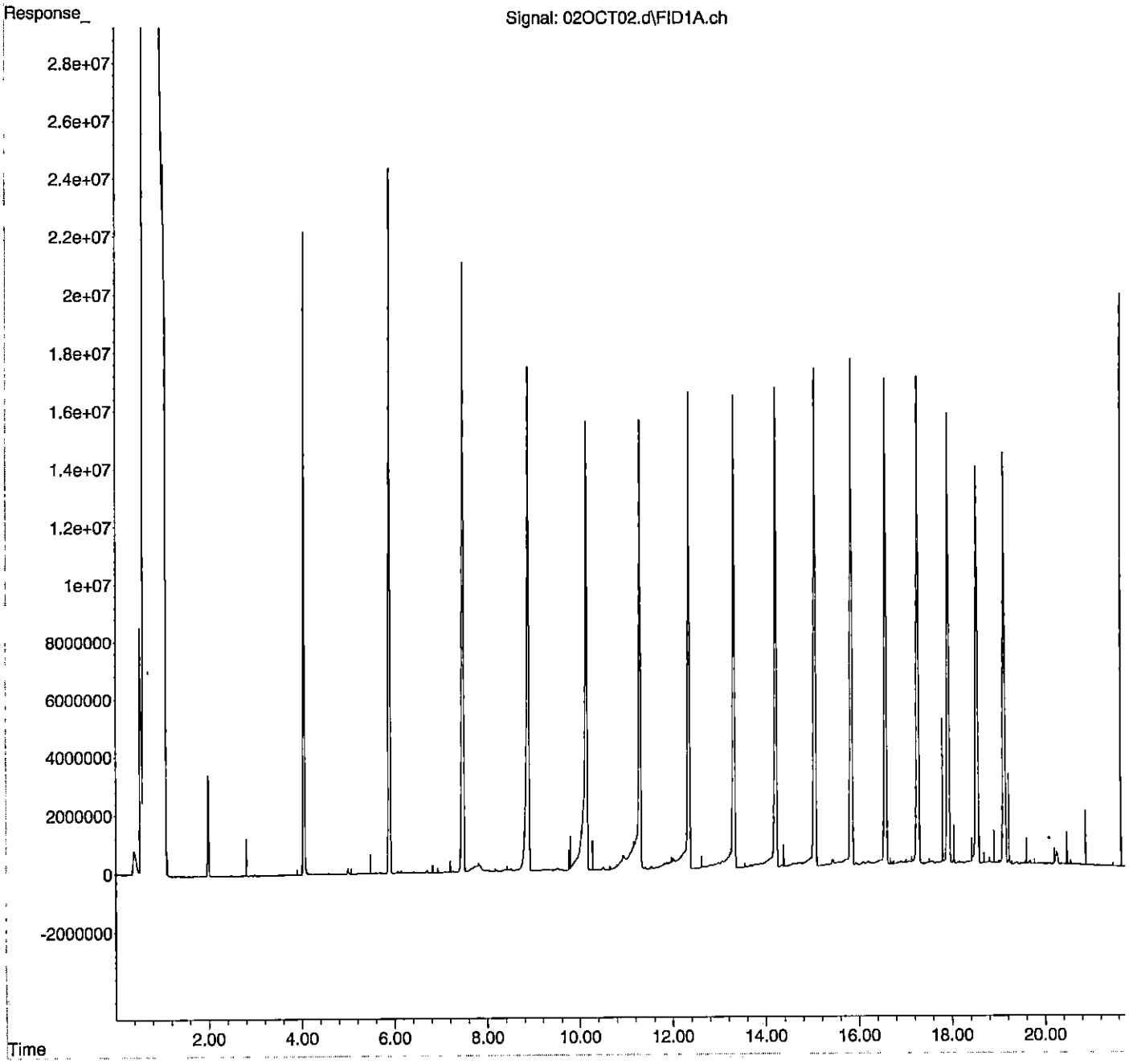
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT02.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 9:10 am
Operator : KJB
Sample : DRO DIST
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 10:03:32 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Thu Sep 26 09:16:21 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT04.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 9:39 am
Operator : KJB
Sample : BNA SURR
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 10:03:11 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Thu Sep 26 09:16:21 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

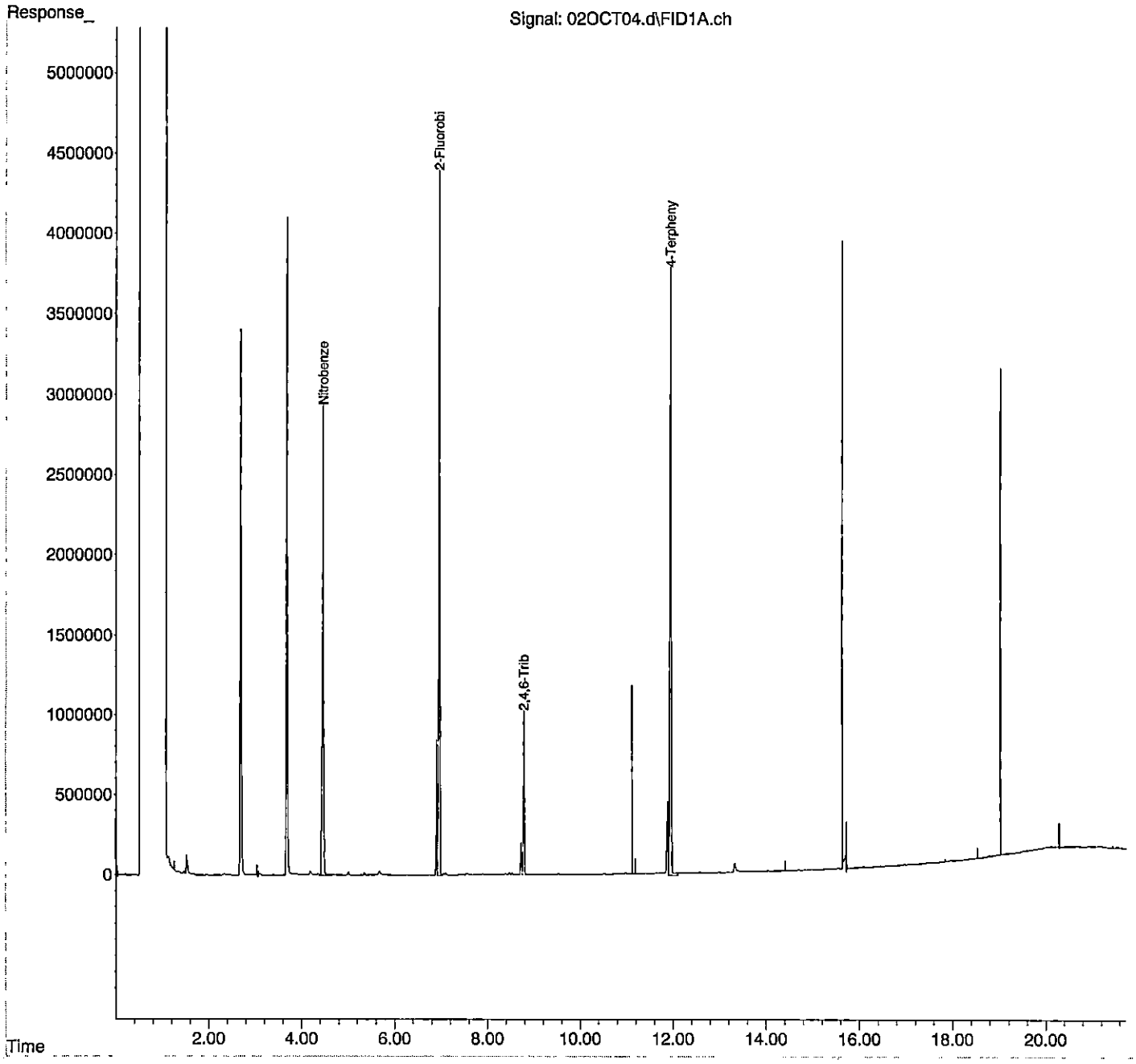
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.460f	51261745	3.160	ug/mLm
2) S	2-Fluorobipehenyl	6.963f	68106626	3.175	ug/mLm
3) S	2,4,6-Tribromophenol	8.782f	15326374	1.451	ug/mLm
4) S	4-Terphenyl-d14	11.949f	69255376	13.760	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	-134694744	N.D.	ug/mL
6) H	ORO (C20-C34)	14.560	-69255376	N.D.	ug/mL
7) H	DRO (C10-C28)	9.472	-203950121	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	-69255376	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	-203950121	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	-203950121	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT04.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 9:39 am
Operator : KJB
Sample : BNA SURR
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 10:03:11 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Thu Sep 26 09:16:21 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT16.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 12:20 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10243A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 16:58:51 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

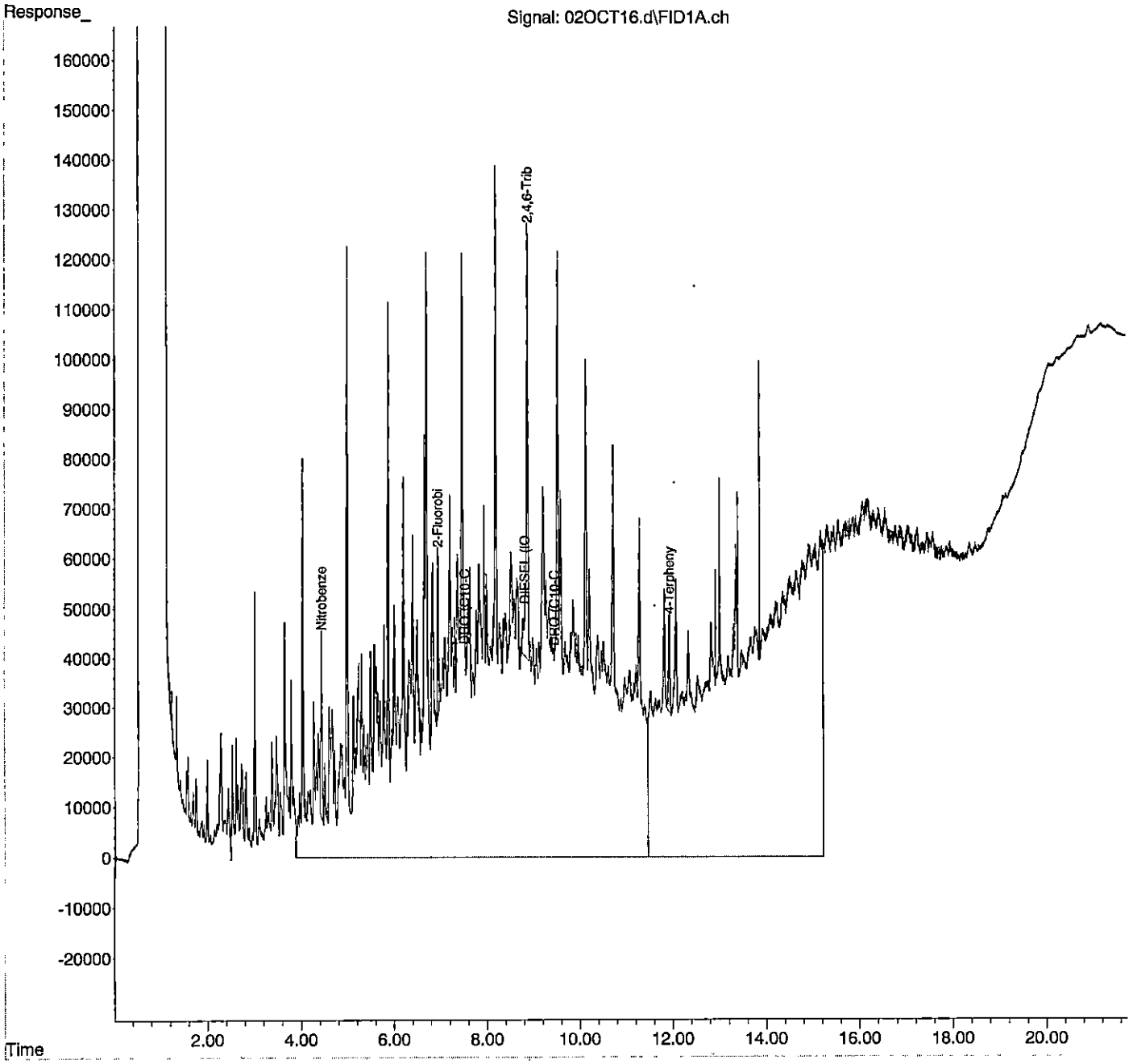
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.452	772690	137.380	ug/mLm
2) S	2-Fluorobipehenyl	6.957	461661	0.677	ug/mLm
3) S	2,4,6-Tribromophenol	8.883	1982635	0.990	ug/mLm
4) S	4-Terphenyl-d14	11.939	366754	0.224	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	166031311	24.758	ug/mL
6) H	ORO (C20-C34)	14.560	164047041	N.D.	ug/mL
7) H	DRO (C10-C28)	9.472	261438082	11.863	ug/mL
8) H	ORO (C28-C40)	17.070	173893384	N.D.	ug/mL
9) H	ORO (C20-C40)	15.165	245238461	N.D.	ug/mL
10) H	ORO (C28-C35)	16.581	87454351	N.D.	ug/mL
11) H	ERO (C8-C40)	10.557	435803524	N.D.	ug/mL
12) H	DIESEL (IOWA)	8.818	260229178	14.071	ug/mL
13) H	OIL (IOWA)	17.414	167825818	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT16.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 12:20 pm
Operator : KJB
Sample : DRO ICAL 50 UG/L
Misc : 100-10243A
ALS Vial : 12 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 16:58:51 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT18.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 12:49 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10243B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:00:43 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

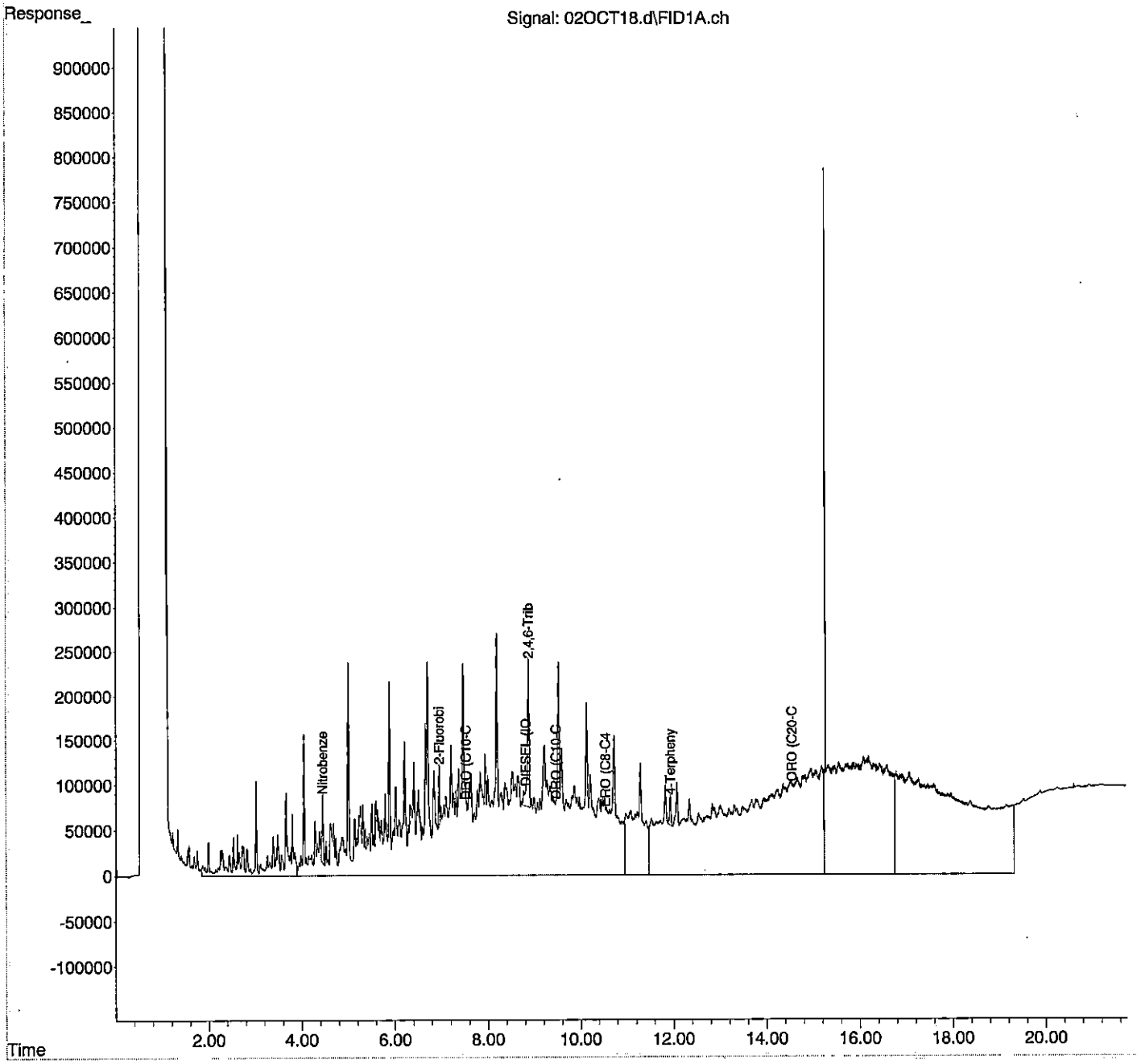
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.454	1542823	0.002 ug/mLm
2) S	2-Fluorobipehenyl	6.958	890330	0.692 ug/mLm
3) S	2,4,6-Tribromophenol	8.885	4173202	1.066 ug/mLm
4) S	4-Terphenyl-d14	11.936	667136	0.283 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	318006221	77.082 ug/mL
6) H	ORO (C20-C34)	14.560	295475034	32.956 ug/mL
7) H	DRO (C10-C28)	9.472	492587233	64.056 ug/mL
8) H	ORO (C28-C40)	17.070	257837422	N.D. ug/mL
9) H	ORO (C20-C40)	15.165	420053178	N.D. ug/mL
10) H	ORO (C28-C35)	16.581	148604558	N.D. ug/mL
11) H	ERO (C8-C40)	10.557	747320132	23.873 ug/mL
12) H	DIESEL (IOWA)	8.818	486492234	65.291 ug/mL
13) H	OIL (IOWA)	17.414	255588646	N.D. ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT18.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 12:49 pm
Operator : KJB
Sample : DRO ICAL 100 UG/L
Misc : 100-10243B
ALS Vial : 13 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:00:43 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT20.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 1:18 pm
Operator : KJB
Sample : DRO ICAL 200 UG/L
Misc : 100-10243C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:02:18 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

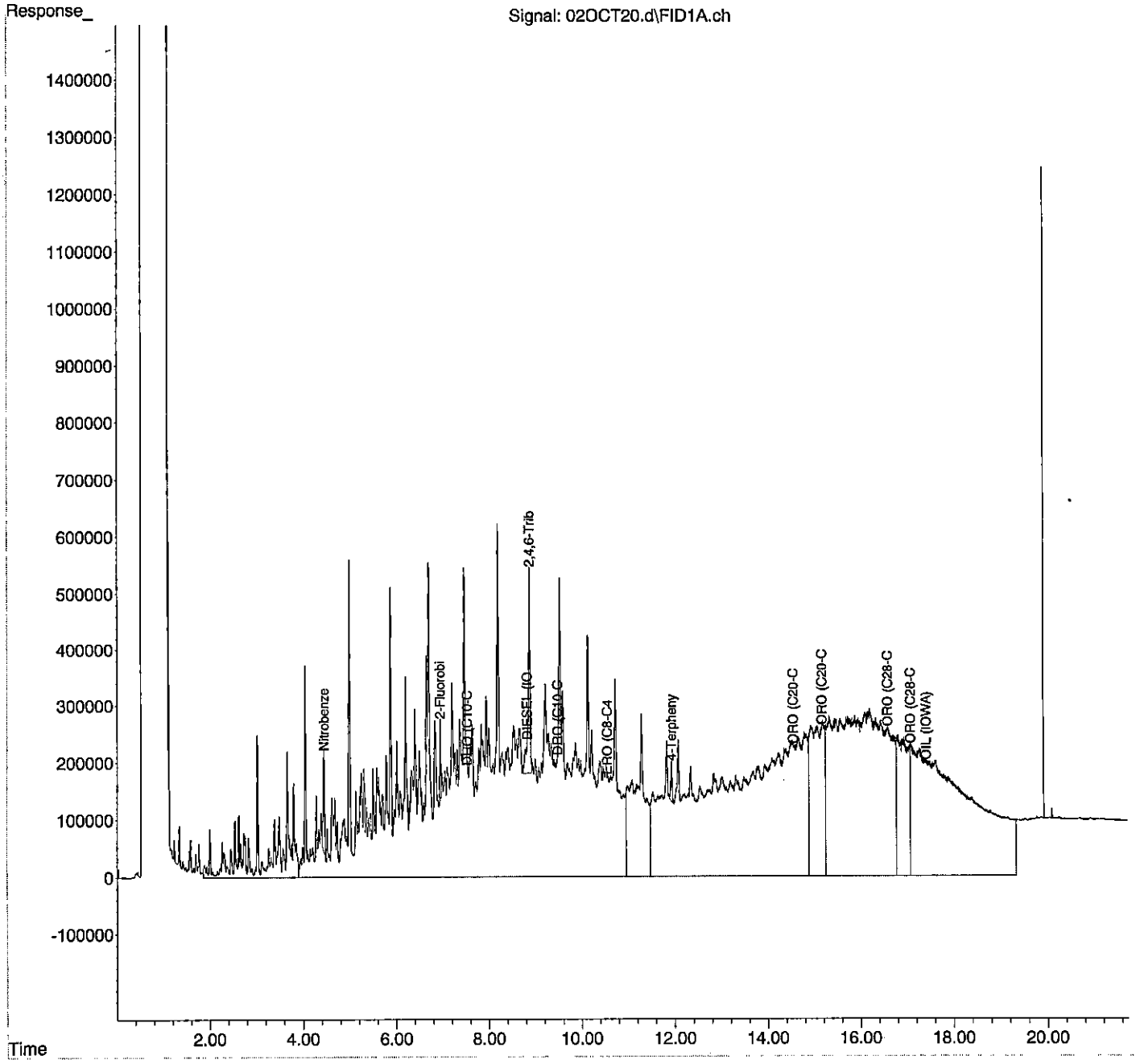
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.451	3394581	0.117 ug/mLm
2) S	2-Fluorobipehenyl	6.956	2059924	0.735 ug/mLm
3) S	2,4,6-Tribromophenol	8.879	10010927	1.267 ug/mLm
4) S	4-Terphenyl-d14	11.939	1356180	0.418 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	765556567	231.171 ug/mL
6) H	ORO (C20-C34)	14.560	693892309	175.585 ug/mL
7) H	DRO (C10-C28)	9.472	1159403225	214.621 ug/mL
8) H	ORO (C28-C40)	17.070	528294084	23.430 ug/mL
9) H	ORO (C20-C40)	15.165	891606765	97.829 ug/mL
10) H	ORO (C28-C35)	16.581	333924354	111.471 ug/mL
11) H	ERO (C8-C40)	10.557	1664722465	309.407 ug/mL
12) H	DIESEL (IOWA)	8.818	1156931578	217.061 ug/mL
13) H	OIL (IOWA)	17.414	534451468	39.641 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT20.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 1:18 pm
Operator : KJB
Sample : DRO ICAL 200 UG/L
Misc : 100-10243C
ALS Vial : 14 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:02:18 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT22.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 1:47 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10243D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:04:01 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

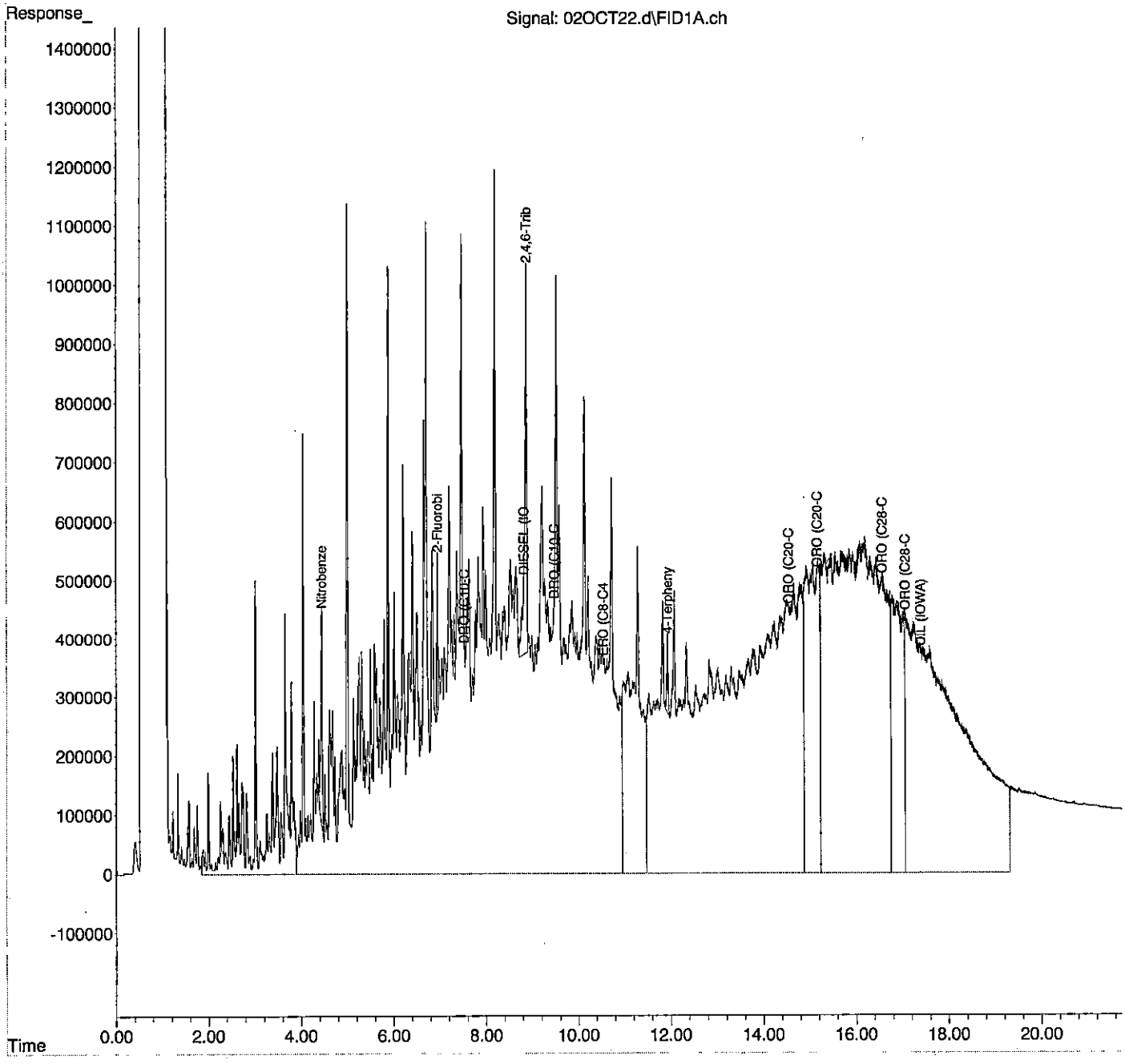
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.449	7399037	0.366 ug/mLm
2) S	2-Fluorobipehenyl	6.953	4072469	0.808 ug/mLm
3) S	2,4,6-Tribromophenol	8.880	19670239	1.602 ug/mLm
4) S	4-Terphenyl-d14	11.936	2587457	0.660 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	1550519927	501.428 ug/mL
6) H	ORO (C20-C34)	14.560	1326078396	401.902 ug/mL
7) H	DRO (C10-C28)	9.472	2347052564	482.789 ug/mL
8) H	ORO (C28-C40)	17.070	1049332739	277.798 ug/mL
9) H	ORO (C20-C40)	15.165	1807525993	360.615 ug/mL
10) H	ORO (C28-C35)	16.581	663413187	321.422 ug/mL
11) H	ERO (C8-C40)	10.557	3370832986	840.421 ug/mL
12) H	DIESEL (IOWA)	8.818	2321515098	480.692 ug/mL
13) H	OIL (IOWA)	17.414	1021086602	277.197 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT22.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 1:47 pm
Operator : KJB
Sample : DRO ICAL 500 UG/L
Misc : 100-10243D
ALS Vial : 15 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:04:01 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT24.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 2:16 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10243E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:05:38 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

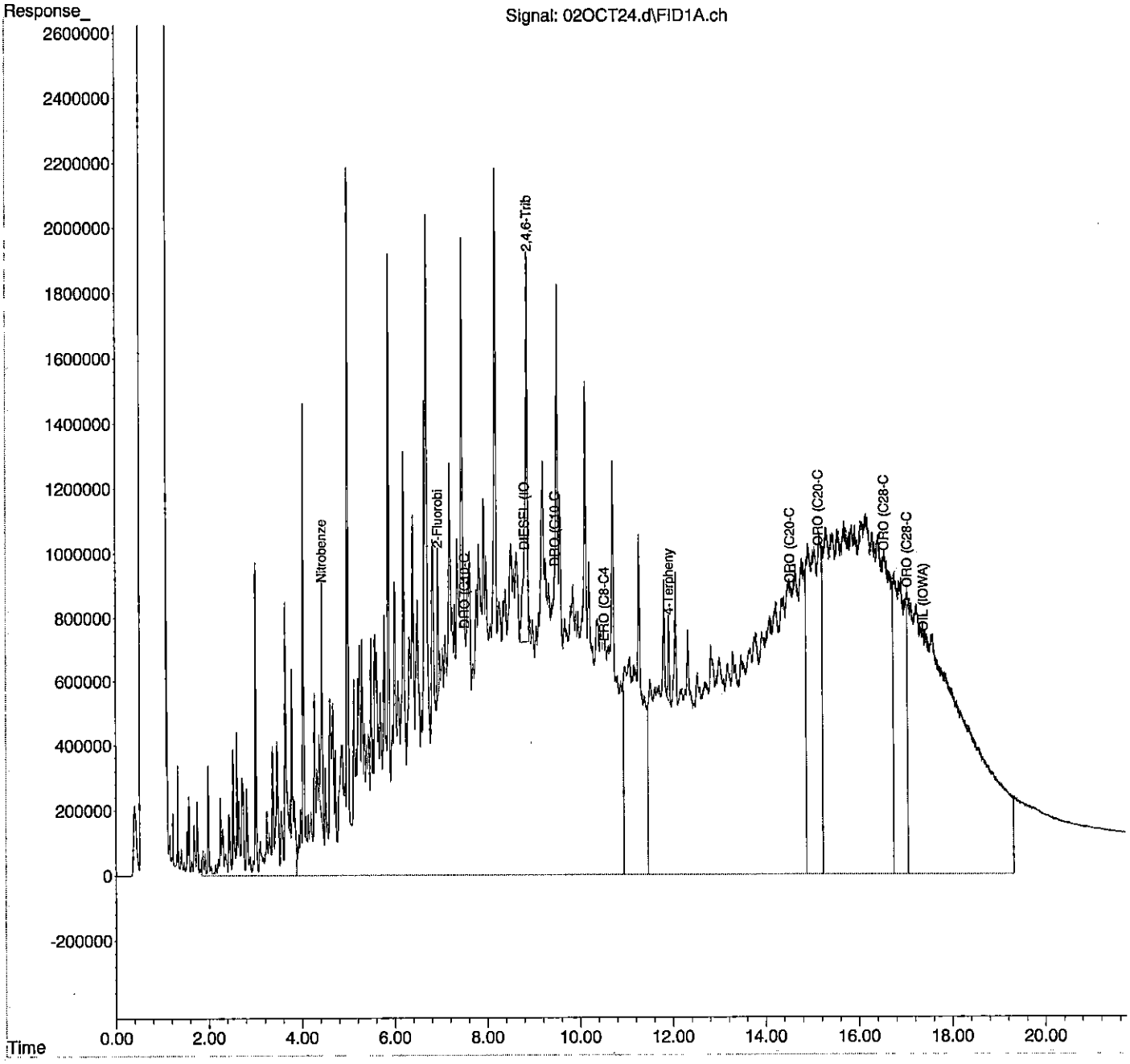
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.448	14184201	0.791 ug/mLm
2) S	2-Fluorobipehenyl	6.955	7566115	0.934 ug/mLm
3) S	2,4,6-Tribromophenol	8.883	39687422	2.301 ug/mLm
4) S	4-Terphenyl-d14	11.937	4915878	1.118 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	3019485543	1007.183 ug/mL
6) H	ORO (C20-C34)	14.560	2685731068	888.644 ug/mL
7) H	DRO (C10-C28)	9.472	4534116409	976.622 ug/mL
8) H	ORO (C28-C40)	17.070	1988813621	736.446 ug/mL
9) H	ORO (C20-C40)	15.165	3494123271	844.514 ug/mL
10) H	ORO (C28-C35)	16.581	1327013932	744.269 ug/mL
11) H	ERO (C8-C40)	10.557	6504850062	1815.860 ug/mL
12) H	DIESEL (IOWA)	8.818	4576080978	991.066 ug/mL
13) H	OIL (IOWA)	17.414	1973718717	742.234 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT24.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 2:16 pm
Operator : KJB
Sample : DRO ICAL 1000 UG/L
Misc : 100-10243E
ALS Vial : 16 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:05:38 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT26.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 2:45 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10243F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:07:17 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

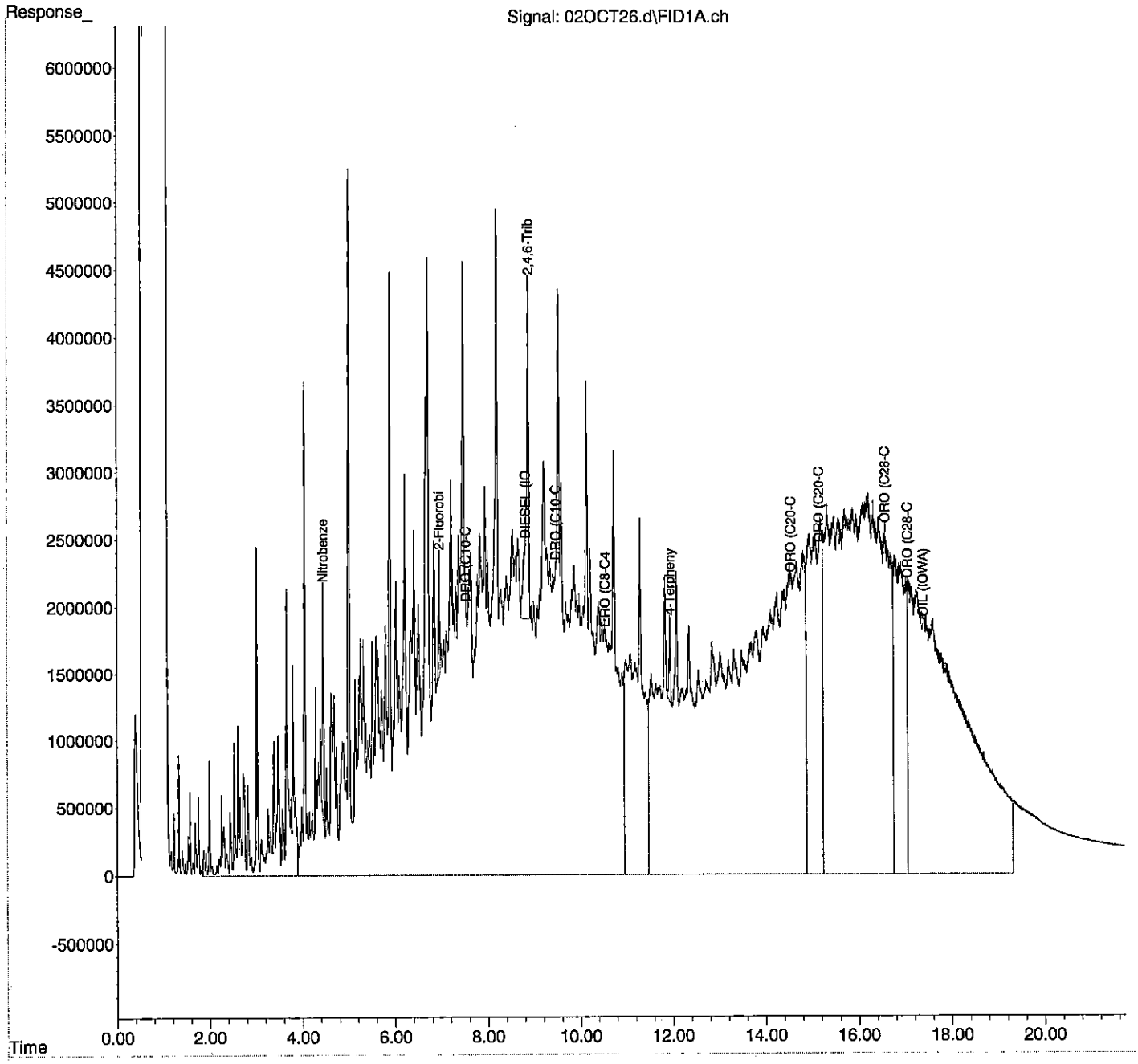
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.451	34343634	2.069 ug/mLm
2) S	2-Fluorobipehenyl	6.963	14782400	1.197 ug/mLm
3) S	2,4,6-Tribromophenol	8.887	87040433	3.985 ug/mLm
4) S	4-Terphenyl-d14	11.942	12968049	2.700 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	7666299988	2607.048 ug/mL
6) H	ORO (C20-C34)	14.560	6629351027	2300.421 ug/mL
7) H	DRO (C10-C28)	9.472	11500471323	2549.606 ug/mL
8) H	ORO (C28-C40)	17.070	5034487520	2223.325 ug/mL
9) H	ORO (C20-C40)	15.165	8810878702	2369.939 ug/mL
10) H	ORO (C28-C35)	16.581	3366128531	2043.595 ug/mL
11) H	ERO (C8-C40)	10.557	16549070948	4942.046 ug/mL
12) H	DIESEL (IOWA)	8.818	11552823178	2570.418 ug/mL
13) H	OIL (IOWA)	17.414	4932267928	2186.478 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT26.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 2:45 pm
Operator : KJB
Sample : DRO ICAL 2500 UG/L
Misc : 100-10243F
ALS Vial : 17 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:07:17 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT28.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 3:14 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10243G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:08:40 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

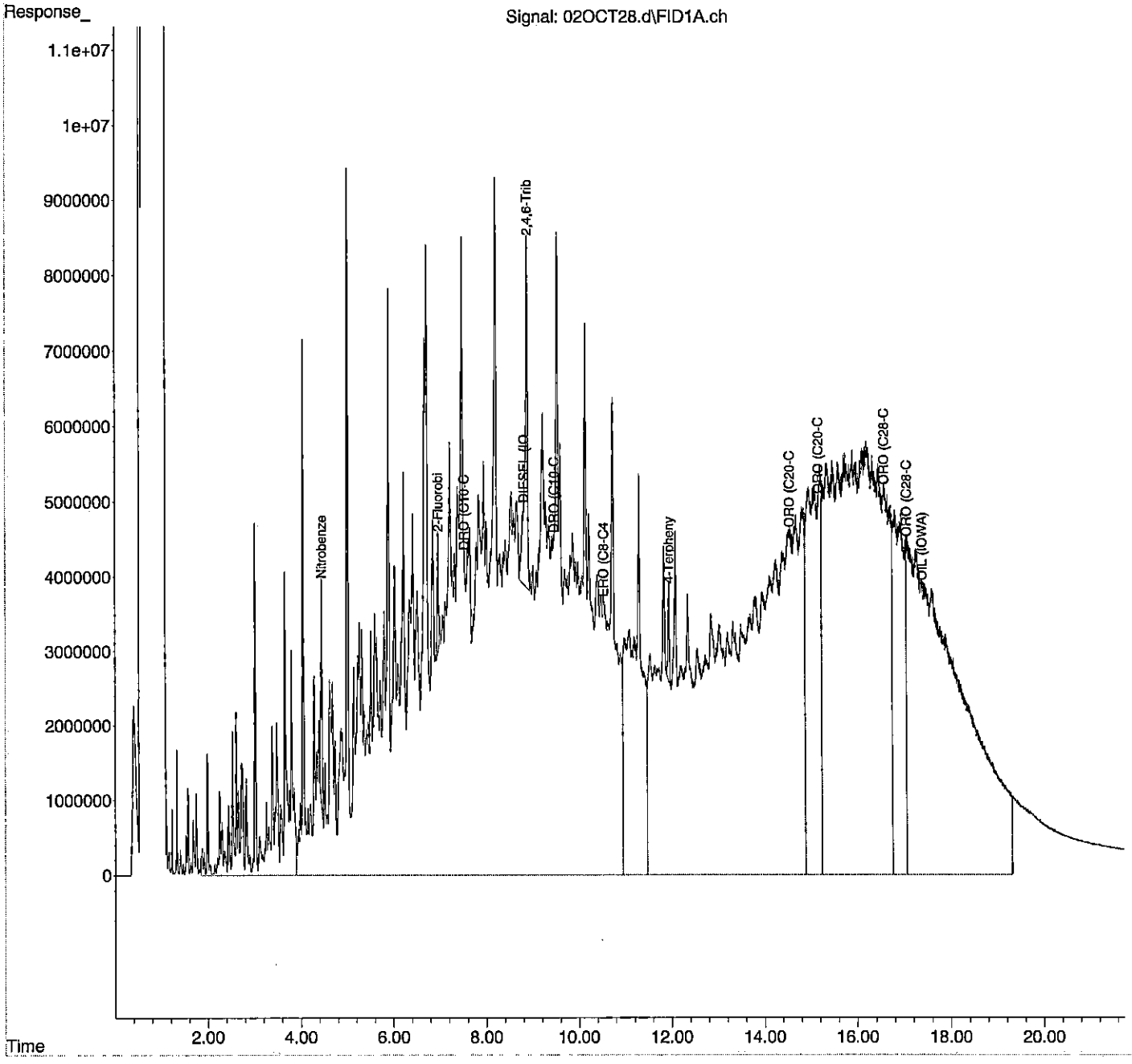
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.456	65129663	4.068 ug/mLm
2) S	2-Fluorobipehenyl	6.971	28007081	1.682 ug/mLm
3) S	2,4,6-Tribromophenol	8.896	169542926	7.028 ug/mLm
4) S	4-Terphenyl-d14	11.950	27281542	5.513 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	15465484132	5292.253 ug/mL
6) H	ORO (C20-C34)	14.560	13456488833	4744.468 ug/mL
7) H	DRO (C10-C28)	9.472	22747334699	5089.117 ug/mL
8) H	ORO (C28-C40)	17.070	10298407240	4793.137 ug/mL
9) H	ORO (C20-C40)	15.165	17579788885	4885.818 ug/mL
10) H	ORO (C28-C35)	16.581	6645910665	4133.477 ug/mL
11) H	ERO (C8-C40)	10.557	33309615406	10158.636 ug/mL
12) H	DIESEL (IOWA)	8.818	23369586260	5245.423 ug/mL
13) H	OIL (IOWA)	17.414	10139405617	4728.393 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT28.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 3:14 pm
Operator : KJB
Sample : DRO ICAL 5000 UG/L
Misc : 100-10243G
ALS Vial : 18 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:08:40 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT30.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 3:43 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10243H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:10:18 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

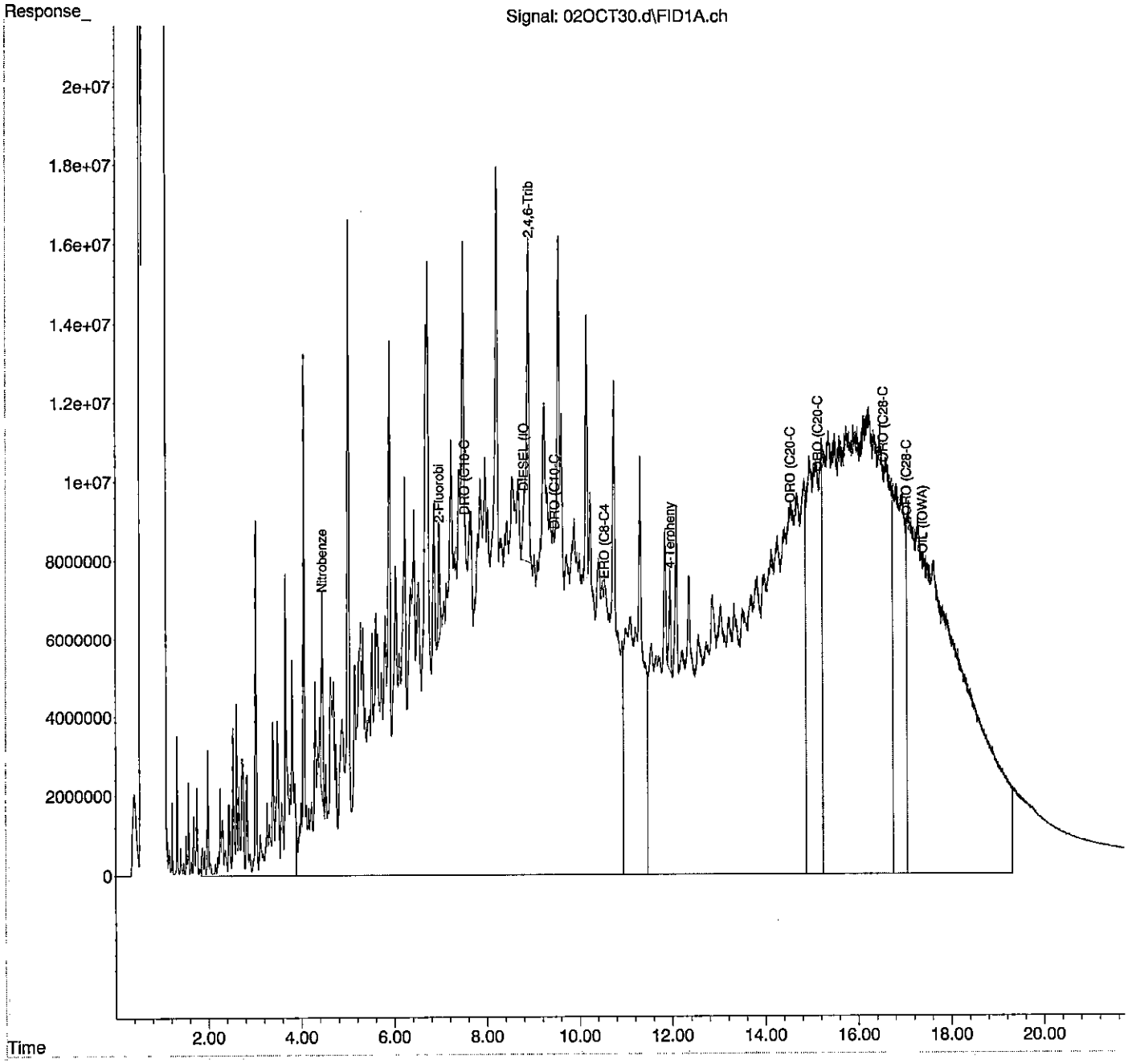
	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
1) S	Nitrobenzene-d5	4.463	128022437	8.360 ug/mLm
2) S	2-Fluorobipehenyl	6.982	60556663	2.891 ug/mLm
3) S	2,4,6-Tribromophenol	8.921	317167984	12.884 ug/mLm
4) S	4-Terphenyl-d14	11.969	60758913	12.091 ug/mLm
	Target Compounds			
5) H	DRO (C10-C20)	7.548	31078399393	10667.670 ug/mL
6) H	ORO (C20-C34)	14.560	27330407748	9711.193 ug/mL
7) H	DRO (C10-C28)	9.472	46881089592	10538.452 ug/mL
8) H	ORO (C28-C40)	17.070	20988633038	10012.037 ug/mL
9) H	ORO (C20-C40)	15.165	36469966104	10305.579 ug/mL
10) H	ORO (C28-C35)	16.581	13437469891	8461.067 ug/mL
11) H	ERO (C8-C40)	10.557	67737620484	20874.086 ug/mL
12) H	DIESEL (IOWA)	8.818	46461736773	10472.880 ug/mL
13) H	OIL (IOWA)	17.414	21006239223	10033.143 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT30.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 3:43 pm
Operator : KJB
Sample : DRO ICAL 10,000 UG/L
Misc : 100-10243H
ALS Vial : 19 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:10:18 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT32.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 4:13 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10243I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:11:50 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

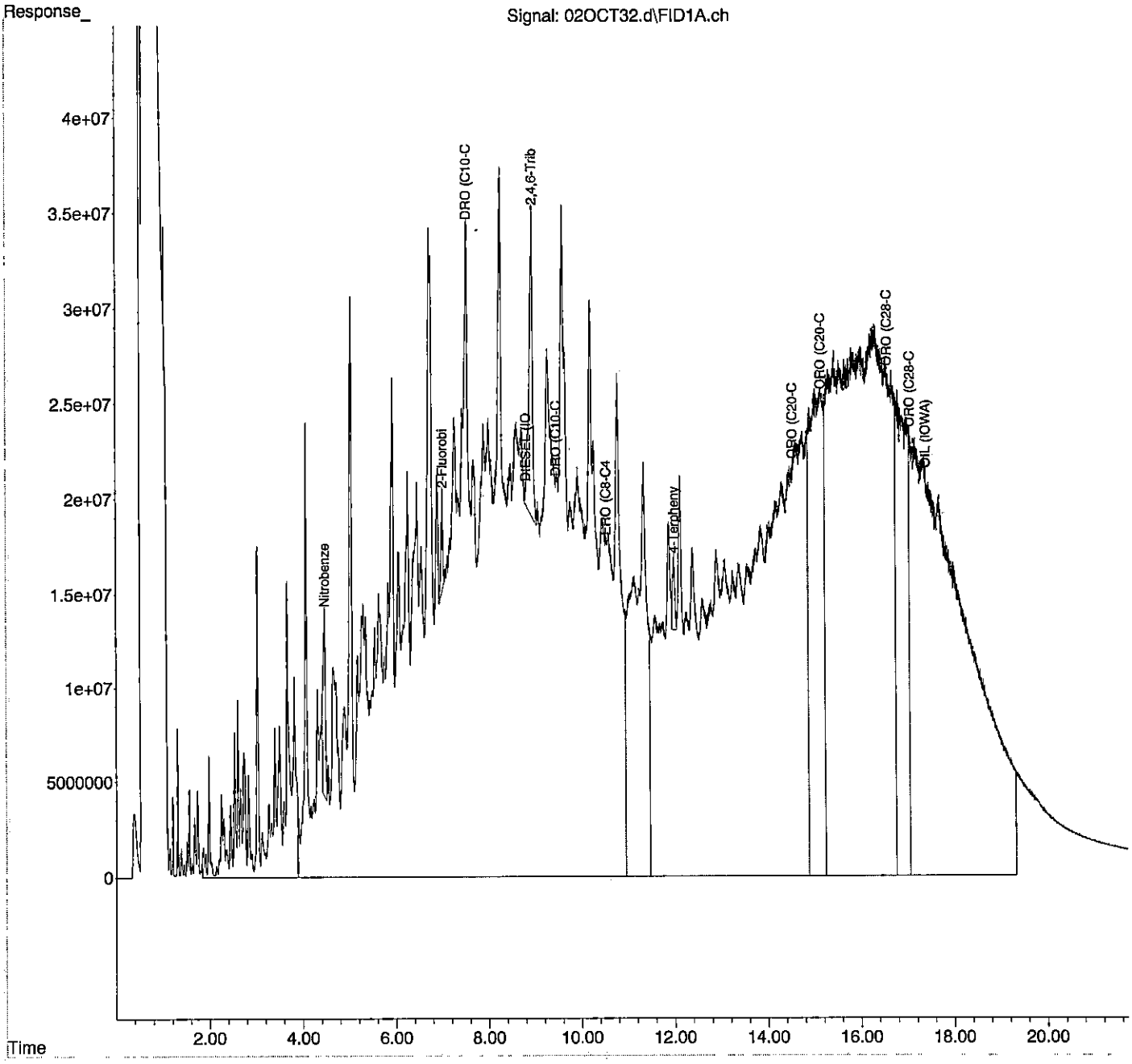
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.485	341434170	26.027 ug/mLm
2) S	2-Fluorobipehenyl	7.023	127376006	5.453 ug/mLm
3) S	2,4,6-Tribromophenol	8.953	798786846	39.141 ug/mLm
4) S	4-Terphenyl-d14	12.007	132079861	26.105 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	75665954649	26018.853 ug/mL
6) H	ORO (C20-C34)	14.560	67307056083	24022.435 ug/mL
7) H	DRO (C10-C28)	9.472	1.14562e+011	25820.700 ug/mL
8) H	ORO (C28-C40)	17.070	53429778190	25849.598 ug/mL
9) H	ORO (C20-C40)	15.165	90894769361	25920.543 ug/mL
10) H	ORO (C28-C35)	16.581	33488567634	21237.653 ug/mL
11) H	ERO (C8-C40)	10.557	1.65361e+011	51258.591 ug/mL
12) H	DIESEL (IOWA)	8.818	1.13932e+011	25746.462 ug/mL
13) H	OIL (IOWA)	17.414	53157297088	25727.993 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT32.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 4:13 pm
Operator : KJB
Sample : DRO ICAL 25,000 UG/L
Misc : 100-10243I
ALS Vial : 20 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:11:50 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT34.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 4:42 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10243J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:13:08 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

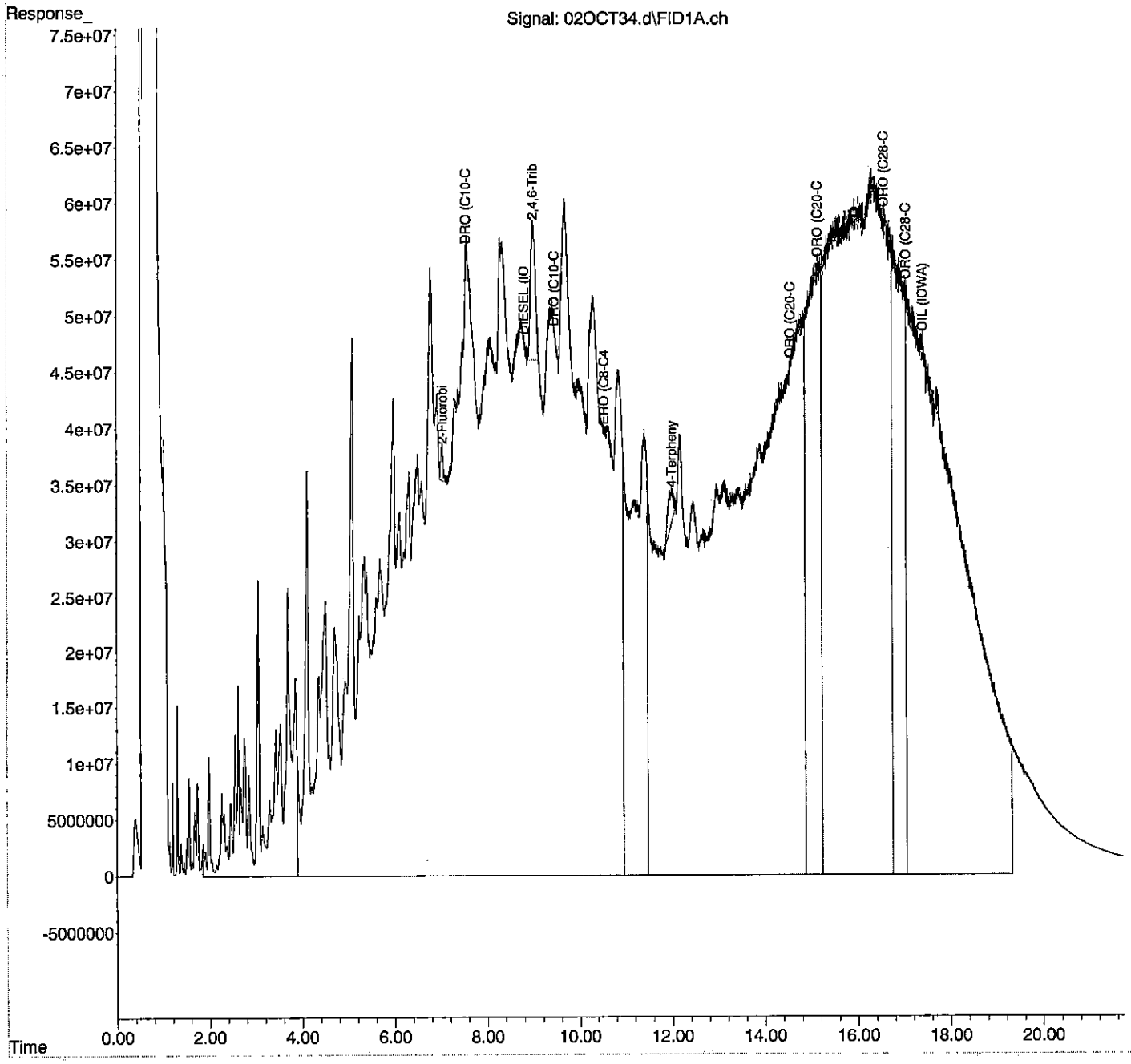
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.512	775088978	BelowCal	ug/mLm
2) S	2-Fluorobipehenyl	7.050	111927804	4.851	ug/mLm
3) S	2,4,6-Tribromophenol	9.004	890697723	47.551	ug/mLm
4) S	4-Terphenyl-d14	12.000	257770603	50.804	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	7.548	1.61342e+011	55516.367	ug/mL
6) H	ORO (C20-C34)	14.560	1.463e+011	52301.216	ug/mL
7) H	DRO (C10-C28)	9.472	2.4589e+011	55474.098	ug/mL
8) H	ORO (C28-C40)	17.070	1.15879e+011	56336.907	ug/mL
9) H	ORO (C20-C40)	15.165	1.98838e+011	56890.314	ug/mL
10) H	ORO (C28-C35)	16.581	74462569108	47346.340	ug/mL
11) H	ERO (C8-C40)	10.557	3.58697e+011	111432.856	ug/mL
12) H	DIESEL (IOWA)	8.818	2.44153e+011	55224.906	ug/mL
13) H	OIL (IOWA)	17.414	1.18299e+011	57527.342	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT34.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 4:42 pm
Operator : KJB
Sample : DRO ICAL 50,000 UG/L
Misc : 100-10243J
ALS Vial : 21 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 02 17:13:08 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 16:58:33 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : E:\GCs\GC8-191002\
Data File : 02OCT36.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 5:11 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10244
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 03 08:28:59 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

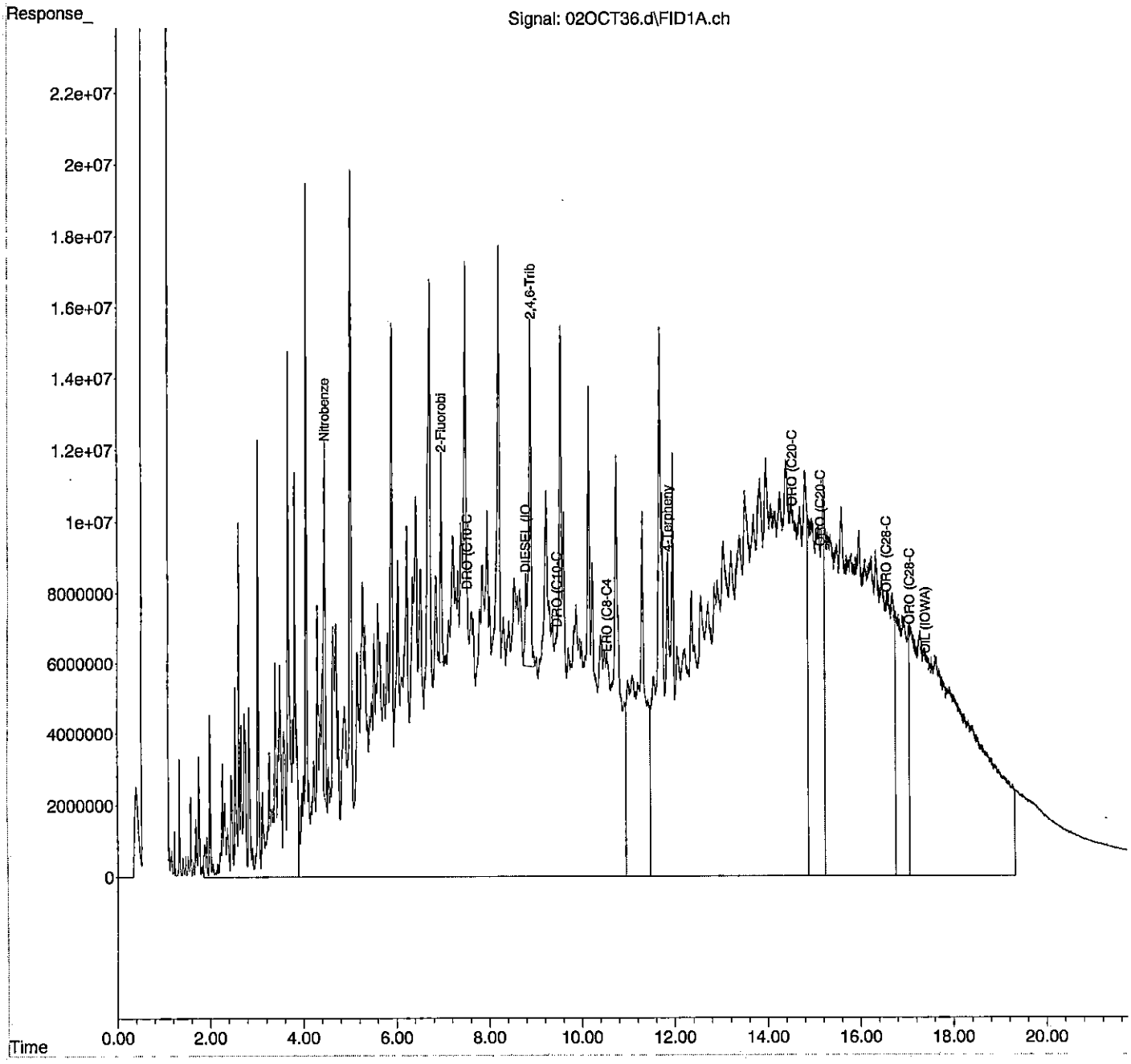
	Compound	R.T.	Response	Conc Units
System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.469	224256702	30.868 ug/mLm
2) S	2-Fluorobipehenyl	6.987	124914425	52.061 ug/mLm
3) S	2,4,6-Tribromophenol	8.914	369762970	19.935 ug/mLm
4) S	4-Terphenyl-d14	11.870	53158769	20.047 ug/mLm
Target Compounds				
5) H	DRO (C10-C20)	7.548	28271273859	8984.867 ug/mL
6) H	ORO (C20-C34)	14.560	28888239435	10244.667 ug/mL
7) H	DRO (C10-C28)	9.472	48152224036	10092.699 ug/mL
8) H	ORO (C28-C40)	17.070	19078730346	8590.796 ug/mL
9) H	ORO (C20-C40)	15.165	36574925718	9605.390 ug/mL
10) H	ORO (C28-C35)	16.581	13151663558	9267.787 ug/mL
11) H	ERO (C8-C40)	10.557	66668046565	19235.053 ug/mL
12) H	DIESEL (IOWA)	8.818	47801738486	10066.361 ug/mL
13) H	OIL (IOWA)	17.414	19493911327	8701.141 ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : E:\GCs\GC8-191002\
Data File : 02OCT36.d
Signal(s) : FID1A.ch
Acq On : 2 Oct 2019 5:11 pm
Operator : KJB
Sample : DRO ICV 10,000 UG/L
Misc : 100-10244
ALS Vial : 22 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 03 08:28:59 2019
Quant Method : C:\msdchem\1\methods\DRO190925.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



```
                          2019 Oct 02 1118 Sequence Log
    Starting sequence Wed Oct 02 09:34:44 2019

  Instrument Name: GC 8
    Sequence File: C:\msdchem\1\sequence\GC8-191002.s
          Comment: DRO / ORO by 8015
         Operator: KJB
        Data Path: C:\MSDCHEM\1\DATA\GC8-191002\
      Method Path: C:\MSDCHEM\1\METHODS\

    Line Type        Vial  DataFile  Method    Sample Name
    ------------------------------------------------------------------------
      1) COMMENT: 'Dual system, unlinked'
      2) UNLINKED: 'Unlinked'
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
      5) RearSamp       9  02OCT03   LVID4     RINSE
      6) Sample        11  02OCT04   LVID4     BNA SURR
      7) RearSamp       9  02OCT05   LVID4     RINSE

Wed Oct 02 10:04:45 2019
    Fatal sequence error detected.
    GC Prerun Aborted


      C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 0934 Quality Log.LOG
      C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 0934 Sequence Log .LOG
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\

    Resuming sequence Wed Oct 02 11:08:49 2019


  Instrument Name: GC 8
    Sequence File: C:\msdchem\1\sequence\GC8-191002.s
          Comment: DRO / ORO by 8015
         Operator: KJB
        Data Path: C:\MSDCHEM\1\DATA\GC8-191002\
      Method Path: C:\MSDCHEM\1\METHODS\

    Line Type        Vial  DataFile  Method    Sample Name
    ------------------------------------------------------------------------
      1) COMMENT: 'Dual system, unlinked'
      2) UNLINKED: 'Unlinked'
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
      9) Comment: 'DUAL SYSTEM, UNLINKED'
     10) Unlinked: 'UNLINKED'
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
     11) RearSamp       9  02OCT07   LVID4B    RINSE

Wed Oct 02 11:09:49 2019
    Fatal sequence error detected.
```

2019 Oct 02 1118 Sequence Log

```
      C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 1108 Quality Log.LOG
      C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 1108 Sequence Log .LOG
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\

    Resuming sequence Wed Oct 02 11:15:07 2019


  Instrument Name: GC 8
    Sequence File: C:\msdchem\1\sequence\GC8-191002.s
          Comment: DRO / ORO by 8015
         Operator: KJB
        Data Path: C:\MSDCHEM\1\DATA\GC8-191002\
      Method Path: C:\MSDCHEM\1\METHODS\

    Line Type        Vial  DataFile  Method    Sample Name
    ----------------------------------------------------------------------
      1) COMMENT: 'Dual system, unlinked'
      2) UNLINKED: 'Unlinked'
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
      9) COMMENT: 'Dual system, unlinked'
     10) UNLINKED: 'Unlinked'
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
     13) Comment: 'DUAL SYSTEM, UNLINKED'
     14) Unlinked: 'UNLINKED'
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
     15) RearSamp       9  02OCT09   LVID4B    RINSE

Wed Oct 02 11:16:05 2019
    Fatal sequence error detected.



      C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 1115 Quality Log.LOG
      C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 1115 Sequence Log .LOG
           Complete paths including drive 'C:\msdchem...' must be specified.
           Ignoring keyword string :UNLINKED
           Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\

    Resuming sequence Wed Oct 02 11:18:54 2019


  Instrument Name: GC 8
    Sequence File: C:\msdchem\1\sequence\GC8-191002.s
          Comment: DRO / ORO by 8015
         Operator: KJB
        Data Path: C:\MSDCHEM\1\DATA\GC8-191002\
      Method Path: C:\MSDCHEM\1\METHODS\

    Line Type        Vial  DataFile  Method    Sample Name
    ----------------------------------------------------------------------
      1) COMMENT: 'Dual system, unlinked'
      2) UNLINKED: 'Unlinked'
```

2019 Oct 02 1118 Sequence Log

```
      Complete paths including drive 'C:\msdchem...' must be specified.
      Ignoring keyword string :UNLINKED
      Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
 9) COMMENT: 'Dual system, unlinked'
10) UNLINKED: 'Unlinked'
      Complete paths including drive 'C:\msdchem...' must be specified.
      Ignoring keyword string :UNLINKED
      Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
13) COMMENT: 'Dual system, unlinked'
14) UNLINKED: 'Unlinked'
      Complete paths including drive 'C:\msdchem...' must be specified.
      Ignoring keyword string :UNLINKED
      Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
17) Comment: 'DUAL SYSTEM, UNLINKED'
18) Unlinked: 'UNLINKED'
      Complete paths including drive 'C:\msdchem...' must be specified.
      Ignoring keyword string :UNLINKED
      Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191002.SEC\
19) RearSamp       9  02OCT11   LVID4B    RINSE
20) Sample         2  02OCT12   LVID4B    DRO DIST
21) RearSamp       9  02OCT13   LVID4B    RINSE
22) Sample        11  02OCT14   LVID4B    BNA SURR
23) RearSamp       9  02OCT15   LVID4B    RINSE
24) Sample        12  02OCT16   LVID4B    DRO ICAL 50 UG/L
25) RearSamp       9  02OCT17   LVID4B    RINSE
26) Sample        13  02OCT18   LVID4B    DRO ICAL 100 UG/L
27) RearSamp       9  02OCT19   LVID4B    RINSE
28) Sample        14  02OCT20   LVID4B    DRO ICAL 200 UG/L
29) RearSamp       9  02OCT21   LVID4B    RINSE
30) Sample        15  02OCT22   LVID4B    DRO ICAL 500 UG/L
31) RearSamp       9  02OCT23   LVID4B    RINSE
32) Sample        16  02OCT24   LVID4B    DRO ICAL 1000 UG/L
33) RearSamp       9  02OCT25   LVID4B    RINSE
34) Sample        17  02OCT26   LVID4B    DRO ICAL 2500 UG/L
35) RearSamp       9  02OCT27   LVID4B    RINSE
36) Sample        18  02OCT28   LVID4B    DRO ICAL 5000 UG/L
37) RearSamp       1  02OCT29   LVID4B    DRLVI DIST
38) Sample        19  02OCT30   LVID4B    DRO ICAL 10,000 UG/L
Sequence Table edit performed Wed Oct 02 16:07:45 2019
39) RearSamp       3  02OCT31   LVID4B    DRLVI CCV 500 UG/ML
This computer is now swap bound.
40) Sample        20  02OCT32   LVID4B    DRO ICAL 25,000 UG/L
41) RearSamp       9  02OCT33   LVID4B    RINSE
This computer is now swap bound.
42) Sample        21  02OCT34   LVID4B    DRO ICAL 50,000 UG/L
43) RearSamp       9  02OCT35   LVID4B    RINSE
This computer is now swap bound.
44) Sample        22  02OCT36   LVID4B    DRO ICV 10,000 UG/L
45) RearSamp       9  02OCT37   LVID4B    RINSE
This computer is now swap bound.
46) Sample         4  02OCT38   LVID4B    DRO CCV 10,000 UG/ML
47) RearSamp       9  02OCT39   LVID4B    RINSE
This computer is now swap bound.
48) Sample        31  02OCT40   LVID4B    DBLKS1-143224
49) RearSamp       9  02OCT41   LVID4B    RINSE
This computer is now swap bound.
50) Sample        32  02OCT42   LVID4B    DLCSS1-143224
51) RearSamp       9  02OCT43   LVID4B    RINSE
This computer is now swap bound.
52) Sample        33  02OCT44   LVID4B    19091788-04B
53) RearSamp       9  02OCT45   LVID4B    RINSE
This computer is now swap bound.
54) Sample        34  02OCT46   LVID4B    19091788-04B MS
```

2019 Oct 02 1118 Sequence Log

```
 55) RearSamp       9  02OCT47   LVID4B    RINSE
This computer is now swap bound.
 56) Sample        35  02OCT48   LVID4B    19091788-04B MSD
 57) RearSamp       9  02OCT49   LVID4B    RINSE
This computer is now swap bound.
 58) Sample        36  02OCT50   LVID4B    19091788-01B
 59) RearSamp       9  02OCT51   LVID4B    RINSE
This computer is now swap bound.
 60) Sample        37  02OCT52   LVID4B    19091788-02B
 61) RearSamp       9  02OCT53   LVID4B    RINSE
This computer is now swap bound.
 62) Sample        38  02OCT54   LVID4B    19091788-03B
 63) RearSamp       9  02OCT55   LVID4B    RINSE
This computer is now swap bound.
 64) Sample        39  02OCT56   LVID4B    19091788-05B
 65) RearSamp       9  02OCT57   LVID4B    RINSE
This computer is now swap bound.
 66) Sample        40  02OCT58   LVID4B    19091788-07B
 67) RearSamp       9  02OCT59   LVID4B    RINSE
This computer is now swap bound.
 68) Sample         4  02OCT60   LVID4B    DRO CCV 10,000 UG/ML
 69) RearSamp       9  02OCT61   LVID4B    RINSE
This computer is now swap bound.
 70) Sample        41  02OCT62   LVID4B    19091788-08B
 71) RearSamp       9  02OCT63   LVID4B    RINSE
This computer is now swap bound.
 72) Sample        42  02OCT64   LVID4B    19091788-09B
 73) RearSamp       9  02OCT65   LVID4B    RINSE
This computer is now swap bound.
 74) Sample        43  02OCT66   LVID4B    19091788-10B
 75) RearSamp       9  02OCT67   LVID4B    RINSE
This computer is now swap bound.
 76) Sample        44  02OCT68   LVID4B    19091788-11B
 77) RearSamp       9  02OCT69   LVID4B    RINSE
This computer is now swap bound.
 78) Sample        45  02OCT70   LVID4B    19091788-12B
 79) RearSamp       9  02OCT71   LVID4B    RINSE
This computer is now swap bound.
 80) Sample        46  02OCT72   LVID4B    19091788-13B
 81) RearSamp       9  02OCT73   LVID4B    RINSE
This computer is now swap bound.
 82) Sample        47  02OCT74   LVID4B    19091788-14B
 83) RearSamp       9  02OCT75   LVID4B    RINSE
This computer is now swap bound.
 84) Sample        48  02OCT76   LVID4B    19091788-15B
 85) RearSamp       9  02OCT77   LVID4B    RINSE
This computer is now swap bound.
 86) Sample        49  02OCT78   LVID4B    19091788-16B
 87) RearSamp       9  02OCT79   LVID4B    RINSE
This computer is now swap bound.
 88) Sample        50  02OCT80   LVID4B    19091788-17B
 89) RearSamp       9  02OCT81   LVID4B    RINSE
This computer is now swap bound.
 90) Sample         4  02OCT82   LVID4B    DRO CCV 10,000 UG/ML
 91) RearSamp       9  02OCT83   LVID4B    RINSE
This computer is now swap bound.
 92) Sample        51  02OCT84   LVID4B    19091788-18B
 93) RearSamp       9  02OCT85   LVID4B    RINSE
This computer is now swap bound.
 94) Sample        52  02OCT86   LVID4B    19091788-19B
 95) RearSamp       9  02OCT87   LVID4B    RINSE
This computer is now swap bound.
 96) Sample        53  02OCT88   LVID4B    19091788-20B
```

2019 Oct 02 1118 Sequence Log

```
 97) RearSamp       9  02OCT89   LVID4B    RINSE
This computer is now swap bound.
 98) Sample        54  02OCT90   LVID4B    19091788-21B
 99) RearSamp       9  02OCT91   LVID4B    RINSE
This computer is now swap bound.
100) Sample        55  02OCT92   LVID4B    DBLKS1-143288
101) RearSamp       9  02OCT93   LVID4B    RINSE
This computer is now swap bound.
102) Sample        56  02OCT94   LVID4B    DLCSS1-143288
103) RearSamp       9  02OCT95   LVID4B    RINSE
This computer is now swap bound.
104) Sample        57  02OCT96   LVID4B    19091742-01B
Sequence Table edit performed Thu Oct 03 08:08:34 2019
105) RearSamp       9  02OCT97   LVID4B    RINSE
This computer is now swap bound.
106) Sample        58  02OCT98   LVID4B    19091742-01B MS
107) RearSamp       9  02OCT99   LVID4B    RINSE
This computer is now swap bound.
108) Sample        59  02OCT100  LVID4B    19091742-01B MSD
109) RearSamp       9  02OCT101  LVID4B    RINSE
This computer is now swap bound.
110) Sample        60  02OCT102  LVID4B    19092031-01A
111) RearSamp       9  02OCT103  LVID4B    RINSE
This computer is now swap bound.
112) Sample         4  02OCT104  LVID4B    DRO CCV 10,000 UG/ML
113) RearSamp       9  02OCT105  LVID4B    RINSE
This computer is now swap bound.
114) Sample        61  02OCT106  LVID4B    19092031-01A
115) RearSamp       9  02OCT107  LVID4B    RINSE
This computer is now swap bound.
116) Sample        62  02OCT110  LVID4B    19092031-03A
117) RearSamp       9  02OCT111  LVID4B    RINSE
This computer is now swap bound.
118) Sample        63  02OCT112  LVID4B    19092031-04A
119) RearSamp       9  02OCT113  LVID4B    RINSE
This computer is now swap bound.
120) Sample        64  02OCT114  LVID4B    19092031-05A
121) RearSamp       9  02OCT115  LVID4B    RINSE
This computer is now swap bound.
122) Sample        65  02OCT116  LVID4B    19092031-06A
123) RearSamp       9  02OCT117  LVID4B    RINSE
This computer is now swap bound.
124) Sample        66  02OCT118  LVID4B    DBLKS1-143376
125) RearSamp       9  02OCT119  LVID4B    RINSE
This computer is now swap bound.
126) Sample        67  02OCT120  LVID4B    DLCSS1-143376
127) RearSamp       9  02OCT121  LVID4B    RINSE
This computer is now swap bound.
128) Sample        68  02OCT122  LVID4B    19100134-01A
129) RearSamp       9  02OCT123  LVID4B    RINSE
This computer is now swap bound.
130) Sample        69  02OCT124  LVID4B    19100136-01A
131) RearSamp       9  02OCT127  LVID4B    RINSE
This computer is now swap bound.
132) Sample        70  02OCT128  LVID4B    19100136-02A
133) RearSamp       9  02OCT129  LVID4B    RINSE
This computer is now swap bound.
134) Sample         4  02OCT130  LVID4B    DRO CCV 10,000 UG/ML
135) RearSamp       9  02OCT131  LVID4B    RINSE
This computer is now swap bound.
136) Sample        71  02OCT132  LVID4B    19100136-03A
137) RearSamp       9  02OCT133  LVID4B    RINSE
This computer is now swap bound.
```

```
                    2019 Oct 02 1118 Sequence Log
138) Sample        72  02OCT134  LVID4B    19100136-04A
139) RearSamp       9  02OCT135  LVID4B    RINSE
This computer is now swap bound.
140) Sample         4  02OCT136  LVID4B    DRO CCV 10,000 UG/ML

Sequence completed Thu Oct 03 16:51:32 2019

  C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 1118 Quality Log.LOG
  C:\MSDCHEM\1\DATA\GC8-191002\2019 Oct 02 1118 Sequence Log .LOG
```

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT06.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 9:41 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:08:36 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	13.683	31.6#	0	0.02
2	S	2-Fluorobipehenyl	20.000	27.075	-35.4#	0	0.03
3	S	2,4,6-Tribromophenol	20.000	15.260	23.7#	0	0.13
4	S	4-Terphenyl-d14	20.000	19.581	2.1	0	0.04
5	H	DRO (C10-C20)	10000.000	-147.423	101.5#	0	-7.55#
7	H	DRO (C10-C28)	10000.000	8995.020	10.0	0	0.00
11	H	ERO (C8-C40)	20000.000	-140.825	100.7#	0	-10.56#
12	H	DIESEL (IOWA)	10000.000	-98.119	101.0#	0	-8.82#

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-147.423	101.5#	0	-7.55#
6	H	ORO (C20-C34)	10000.000	0.000	100.0#	0	-14.56#
8	H	ORO (C28-C40)	10000.000	0.000	100.0#	0	-17.07#
9	H	ORO (C20-C40)	10000.000	0.000	100.0#	0	-15.16#
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	-16.58#
11	H	ERO (C8-C40)	20000.000	-140.825	100.7#	0	-10.56#
12	H	DIESEL (IOWA)	10000.000	-98.119	101.0#	0	-8.82#
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	-17.41#

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

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT06.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 9:41 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:08:36 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	7.108	4.968 E6	30.1#	0#	0.02
2	S	2-Fluorobipehenyl	3.350	4.118 E6	-22.9#	0#	0.03
3	S	2,4,6-Tribromophenol	17.533	14.469 E6	17.5	0#	0.13
4	S	4-Terphenyl-d14	2.832	2.596 E6	8.3	0#	0.04
5	H	DRO (C10-C20)	3.120	0.000 E6	100.0#	0#	-7.55#
7	H	DRO (C10-C28)	4.736	4.291 E6	9.4	0#	0.00
11	H	ERO (C8-C40)	3.497	0.000 E6	100.0#	0#	-10.56#
12	H	DIESEL (IOWA)	4.730	0.000 E6	100.0#	0#	-8.82#

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.120	0.000 E6	100.0#	0#	-7.55#
6	H	ORO (C20-C34)	2.804	0.000 E6	100.0#	0#	-14.56#
8	H	ORO (C28-C40)	2.288	0.000 E6	100.0#	0#	-17.07#
9	H	ORO (C20-C40)	3.808	0.000 E6	100.0#	0#	-15.16#
10	H	ORO (C28-C35)	1.407	0.000 E6	100.0#	0#	-16.58#
11	H	ERO (C8-C40)	3.497	0.000 E6	100.0#	0#	-10.56#
12	H	DIESEL (IOWA)	4.730	0.000 E6	100.0#	0#	-8.82#
13	H	OIL (IOWA)	2.266	0.000 E6	100.0#	0#	-17.41#

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

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT06.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 9:41 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:08:36 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

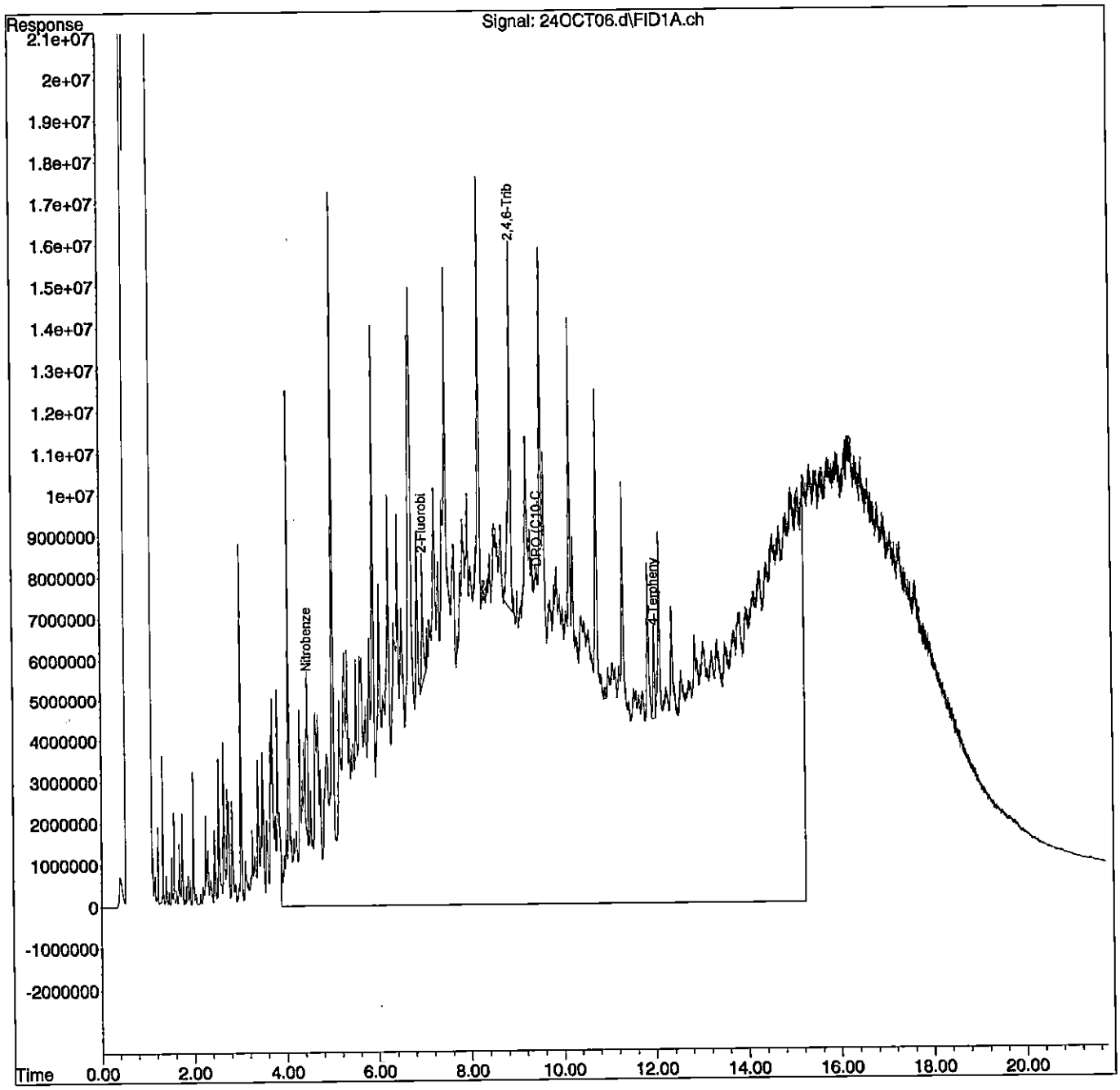
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.465	99360117	13.683	ug/mLm
2) S	2-Fluorobipehenyl	6.986	82366724	27.075	ug/mLm
3) S	2,4,6-Tribromophenol	8.912	289386278	15.260	ug/mLm
4) S	4-Terphenyl-d14	11.994	51927389	19.581	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	42914165719	8995.020	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT06.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 9:41 am
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:08:36 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT26.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 2:32 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:33:11 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	20.000	15.532	22.3#	0	0.01
2	S	2-Fluorobipehenyl	20.000	40.840	-104.2#	0	-0.09
3	S	2,4,6-Tribromophenol	20.000	15.130	24.3#	0	0.13
4	S	4-Terphenyl-d14	20.000	19.535	2.3	0	0.04
5	H	DRO (C10-C20)	10000.000	-159.722	101.6#	0	-7.55#
7	H	DRO (C10-C28)	10000.000	9384.009	6.2	0	0.00
11	H	ERO (C8-C40)	20000.000	-151.996	100.8#	0	-10.56#
12	H	DIESEL (IOWA)	10000.000	-106.269	101.1#	0	-8.82#

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	10000.000	-159.722	101.6#	0	-7.55#
6	H	ORO (C20-C34)	10000.000	0.000	100.0#	0	-14.56#
8	H	ORO (C28-C40)	10000.000	0.000	100.0#	0	-17.07#
9	H	ORO (C20-C40)	10000.000	0.000	100.0#	0	-15.16#
10	H	ORO (C28-C35)	10000.000	0.000	100.0#	0	-16.58#
11	H	ERO (C8-C40)	20000.000	-151.996	100.8#	0	-10.56#
12	H	DIESEL (IOWA)	10000.000	-106.269	101.1#	0	-8.82#
13	H	OIL (IOWA)	10000.000	0.000	100.0#	0	-17.41#

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

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT26.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 2:32 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:33:11 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	S	Nitrobenzene-d5	7.108	5.640 E6	20.7#	0#	0.01
2	S	2-Fluorobipehenyl	3.350	5.497 E6	-64.1#	0#	-0.09
3	S	2,4,6-Tribromophenol	17.533	14.354 E6	18.1	0#	0.13
4	S	4-Terphenyl-d14	2.832	2.590 E6	8.5	0#	0.04
5	H	DRO (C10-C20)	3.120	0.000 E6	100.0#	0#	-7.55#
7	H	DRO (C10-C28)	4.736	4.477 E6	5.5	0#	0.00
11	H	ERO (C8-C40)	3.497	0.000 E6	100.0#	0#	-10.56#
12	H	DIESEL (IOWA)	4.730	0.000 E6	100.0#	0#	-8.82#

Evaluate Continuing Calibration Report - Not Founds

5	H	DRO (C10-C20)	3.120	0.000 E6	100.0#	0#	-7.55#
6	H	ORO (C20-C34)	2.804	0.000 E6	100.0#	0#	-14.56#
8	H	ORO (C28-C40)	2.288	0.000 E6	100.0#	0#	-17.07#
9	H	ORO (C20-C40)	3.808	0.000 E6	100.0#	0#	-15.16#
10	H	ORO (C28-C35)	1.407	0.000 E6	100.0#	0#	-16.58#
11	H	ERO (C8-C40)	3.497	0.000 E6	100.0#	0#	-10.56#
12	H	DIESEL (IOWA)	4.730	0.000 E6	100.0#	0#	-8.82#
13	H	OIL (IOWA)	2.266	0.000 E6	100.0#	0#	-17.41#

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

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT26.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 2:32 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:33:11 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

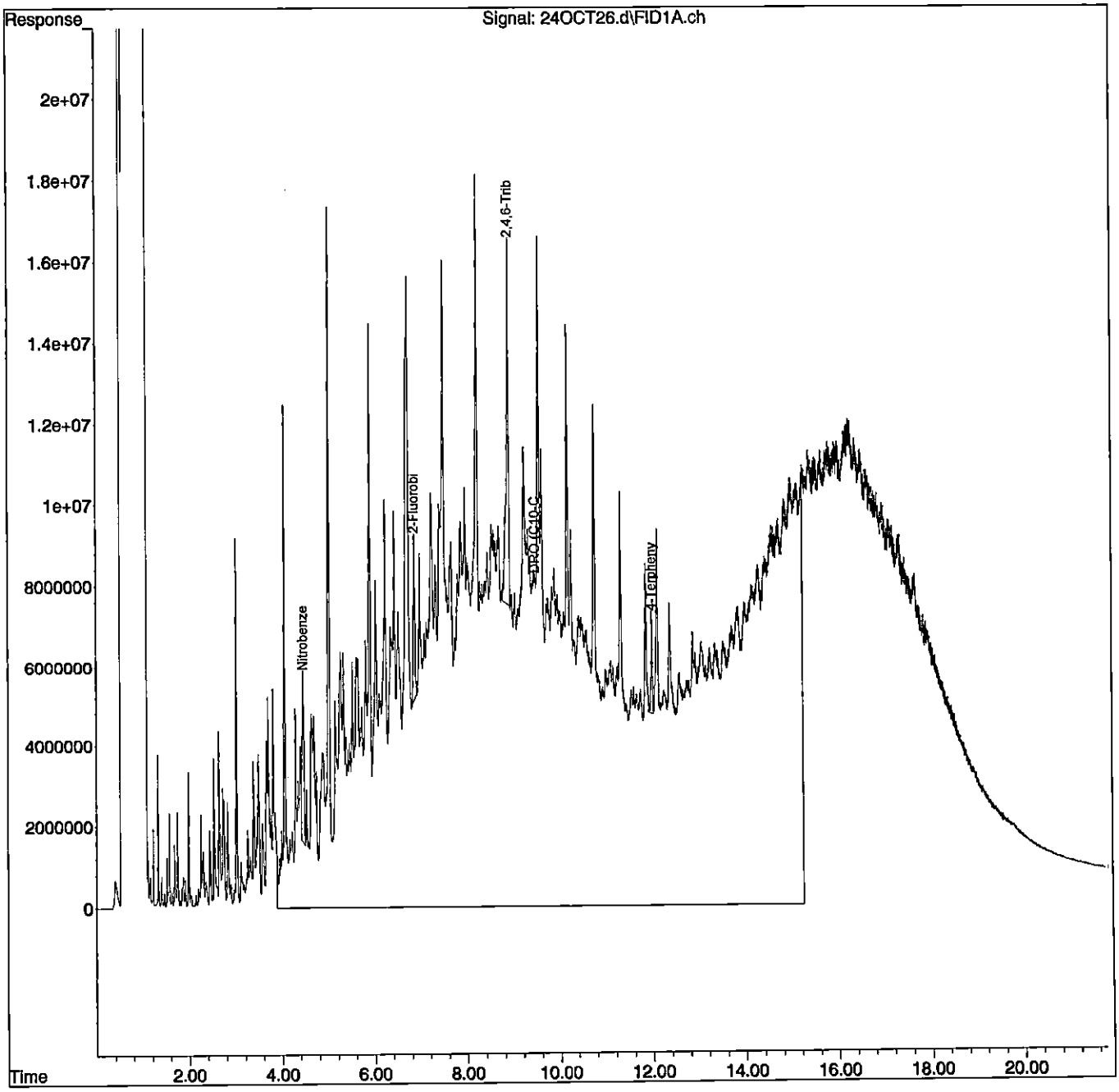
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.462	112797515	15.532	ug/mLm
2) S	2-Fluorobipehenyl	6.870	109944854	40.840	ug/mLm
3) S	2,4,6-Tribromophenol	8.907	287079037	15.130	ug/mLm
4) S	4-Terphenyl-d14	11.987	51804384	19.535	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	44770399375	9384.009	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT26.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 2:32 pm
Operator : KJB
Sample : DRO CCV 10,000 UG/ML
Misc : 100-10243H
ALS Vial : 4 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:33:11 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT02.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 8:33 am
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:07:53 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

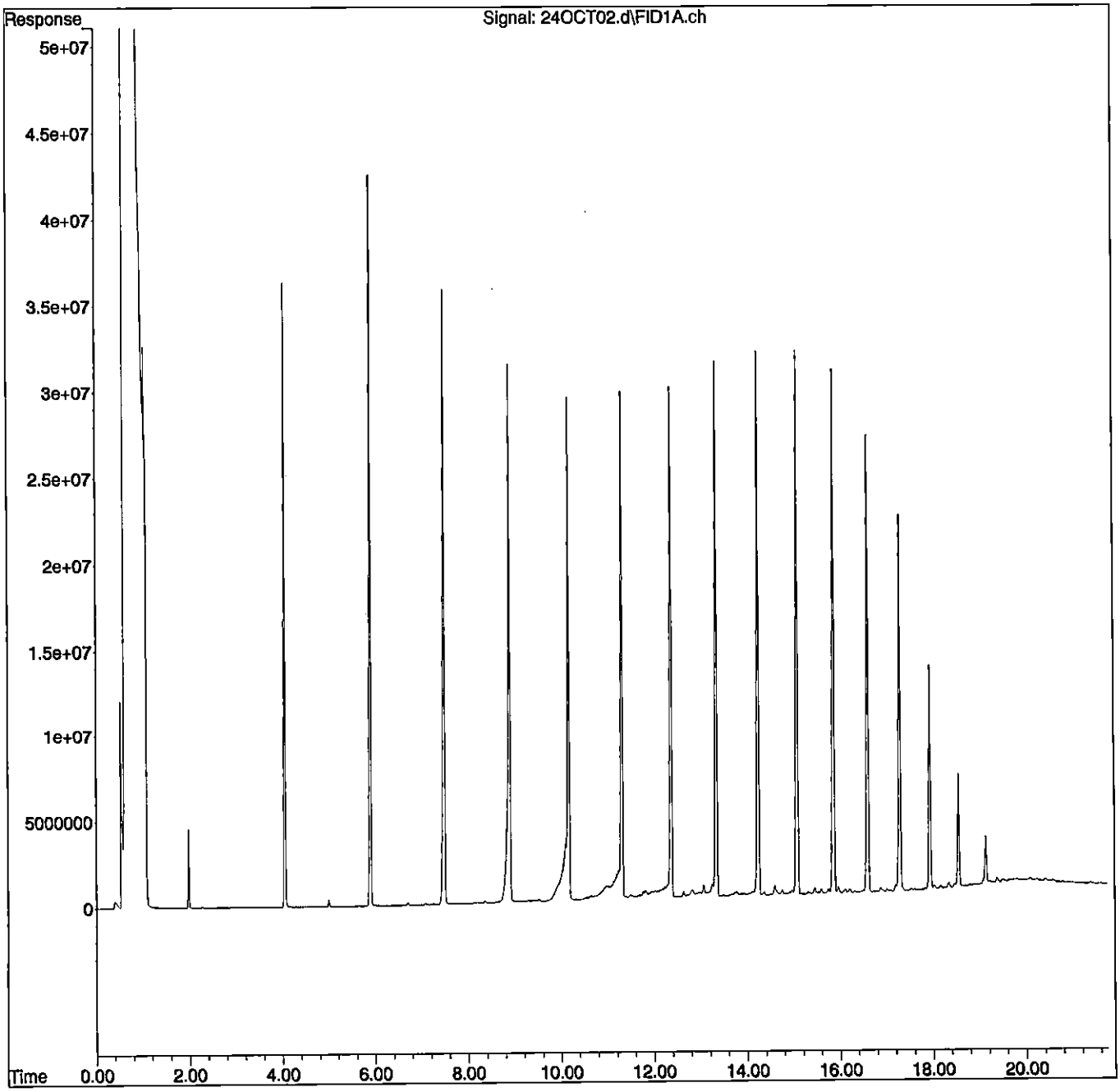
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	0.000	0	N.D.	ug/mL
2) S	2-Fluorobipehenyl	0.000	0	N.D.	ug/mL
3) S	2,4,6-Tribromophenol	0.000	0	N.D.	ug/mL
4) S	4-Terphenyl-d14	0.000	0	N.D.	ug/mL
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mL
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mL
7) H	DRO (C10-C28)	0.000	0	N.D.	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mL
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mL
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mL
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mL
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mL
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mL

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT02.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 8:33 am
Operator : KJB
Sample : DRO DIST
Misc : 3081-97-7
ALS Vial : 2 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:07:53 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT08.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 10:10 am
Operator : KJB
Sample : DBLKS1-144450
Misc :
ALS Vial : 101 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:09:07 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

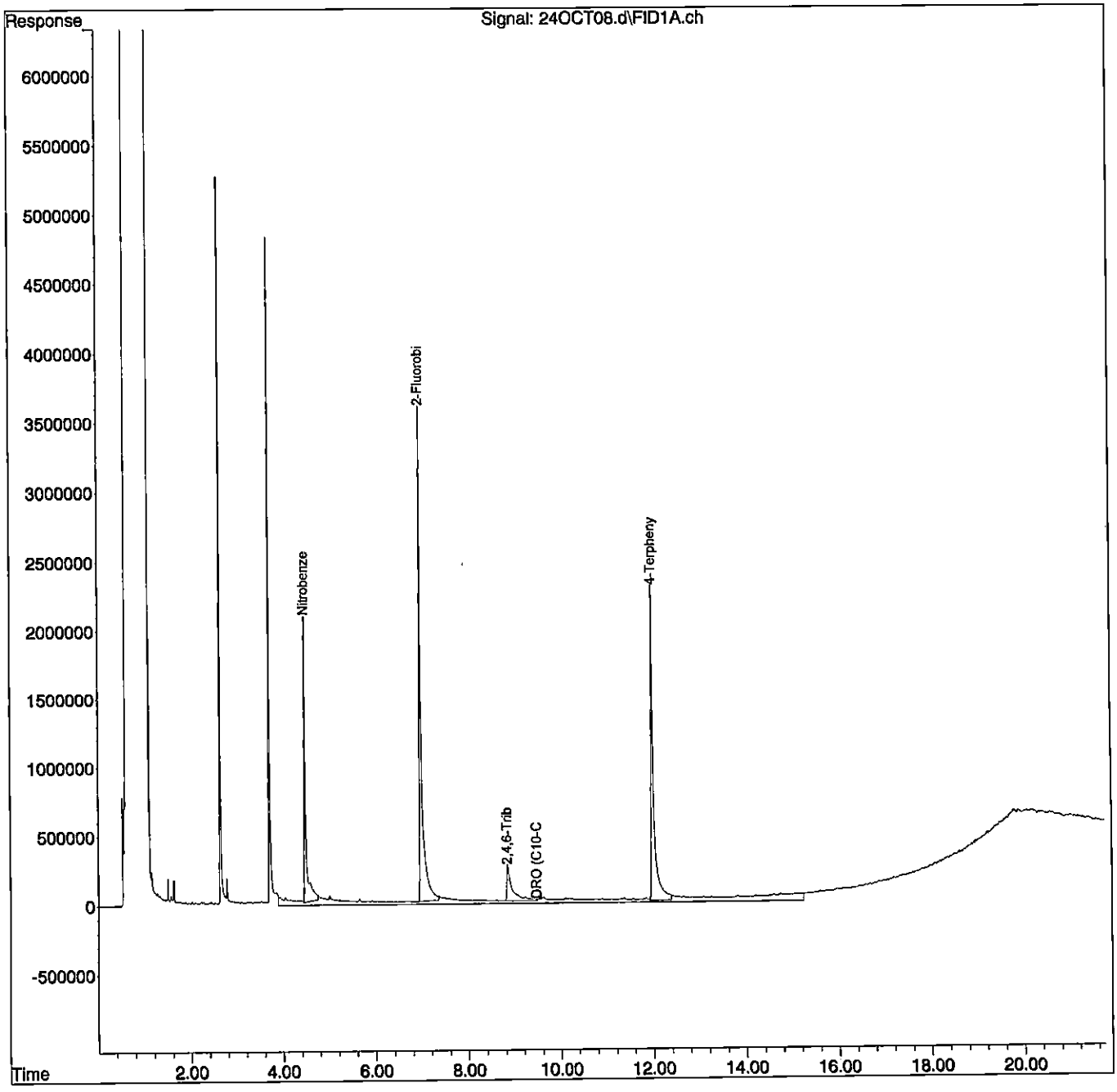
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.461	50748990	6.994	ug/mLm
2) S	2-Fluorobipehenyl	6.969	106536248	38.821	ug/mLm
3) S	2,4,6-Tribromophenol	8.841	20640778	1.477	ug/mLm
4) S	4-Terphenyl-d14	11.974	88626076	33.446	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	56163220	13.772	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT08.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 10:10 am
Operator : KJB
Sample : DBLKS1-144450
Misc :
ALS Vial : 101 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:09:07 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT10.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 10:40 am
Operator : KJB
Sample : DLCSS1-144450
Misc :
ALS Vial : 102 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:09:36 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

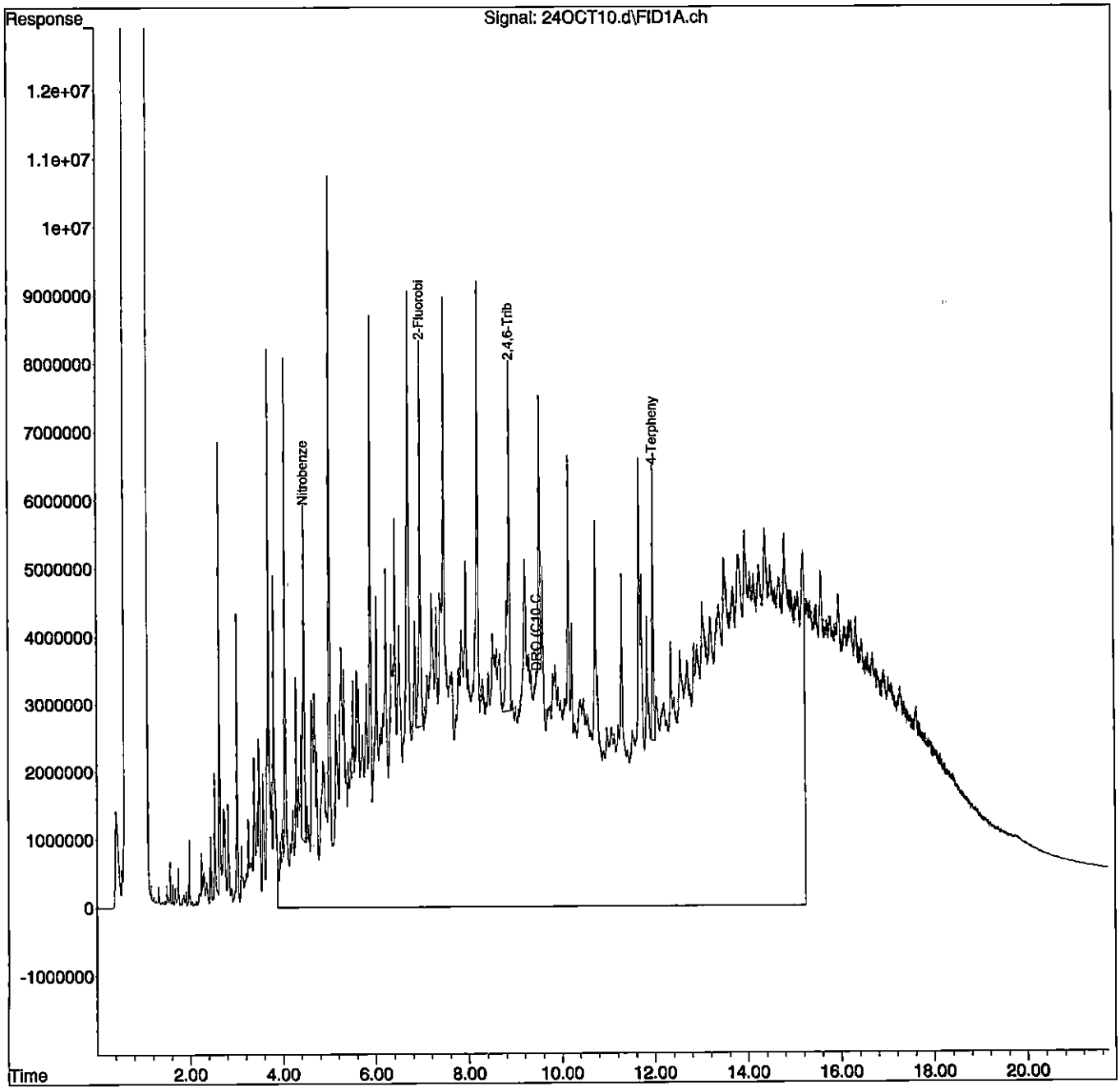
	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	Nitrobenzene-d5	4.459	116795871	16.082	ug/mLm
2) S	2-Fluorobipehenyl	6.974	126285929	53.437	ug/mLm
3) S	2,4,6-Tribromophenol	8.891	160969181	8.370	ug/mLm
4) S	4-Terphenyl-d14	11.981	83893736	31.658	ug/mLm
	Target Compounds				
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	22018930403	4616.251	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT10.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 10:40 am
Operator : KJB
Sample : DLCSS1-144450
Misc :
ALS Vial : 102 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 12:09:36 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT22.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 1:34 pm
Operator : KJB
Sample : 19101554-14B MS
Misc :
ALS Vial : 108 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:20:41 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

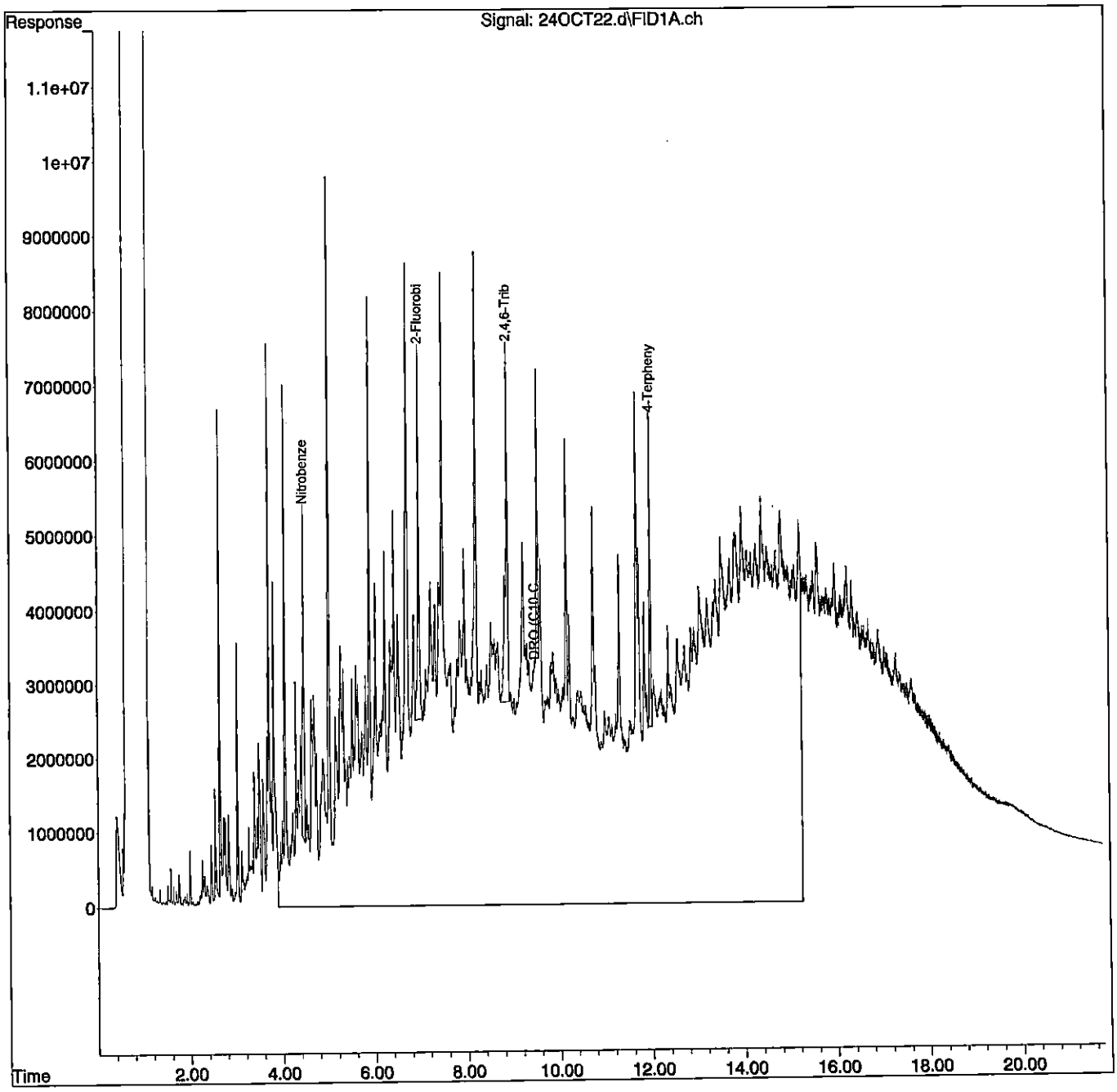
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.460	101484852	13.975	ug/mLm
2) S	2-Fluorobipehenyl	6.972	114282179	43.620	ug/mLm
3) S	2,4,6-Tribromophenol	8.890	156476995	8.140	ug/mLm
4) S	4-Terphenyl-d14	11.978	85364803	32.214	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	20959603922	4394.261	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT22.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 1:34 pm
Operator : KJB
Sample : 19101554-14B MS
Misc :
ALS Vial : 108 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:20:41 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT24.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 2:03 pm
Operator : KJB
Sample : 19101554-14B MSD
Misc :
ALS Vial : 109 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:21:11 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

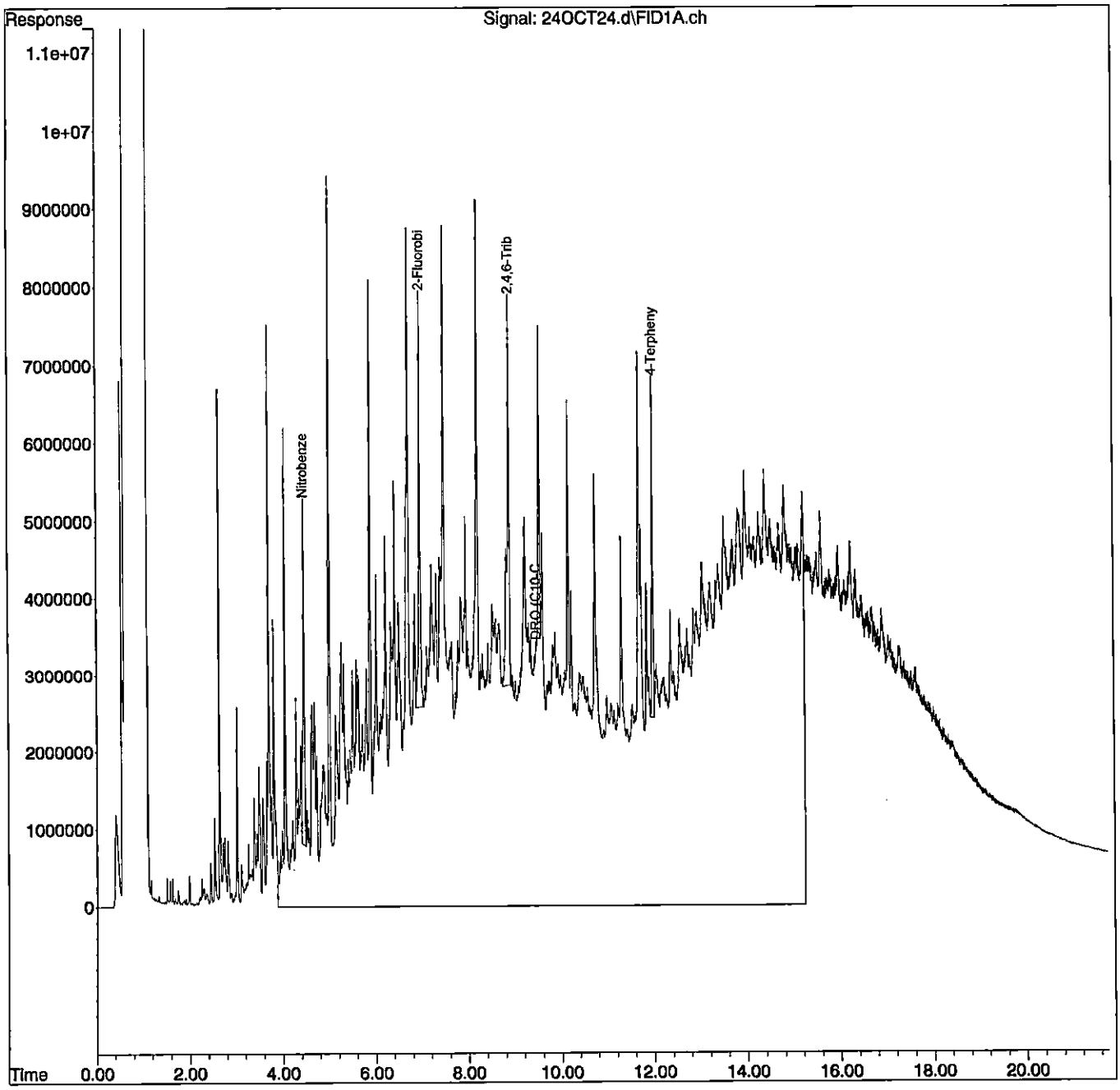
	Compound	R.T.	Response	Conc	Units
System Monitoring Compounds					
1) S	Nitrobenzene-d5	4.458	102850127	14.163	ug/mLm
2) S	2-Fluorobipehenyl	6.974	124377987	51.548	ug/mLm
3) S	2,4,6-Tribromophenol	8.890	161497384	8.397	ug/mLm
4) S	4-Terphenyl-d14	11.977	89861876	33.913	ug/mLm
Target Compounds					
5) H	DRO (C10-C20)	0.000	0	N.D.	ug/mLd
6) H	ORO (C20-C34)	0.000	0	N.D.	ug/mLd
7) H	DRO (C10-C28)	9.472	21630627071	4534.879	ug/mL
8) H	ORO (C28-C40)	0.000	0	N.D.	ug/mLd
9) H	ORO (C20-C40)	0.000	0	N.D.	ug/mLd
10) H	ORO (C28-C35)	0.000	0	N.D.	ug/mLd
11) H	ERO (C8-C40)	0.000	0	N.D.	ug/mLd
12) H	DIESEL (IOWA)	0.000	0	N.D.	ug/mLd
13) H	OIL (IOWA)	0.000	0	N.D.	ug/mLd

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : C:\msdchem\1\data\GC8-191024\
Data File : 24OCT24.d
Signal(s) : FID1A.ch
Acq On : 24 Oct 2019 2:03 pm
Operator : KJB
Sample : 19101554-14B MSD
Misc :
ALS Vial : 109 Sample Multiplier: 1

Integration File: EVEA.e
Quant Time: Oct 24 14:21:11 2019
Quant Method : C:\msdchem\1\methods\DRO191002.M
Quant Title :
QLast Update : Wed Oct 02 17:16:11 2019
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



2019 Oct 24 0831 Sequence Log

Starting sequence Thu Oct 24 08:31:32 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191024.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191024\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Comment: 'DUAL SYSTEM, UNLINKED'				
2)	Unlinked: 'UNLINKED'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191024.SEC\				
3)	RearSamp	1	24OCT01	LVID4B	DRLVI
This computer is now swap bound.					
4)	Sample	2	24OCT02	LVID4B	DRO DIST
5)	RearSamp	3	24OCT03	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
6)	Sample	4	24OCT04	LVID4B	DRO CCV 10,000 UG/ML

Sequence completed Thu Oct 24 09:25:07 2019

C:\MSDCHEM\1\DATA\GC8-191024\2019 Oct 24 0831 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191024\2019 Oct 24 0831 Sequence Log .LOG

2019 Oct 24 0939 Sequence Log

Starting sequence Thu Oct 24 09:39:56 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191024.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191024\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	COMMENT: 'Dual system, unlinked'				
2)	UNLINKED: 'Unlinked'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191024.SEC\				
7)	RearSamp	3	24OCT05	LVID4B	DRLVI CCV 500 UG/ML

This computer is now swap bound.

8)	Sample	4	24OCT06	LVID4B	DRO CCV 10,000 UG/ML

Sequence completed Thu Oct 24 10:04:15 2019

C:\MSDCHEM\1\DATA\GC8-191024\2019 Oct 24 0939 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191024\2019 Oct 24 0939 Sequence Log .LOG

2019 Oct 24 1009 Sequence Log

Starting sequence Thu Oct 24 10:09:01 2019

Instrument Name: GC 8
Sequence File: C:\msdchem\1\sequence\GC8-191024.s
Comment: DRO / ORO by 8015
Operator: KJB
Data Path: C:\MSDCHEM\1\DATA\GC8-191024\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	COMMENT: 'Dual system, unlinked'				
2)	UNLINKED: 'Unlinked'				
	Complete paths including drive 'C:\msdchem...' must be specified.				
	Ignoring keyword string :UNLINKED				
	Unlinked Sequencing initiated to : C:\MSDCHEM\1\DATA\GC8-191024.SEC\				
9)	RearSamp	51	24OCT07	LVID4B	DBLKW1-144415
This computer is now swap bound.					
10)	Sample	101	24OCT08	LVID4B	DBLKS1-144450
11)	RearSamp	52	24OCT09	LVID4B	DLCSW1-144415
This computer is now swap bound.					
12)	Sample	102	24OCT10	LVID4B	DLCSS1-144450
13)	RearSamp	53	24OCT11	LVID4B	DRLVSW1-144415
This computer is now swap bound.					
14)	Sample	103	24OCT12	LVID4B	19101800-01A
15)	RearSamp	54	24OCT13	LVID4B	19101423-01A
This computer is now swap bound.					
16)	Sample	104	24OCT14	LVID4B	19101800-02A
17)	RearSamp	55	24OCT15	LVID4B	19101423-01A MS
This computer is now swap bound.					
18)	Sample	105	24OCT16	LVID4B	19101800-03A
19)	RearSamp	56	24OCT17	LVID4B	19101423-01A MSD
This computer is now swap bound.					
20)	Sample	106	24OCT18	LVID4B	19101800-04A
21)	RearSamp	57	24OCT19	LVID4B	19101423-02A
This computer is now swap bound.					
22)	Sample	107	24OCT20	LVID4B	19101554-14B
23)	RearSamp	58	24OCT21	LVID4B	19101423-03A
This computer is now swap bound.					
24)	Sample	108	24OCT22	LVID4B	19101554-14B MS
25)	RearSamp	59	24OCT23	LVID4B	19101425-01A
This computer is now swap bound.					
26)	Sample	109	24OCT24	LVID4B	19101554-14B MSD
27)	RearSamp	60	24OCT25	LVID4B	19101425-02A
This computer is now swap bound.					
28)	Sample	4	24OCT26	LVID4B	DRO CCV 10,000 UG/ML
29)	RearSamp	3	24OCT27	LVID4B	DRLVI CCV 500 UG/ML
This computer is now swap bound.					
30)	Sample	10	24OCT28	LVID4B	RINSE
31)	RearSamp	61	24OCT29	LVID4B	19101425-03A
This computer is now swap bound.					
32)	Sample	10	24OCT30	LVID4B	RINSE
33)	RearSamp	62	24OCT31	LVID4B	19101425-04A
This computer is now swap bound.					
34)	Sample	10	24OCT32	LVID4B	RINSE
35)	RearSamp	3	24OCT33	LVID4B	DRLVI CCV 500 UG/ML

2019 Oct 24 1009 Sequence Log

This computer is now swap bound.
36) Sample 10 24OCT34 LVID4B RINSE
37) RearSamp 9 24OCT35 LVID4B RINSE
This computer is now swap bound.
38) Sample 11 24OCT36 LVID4B DBLKS1-144537
39) RearSamp 9 24OCT37 LVID4B RINSE
This computer is now swap bound.
40) Sample 12 24OCT38 LVID4B DLCSS1-144537
41) RearSamp 71 24OCT39 LVID4B DBLKW1-144552
This computer is now swap bound.
42) Sample 13 24OCT40 LVID4B 19101622-01A
43) RearSamp 72 24OCT41 LVID4B DLCSW1-144552
This computer is now swap bound.
44) Sample 14 24OCT42 LVID4B 19101622-01A MS
45) RearSamp 73 24OCT43 LVID4B DRLVSW1-144552
This computer is now swap bound.
46) Sample 15 24OCT44 LVID4B 19101622-01A MSD
47) RearSamp 74 24OCT45 LVID4B 19101834-01A
This computer is now swap bound.
48) Sample 16 24OCT46 LVID4B 19101900-01A
49) RearSamp 75 24OCT47 LVID4B 19101834-01A MS
This computer is now swap bound.
50) Sample 17 24OCT48 LVID4B 19101900-03A
51) RearSamp 76 24OCT49 LVID4B 19101834-01A MSD
This computer is now swap bound.
52) Sample 18 24OCT50 LVID4B 19101907-01A
53) RearSamp 77 24OCT51 LVID4B 19101834-02A
This computer is now swap bound.
54) Sample 19 24OCT52 LVID4B 19101909-01A
55) RearSamp 78 24OCT53 LVID4B 19101855-01D
This computer is now swap bound.
56) Sample 20 24OCT54 LVID4B 19101909-02A
57) RearSamp 79 24OCT55 LVID4B 19101855-02D
This computer is now swap bound.
58) Sample 4 24OCT56 LVID4B DRO CCV 10,000 UG/L
59) RearSamp 80 24OCT57 LVID4B 19101855-03D
This computer is now swap bound.
60) Sample 21 24OCT58 LVID4B 19101618-01B
61) RearSamp 3 24OCT59 LVID4B DRLVI CCV 500 NG/ML
This computer is now swap bound.
62) Sample 22 24OCT60 LVID4B 19101618-03B
63) RearSamp 9 24OCT61 LVID4B RINSE
This computer is now swap bound.
64) Sample 23 24OCT62 LVID4B 19101618-05B
65) RearSamp 9 24OCT63 LVID4B RINSE
This computer is now swap bound.
66) Sample 24 24OCT64 LVID4B 19101618-10B
67) RearSamp 9 24OCT65 LVID4B RINSE
This computer is now swap bound.
68) Sample 25 24OCT66 LVID4B 19101623-01A
69) RearSamp 9 24OCT67 LVID4B RINSE
This computer is now swap bound.
70) Sample 26 24OCT68 LVID4B 19101624-01A
71) RearSamp 9 24OCT69 LVID4B RINSE
This computer is now swap bound.
72) Sample 27 24OCT70 LVID4B 19101627-01A

2019 Oct 24 1009 Sequence Log

73) RearSamp 9 24OCT71 LVID4B RINSE
This computer is now swap bound.
74) Sample 28 24OCT72 LVID4B 19101627-02A
75) RearSamp 9 24OCT73 LVID4B RINSE
This computer is now swap bound.
76) Sample 29 24OCT74 LVID4B 19101899-01A
77) RearSamp 9 24OCT75 LVID4B RINSE
This computer is now swap bound.
78) Sample 30 24OCT76 LVID4B 19101899-02A
79) RearSamp 9 24OCT77 LVID4B RINSE
This computer is now swap bound.
80) Sample 4 24OCT78 LVID4B DRO CCV 10,000 UG/L
81) RearSamp 9 24OCT79 LVID4B RINSE
This computer is now swap bound.
82) Sample 31 24OCT80 LVID4B 19101899-03A
83) RearSamp 9 24OCT81 LVID4B RINSE
This computer is now swap bound.
84) Sample 32 24OCT82 LVID4B 19101924-02A
85) RearSamp 9 24OCT83 LVID4B RINSE
This computer is now swap bound.
86) Sample 4 24OCT84 LVID4B DRO CCV 10,000 UG/L

Sequence completed Fri Oct 25 04:58:15 2019

C:\MSDCHEM\1\DATA\GC8-191024\2019 Oct 24 1009 Quality Log.LOG
C:\MSDCHEM\1\DATA\GC8-191024\2019 Oct 24 1009 Sequence Log .LOG

ALS Group, USA

PREP BATCH REPORT

Batch ID: **144450** Prep Code: **DRO_3550_S**

Start Date: **10/23/2019 8:43:31 AM** End Date: **10/23/2019 5:11:15 PM**

Technician: **Matthew Krause**

InitSamp Wt/Vol: 15 g
FinSampVol: 1 mL
OriginalFac: 66.6667
PrepUnitFac: 1000

Sample ID	Matrix	pH	Init wt	Init vol	PMoisture	Fin Vol (mL)	Factor
19101554-14B	Soil		15.219		0	1	65.7073
19101554-14B MS			15.423		0	1	64.8382
19101554-14B MS			15.196		0	1	65.8068
19101554-15B	Soil		15.043		0	1	66.4761
19101554-17B	Soil		15.099		0	1	66.2296
19101554-21B	Soil		15.215		0	1	65.7246
19101554-22B	Soil		15.112		0	1	66.1726
19101628-01C	Soil		15.602		0	1	64.0943
19101628-02C	Soil		15.531		0	1	64.3874
19101628-03C	Soil		15.35		0	1	65.1466
19101628-04C	Soil		15.514		0	1	64.4579
19101628-05C	Soil		15.346		0	1	65.1636
19101628-06C	Soil		15.029		0	1	66.538
19101628-07C	Soil		15.192		0	1	65.8241
19101628-08C	Soil		15.164		0	1	65.9457
19101628-09C	Soil		15.214		0	1	65.7289
19101800-01A			15.165		0	1	65.9413
19101800-02A			15.333		0	1	65.2188
19101800-03A			15.57		0	1	64.2261
19101800-04A			15.246		0	1	65.591
DBLKS1-144450			15		0	1	66.6667
DLCSS1-144450			15		0	1	66.6667

Notes: *500uL Surrogate (3081-143-4) added to all samples. 500 uL DRO Spike (400-0101) added to QC. DCM (3081-147-5). Hydromatrix, H101519. Sodium Sulfate S100119. Balance 5. All extractions are B1/E1 unless otherwise noted.*

Inorganic

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

Wet Chemistry

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA | PHONE +1 616 399 6070 | FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-102219-01

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-01A

Level (low/med): LOW Date Received: 10/23/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	18			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-102219-01D

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-02A

Level (low/med): LOW Date Received: 10/23/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	21			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-102219-02

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-03A

Level (low/med): LOW Date Received: 10/23/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	17			

1 CLIENT SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MPGI-102219-03

Lab Name: ALS Group, USA

Lab Code: MI01262 Case No. SAS No SDG No. 19101800

Matrix: Soil Lab Sample ID: 19101800-04A

Level (low/med): LOW Date Received: 10/23/2019

% Moisture: not dec. 0 Date Prep:

CONCENTRATION UNITS: % of sample

CAS NO.	COMPOUND	CONCENTRATION	C	Q	M
MOIST	Moisture	21			

ALS Group, USA

Date: 14-Nov-19

Client: Tetra Tech EM Inc.

Work Order: 19101800

Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **R273685** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R273685** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**

Client ID: Run ID: **MOIST_191023C** SeqNo: **6009080** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R273685** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**

Client ID: Run ID: **MOIST_191023C** SeqNo: **6009079** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19101764-02A DUP** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**

Client ID: Run ID: **MOIST_191023C** SeqNo: **6009068** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.5	0.10	0	0	0	0-0	10.99	4.54	10	

DUP Sample ID: **19101785-01A DUP** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**

Client ID: Run ID: **MOIST_191023C** SeqNo: **6009072** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	1.77	0.10	0	0	0	0-0	2.13	18.5	10	R

The following samples were analyzed in this batch:

19101800-01A	19101800-02A	19101800-03A
19101800-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Moisture

Analyst:	KT			Date/Time In:	10/23/19 2:08 PM				Temp In Deg C:	105.1			
Review By:				Date/Time Out:	10/24/19 8:39 AM				Temp Out Deg C:	105.4			
Method:	% Moisture (SW3550C)			Batch ID:	MOIST_191023C				Sand BPL:	2049-184-4			
SOP:	HN-WC-018			Balance ID:	6				Oven ID:	11			

WO	Btl. #	SampType	Dish ID	Pan Wt	Tare Wt*	Wet Wt	1st Wt	2nd Wt	3rd Wt	Final Wt**	% Solid	%Moisture	Analyte
WBLKS		MBLK	BLK	1.1342	0	0.0000				1.1341	0.01	0.01	Moisture
LCS		LCS	LCS	1.1265	0	9.6391				10.7654	100.00	100.00	Moisture
19101785-01A	1	SAMP	T1	1.1347	0	8.0634				9.0267	97.87	2.13	Moisture
19101785-01A DUP	1	DUP	T2	1.1484	0	8.0613				9.0673	98.23	1.77	Moisture
19101800-02A	1	SAMP	T3	1.1452	0	7.0427				6.7347	79.37	20.63	Moisture
19101800-03A	1	SAMP	T4	1.1564	0	8.3039				8.0204	82.66	17.34	Moisture
19101800-04A	1	SAMP	T5	1.1585	0	8.5491				7.9231	79.13	20.87	Moisture
19101777-01A	1	SAMP	T6	1.1697	0	8.0335				8.4705	90.88	9.12	Moisture
19101777-02A	2	SAMP	T7	1.1216	0	8.0353				8.3968	90.54	9.46	Moisture
19101800-01A	1	SAMP	T8	1.1244	0	9.1022				8.5705	81.81	18.19	Moisture
19101793-01A	1	SAMP	T9	1.1321	0	7.8947				8.2534	90.20	9.80	Moisture
19101793-02A	1	SAMP	T10	1.1183	0	8.7736				8.5162	84.32	15.68	Moisture
19101759-07A	1	SAMP	T11	1.1369	0	8.032				8.5704	92.55	7.45	Moisture
19101764-02A	1	SAMP	T12	1.1225	0	9.5847				9.6542	89.01	10.99	Moisture
19101764-02A DUP	1	DUP	T13	1.143	0	9.597				9.6365	88.50	11.50	Moisture
19101759-09A	1	SAMP	T14	1.1662	0	8.4958				8.4119	85.29	14.71	Moisture
19101759-12A	1	SAMP	T15	1.1676	0	6.1411				5.8916	76.92	23.08	Moisture
19101759-14A	1	SAMP	T16	1.1424	0	6.4544				6.5444	83.69	16.31	Moisture
19101759-15A	1	SAMP	T17	1.1418	0	7.2394				6.8697	79.12	20.88	Moisture
19101759-16A	1	SAMP	T18	1.1507	0	7.6984				7.2383	79.08	20.92	Moisture
19101764-01A	1	SAMP	T19	1.13	0	7.0997				7.4693	89.29	10.71	Moisture
19101759-08A	1	SAMP	T20	1.1356	0	8.9744				9.1857	89.70	10.30	Moisture
	1	SAMP									#DIV/0!	#DIV/0!	Moisture
	1	SAMP									#DIV/0!	#DIV/0!	Moisture

Re-Dry		Temp °C	Analyst
Date/Time In:			
Date/Time Out:			

Analysis Date/Time:	10/24/2019 12:15	KT

: Tare weight must ≤ 0.0005g

****: Weight difference must be <4% or 0.5mg (whichever is smaller)**

% Solid = ((Final Wt - Pan Wt) / Wet Wt)*100

% Moisture = (1- (Final Wt - Pan Wt) / Wet Wt)) * 100

Copyright ALS Environmental, 2019

Section IV

ATTACHMENTS

-Previously Issued Report(s)

ADDRESS 3352 128th Avenue, Holland Michigan 49424-9236 USA PHONE +1 616 399 6070 FAX +1 616 399 6185
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

24-Oct-2019

Andre Baker
Tetra Tech EM Inc.
1 South Wacker Dr
Suite 3700
Chicago, IL 60606

Re: **Joliet Chemical Fire PRP Clean UP** Work Order: **19101800**

Dear Andre,

ALS Environmental received 4 samples on 23-Oct-2019 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS Group, USA

Date: 24-Oct-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: **19101800**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19101800-01	MPGI-102219-01	Soil		10/22/2019 09:30	10/23/2019 09:30	☐
19101800-02	MPGI-102219-01D	Soil		10/22/2019 09:30	10/23/2019 09:30	☐
19101800-03	MPGI-102219-02	Soil		10/22/2019 09:35	10/23/2019 09:30	☐
19101800-04	MPGI-102219-03	Soil		10/22/2019 09:37	10/23/2019 09:30	☐

ALS Group, USA

Date: 24-Oct-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Work Order: 19101800

Case Narrative

Samples for the above noted Work Order were received on 10/23/2019. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics:

Batch 144450, Method DRO_8015_S, Sample 19101800-03A: DRO surrogate recovery high due to matrix interference.

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: 24-Oct-19

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
WorkOrder: **19101800**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group, USA

Date: *24-Oct-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-102219-01
Collection Date: 10/22/2019 09:30 AM

Work Order: 19101800
Lab ID: 19101800-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 10/23/19		Analyst: **KB**
DRO (C10-C28)	**16**		**3.4**	**6.0**	**mg/Kg-dry**	1	10/24/2019 11:09
Surr: 4-Terphenyl-d14	*66.3*			*33-111*	*%REC*	1	10/24/2019 11:09
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**18**		**0.10**	**0.10**	**% of sample**	1	10/23/2019 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Oct-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-102219-01D
Collection Date: 10/22/2019 09:30 AM

Work Order: 19101800
Lab ID: 19101800-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 10/23/19		Analyst: **KB**
DRO (C10-C28)	**23**		**3.5**	**6.2**	**mg/Kg-dry**	1	10/24/2019 11:38
Surr: 4-Terphenyl-d14	*65.9*			*33-111*	*%REC*	1	10/24/2019 11:38
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**21**		**0.10**	**0.10**	**% of sample**	1	10/23/2019 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Oct-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-102219-02
Collection Date: 10/22/2019 09:35 AM

Work Order: 19101800
Lab ID: 19101800-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method:	**SW8015M**		Prep: SW3550 / 10/23/19		Analyst: **KB**
DRO (C10-C28)	**1,900**		**3.3**	**5.8**	**mg/Kg-dry**	1	10/24/2019 12:07
Surr: 4-Terphenyl-d14	*218*	S		*33-111*	*%REC*	1	10/24/2019 12:07
MOISTURE		Method:	**SW3550C**				Analyst: **KTP**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	10/23/2019 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *24-Oct-19*

Client: Tetra Tech EM Inc.
Project: Joliet Chemical Fire PRP Clean UP
Sample ID: MPGI-102219-03
Collection Date: 10/22/2019 09:37 AM

Work Order: 19101800
Lab ID: 19101800-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015M**			Prep: SW3550 / 10/23/19		Analyst: **KB**
DRO (C10-C28)	**31**		**3.5**	**6.2**	**mg/Kg-dry**	1	10/24/2019 12:36
Surr: 4-Terphenyl-d14	*91.5*			*33-111*	*%REC*	1	10/24/2019 12:36
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**21**		**0.10**	**0.10**	**% of sample**	1	10/23/2019 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 24-Oct-19

Client: Tetra Tech EM Inc.

Work Order: 19101800

Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **144450** Instrument ID **GC8** Method: **SW8015M**

MBLK Sample ID: **DBLKS1-144450-144450** Units: **mg/Kg** Analysis Date: **10/24/2019 10:10 A**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009800** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
Surr: 4-Terphenyl-d14	*2.23*	0	*3.33*	0	*67*	*33-111*	0			

LCS Sample ID: **DLCSS1-144450-144450** Units: **mg/Kg** Analysis Date: **10/24/2019 10:40 A**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009801** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	307.8	5.0	333	0	92.4	58-111	0			
Surr: 4-Terphenyl-d14	*2.111*	0	*3.33*	0	*63.4*	*33-111*	0			

MS Sample ID: **19101554-14B MS** Units: **mg/Kg** Analysis Date: **10/24/2019 01:34 P**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009808** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	284.9	4.9	323.9	2.756	87.1	58-111	0			
Surr: 4-Terphenyl-d14	*2.088*	0	*3.239*	0	*64.5*	*33-111*	0			

MSD Sample ID: **19101554-14B MSD** Units: **mg/Kg** Analysis Date: **10/24/2019 02:03 P**

Client ID: Run ID: **GC8_191024A** SeqNo: **6009809** Prep Date: **10/23/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	298.4	4.9	328.7	2.756	89.9	58-111	284.9	4.63	30	
Surr: 4-Terphenyl-d14	*2.232*	0	*3.287*	0	*67.9*	*33-111*	2.088	*6.62*	*30*	

The following samples were analyzed in this batch:

19101800-01A
19101800-02A
19101800-03A
19101800-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech EM Inc.
Work Order: 19101800
Project: Joliet Chemical Fire PRP Clean UP

QC BATCH REPORT

Batch ID: **R273685** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R273685** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**
Client ID: Run ID: **MOIST_191023C** SeqNo: **6009080** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R273685** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**
Client ID: Run ID: **MOIST_191023C** SeqNo: **6009079** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **19101764-02A DUP** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**
Client ID: Run ID: **MOIST_191023C** SeqNo: **6009068** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.5	0.10	0	0	0	0-0	10.99	4.54	10	

DUP Sample ID: **19101785-01A DUP** Units: **% of sample** Analysis Date: **10/23/2019 02:08 P**
Client ID: Run ID: **MOIST_191023C** SeqNo: **6009072** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	1.77	0.10	0	0	0	0-0	2.13	18.5	10	R

The following samples were analyzed in this batch:

19101800-01A	19101800-02A	19101800-03A
19101800-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

19101800

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT: Tetra Tech	TURNAROUND REQUIREMENTS : ☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)	
OFFICE:	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact?	Yes No N/A
PROJECT: 103x903100690002aj001	ALS QUOTE NO.:	Free ice / frozen ice bricks present upon receipt?	Yes No N/A
ORDER NUMBER:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: Andre Baker CONTACT PH: 6303793749	OF: 1 2 3 4 5 6 7	Other comment:	

SAMPLER: Andre Baker	SAMPLER MOBILE:	RELINQUISHED BY: Andre Baker	RECEIVED BY: FED EX	RELINQUISHED BY: FED EX
COC emailed to ALS? (YES)	EDD FORMAT (or default):			
Email Reports to (will default to PM if no other addresses are Andre.baker@tetratech.com		DATE/TIME: 10/22/19	DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:	SDZ 4.6°c

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH-DRO/SW8660 8015	Percent Solids							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	MPGI-102218-01	10-22-19 0930	S	No Preserve	1	X	X							
2	MPGI-102219-01D	10-22-19 0930	S	No Preserve	1	X	X							
3	MPGI-102219-02	10-22-19 0935	S	No Preserve	1	X	X							
4	MPGI-102219-03	10-22-19 0937	S	No Preserve	1	X	X							
				TOTAL	4									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Group, USA

Sample Receipt Checklist

Client Name: **TETRATECH-EM-CHI** Date/Time Received: **23-Oct-19 09:30**

Work Order: **19101800** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 23-Oct-19 (Date) Reviewed by: Chad Whelton (eSignature) 23-Oct-19 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6/4.6 c	SR2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/23/2019 12:42:53 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: