GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

August 07, 2018

Mr. Jason Litwiller
URS Corporation
2425 River Road (c/o SPRU DP)
Niskayuna, New York 12309

Re: SPRU Buildings
Work Order: 454474

Dear Mr. Litwiller:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 12, 2018. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. This package has been resubmitted to include revised metals list.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Hope Taylor
Project Manager

Chain of Custody: 18-COC-28
Enclosures

URS Energy & Construction (2012-SC-SPRU-29463-171)
SPRU Buildings
SDG: 454474

Table of Contents

Case Narrative

This package has been resubmitted to include revised metals list.

Receipt Narrative
for
URS Energy & Construction (2012-SC-SPRU-29463-171)
SDG: 454474

August 07, 2018

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on July 12, 2018 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

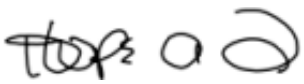
Sample Identification: The laboratory received the following samples:

Laboratory ID	Client ID
454474001	SHS01
454474002	SET01
454474003	SW17
454474004	SW18
454474005	SW19
454474006	SW20

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: GC/MS Volatile, Metals and Radiochemistry.



Hope Taylor
Project Manager

Chain of Custody and Supporting Documentation

SPRU DP OFF-SITE CHAIN-OF-CUSTODY FORM 454474

Page: 1 of 1
Project #: SPRU DP
COC Number (1): 18-COC-28

SPRU DP Off-Site Chain-of-Custody and Analytical Request Form

Work Order or Sample Delivery Group (SDG) Number:

Laboratory Address:
GEL Laboratories, LLC
2040 Savage Rd
Charleston, SC 29407

Client Name: AECOM (c/o Jason Litwiller) Phone #: 518-225-8513

Project/Site Name: SPRU Disposition Project

Address: 2401 River Rd. (SP-24) Niskayuna, NY 12309

Collected by: Jason Litwiller
Send Results: Jason Litwiller
Reference: SPRU-ENV-020, Figure 13 (Sample locations) & SPRU-ENV-007 *QAPjP*

Sample Analysis Requested (5) (Fill in the number of containers for each test, X for analyses run from another container.)

Sample ID* (*Must be obtain from Sample Coordinator)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	Sample Code(2)	Field Filtered (3)	Sample Matrix (4)	Should this Sample be considered: Radioactive (Y or N)	Should this Sample be considered: TSCA Regulated (Y or N)	Total number of containers		Gamma Spec	Alpha Spec – Th232	Alpha Spec – U	Metals incl Hg (Se by SW6020)	VOCs (SW8260), For this gray till soil, purge and trap & medium level with methanol extraction	SVOCs (SW8270)	Sample Description (required) Note: Additional sample is required for sample-specific QC (as needed)
										< --Preservative Type (6)						
SHS01	7/10/18	1430	N	N	SO	N	N	1		X			X	X		Soil from floor, excavated H2 Hillside Sump - confirmation samples
SET01	7/10/18	1440	N	N	SO	N	N	1		X			X	X		Soil from floor, beyond end of excavated H2 Escape Tunnel
SW17	7/10/18	1450	N	N	SO	N	N	1		X			X	X		Soil from sidewall, excavated H2 Escape Tunnel - confirmation samples
SW18	7/10/18	1500	N	N	SO	N	N	1		X			X	X		Soil from sidewall, excavated H2 Escape Tunnel - confirmation samples
SW19	7/10/18	1510	N	N	SO	N	N	1		X			X	X		Soil from sidewall, excavated H2 Escape Tunnel - confirmation samples
SW20	7/10/18	1520	N	N	SO	N	N	1		X			X	X		Soil from sidewall, excavated H2 Escape Tunnel - confirmation samples

TAT Requested (working days): Normal: Rush: X- 5 Day VOCs Specify below:

E-mail Results (Yes/No): Yes

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards:*

No (clean confirmation samples). VOC samples taken from 6-12" depth. Soil is dry till, gray in color. PID had no detections.
SPRU-ENV-007, Section 3.2 - Single use sample equipment (i.e., no equipment blanks). No trip blanks (section 3.2.5).
Analysis priority to VOCs & metals, then rad. Please return cooler & ice packs.
REPORT DATA AS pCi/g, DRY WEIGHT CORRECTED.
SPRU-ENV-017, Section 6.1 says: 'KAPL experience has shown low responses of internal standards in gray till samples analyzed for VOCs, resulting in data being unusable. Based on KAPL agreements with NYSDEC and to ensure usable data, the gray till samples will also be analyzed using a modified Method 8260, whereby analysis is performed using the low level purge and trap and the medium level methanol extraction. NYSDEC agreed that reanalysis for low level purge and trap is not needed to confirm the matrix effect from the till on the low internal standard responses. The lower of the usable concentrations from the two analyses (base & modified Method 8260) is used for reporting. Gray till samples can be identified on the COC to alert GEL to perform the dual analysis.'

Environmental Specialist or Manager Approval: William Duggan

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1.Jason Litwiller	7/11/18	1430	1.	7/12/18	9:15
2.			2.		

Sample Shipping and Delivery Details

Lab PM: Hope Taylor
Method of Shipment: Fed Ex
Date Shipped: 7/11/18
Airbill #: 7726 7900 1303

1) Chain of Custody Number = Client Determined
2) Sample Codes: **N** = Normal Sample, , **C** = Composite*, **TB** = Trip Blank, **EB** = Equipment Blank, **FB** – Field Blank *NOTE: All samples are grab samples unless otherwise specified
3) Field Filtered: For liquid matrices, indicate with a –**Y**- for yes the sample was field filtered or –**N**- for sample was not field filtered.
4) Matrix Codes: **GW**=Groundwater, **WW**=Waste Water, **W**=Water, **ML**=Misc. Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **MW**=Misc. Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, SM=smear(s), MET=metal, CON-concrete
5) Sample Analysis Requested: Analytical suite (e.g., Gamma spec (full suite), TCLP metals) or analytical method requested (e.g., Alpha spec (specify isotopes), 8260B (VOCs), 6010B/7470A (total metals +Hg) and number of containers provided for each..
6) Preservative Type: **HA** =Hydrochloric Acid, **NI** =Nitric Acid, **SH** =Sodium Hydroxide, **SA** =Sulfuric Acid, **AA** =Ascorbic Acid, **HX** = Hexane, **ST** =Sodium Thiosulfate, If no preservative is added = leave field blank.

For Lab Receiving Use Only	
Custody Seal Intact?	
YES	NO
Cooler Temp:	C

GEL Laboratories LLC HT

SAMPLE RECEIPT & REVIEW FORM

Client: UKSC	**SDG/AR/COC/Work Order:** 454474
Received By: AJA	**Date Received:** 7/12/18
Carrier and Tracking Number	Circle Applicable: (FedEx Express) FedEx Ground UPS Field Services Courier Other 7726 7906 1303 7726 8631 5516

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 **CPM / mR/Hr** **Classified as: Rad 1 Rad 2 Rad 3**
Is package, COC, and/or Samples marked HAZ?		✓	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice (Ice Packs) Dry ice None Other: *all temperatures are recorded in Celsius **TEMP:** 1°
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR2-18 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes No___ N/A (If unknown, select No) VOA vials free of headspace? Yes No___ N/A Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?			✓	Sample ID's affected: SET 01 has 15:00 as time
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials TMC Date 7/13/18 Page 1 of 1

GL-CHL-SR-001 Rev 5

Subject: Fwd: Samples received at GEL 7/12/18
From: Taylor Cannon <taylor.cannon@gel.com>
Date: 7/17/2018 8:32 AM
To: Jason.Litwiller@aecom.com

Hey Jason,

You get a chance to look at this?

-------- Forwarded Message --------
Subject: Samples received at GEL 7/12/18
Date: Fri, 13 Jul 2018 08:33:47 -0400
From: Taylor Cannon <taylor.cannon@gel.com>
To: Jason.Litwiller@aecom.com
CC:team.taylor@gel.com <team.taylor@gel.com>

Good morning,

Sample ID SET01 (18-COC-28) has a collect time of 1440 recorded on the chain of custody, and a collect time of 1500 recorded on the sample container. Please advise as to which collect time is correct.

Thanks,

Taylor

--
Taylor Cannon
Project Manager Assistant

GEL | Laboratories LLC

2040 Savage Road, Charleston, SC 29407 | PO Box 30712, Charleston, SC 29417

Office Direct: 843.556.8171 ext. 4708 | Office Main: 843.556.8171 | Fax: 843.766.1178
E-Mail: taylor.cannon@gel.com | Website: www.gel.com
Analytical Testing

Laboratory Certifications

List of current GEL Certifications as of 07 August 2018

State	Certification
Alaska	17−018
Arkansas	88−0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−15−00283, P330−15−00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA180011
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE−OS−26−13
Nevada	SC000122018−1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R−158
Oklahoma	9904
Pennsylvania NELAP	68−00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−18−13
Utah NELAP	SC000122018−26
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

Volatile Analysis

Case Narrative

GC/MS Volatile
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 454474

Product: **Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer**
Analytical Method: SW846 5035A/8260C
Analytical Procedure: GL-OA-E-038 REV# 26
Analytical Batch: 1782981

Preparation Method: SW846 5035A
Preparation Procedure: GL-OA-E-039 REV# 12
Preparation Batch: 1782978

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
454474001	SHS01
454474002	SET01
454474003	SW17
454474004	SW18
454474005	SW19
454474006	SW20
1204070948	Method Blank (MB)
1204070949	High Blank (HB)
1204070950	Laboratory Control Sample (LCS)
1204070951	454688003(NonSDG) Post Spike (PS)
1204070952	454688003(NonSDG) Post Spike Duplicate (PSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Matrix Spike/Matrix Spike Duplicate Recovery Statement
The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits.

Sample	Analyte	Value
1204070951 (Non SDG 454688003PS)	Bromomethane	33* (70%-130%)
	Chloroethane	10* (70%-130%)
1204070952 (Non SDG 454688003PSD)	Bromomethane	32* (70%-130%)
	Chloroethane	9* (70%-130%)

Technical Information

Sample Preservation and Integrity

Samples 454474001 (SHS01), 454474002 (SET01), 454474003 (SW17), 454474004 (SW18), 454474005 (SW19) and 454474006 (SW20) contained head-space greater than pea size. The Project Manager was notified and the results are reported.

Sample Dilutions/Methanol Dilutions
Samples 1204070951 (Non SDG 454688003PS), 1204070952 (Non SDG 454688003PSD), 454474001 (SHS01), 454474002 (SET01), 454474003 (SW17), 454474004 (SW18), 454474005 (SW19) and 454474006 (SW20) were analyzed using a methanol dilution extraction procedure because the sample matrices were not amenable to more concentrated analyses.

Analyte	454474					
	001	**002**	**003**	**004**	**005**	**006**
Several	50X	50X	50X	50X	50X	50X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)

Client SDG: 454474 GEL Work Order: 454474

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
** Analyte is a surrogate compound
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Cameron Bearden **Name: Cameron Bearden**

Date: 26 JUL 2018 **Title: Group Leader**

Sample Data Summary

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:30**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474001**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.1**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SHS01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:06**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:20**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q312.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	103	ug/kg	15.5	103
79-34-5	1,1,2,2-Tetrachloroethane	U	103	ug/kg	15.5	103
79-00-5	1,1,2-Trichloroethane	U	103	ug/kg	15.5	103
75-34-3	1,1-Dichloroethane	U	103	ug/kg	15.5	103
75-35-4	1,1-Dichloroethylene	U	103	ug/kg	15.5	103
87-61-6	1,2,3-Trichlorobenzene	U	103	ug/kg	15.5	103
120-82-1	1,2,4-Trichlorobenzene	U	103	ug/kg	15.5	103
96-12-8	1,2-Dibromo-3-chloropropane	U	103	ug/kg	25.8	103
106-93-4	1,2-Dibromoethane	U	103	ug/kg	15.5	103
95-50-1	1,2-Dichlorobenzene	U	103	ug/kg	15.5	103
107-06-2	1,2-Dichloroethane	U	103	ug/kg	15.5	103
78-87-5	1,2-Dichloropropane	U	103	ug/kg	15.5	103
541-73-1	1,3-Dichlorobenzene	U	103	ug/kg	15.5	103
106-46-7	1,4-Dichlorobenzene	U	103	ug/kg	15.5	103
123-91-1	1,4-Dioxane	U	2580	ug/kg	774	2580
78-93-3	2-Butanone	U	516	ug/kg	155	516
591-78-6	2-Hexanone	U	516	ug/kg	155	516
108-10-1	4-Methyl-2-pentanone	U	516	ug/kg	155	516
67-64-1	Acetone	U	516	ug/kg	155	516
71-43-2	Benzene	U	103	ug/kg	15.5	103
74-97-5	Bromochloromethane	U	103	ug/kg	15.5	103
75-27-4	Bromodichloromethane	U	103	ug/kg	15.5	103
75-25-2	Bromoform	U	103	ug/kg	15.5	103
74-83-9	Bromomethane	U	103	ug/kg	15.5	103
75-15-0	Carbon disulfide	U	516	ug/kg	82.5	516
56-23-5	Carbon tetrachloride	U	103	ug/kg	15.5	103
108-90-7	Chlorobenzene	U	103	ug/kg	15.5	103
75-00-3	Chloroethane	U	103	ug/kg	15.5	103
67-66-3	Chloroform	U	103	ug/kg	15.5	103
74-87-3	Chloromethane	U	103	ug/kg	15.5	103
110-82-7	Cyclohexane	U	103	ug/kg	15.5	103
124-48-1	Dibromochloromethane	U	103	ug/kg	15.5	103
75-71-8	Dichlorodifluoromethane	U	103	ug/kg	15.5	103
100-41-4	Ethylbenzene	U	103	ug/kg	15.5	103
98-82-8	Isopropylbenzene	U	103	ug/kg	15.5	103
79-20-9	Methyl acetate	U	258	ug/kg	77.4	258
108-87-2	Methylcyclohexane	U	103	ug/kg	15.5	103
75-09-2	Methylene chloride	U	258	ug/kg	82.5	258

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:30**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474001**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.1**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SHS01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:06**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:20**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q312.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	103	ug/kg	15.5	103
127-18-4	Tetrachloroethylene	U	103	ug/kg	15.5	103
108-88-3	Toluene	U	103	ug/kg	15.5	103
79-01-6	Trichloroethylene	U	103	ug/kg	15.5	103
75-69-4	Trichlorofluoromethane	U	103	ug/kg	15.5	103
76-13-1	Trichlorotrifluoroethane	U	258	ug/kg	82.5	258
75-01-4	Vinyl chloride	U	103	ug/kg	15.5	103
156-59-2	cis-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-01-5	cis-1,3-Dichloropropylene	U	103	ug/kg	15.5	103
179601-23-1	m,p-Xylenes	U	206	ug/kg	15.5	206
95-47-6	o-Xylene	U	103	ug/kg	15.5	103
1634-04-4	tert-Butyl methyl ether	U	103	ug/kg	15.5	103
156-60-5	trans-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-02-6	trans-1,3-Dichloropropylene	U	103	ug/kg	15.5	103

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:40**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474002**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.2**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SET01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:37**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:21**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q313.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	103	ug/kg	15.5	103
79-34-5	1,1,2,2-Tetrachloroethane	U	103	ug/kg	15.5	103
79-00-5	1,1,2-Trichloroethane	U	103	ug/kg	15.5	103
75-34-3	1,1-Dichloroethane	U	103	ug/kg	15.5	103
75-35-4	1,1-Dichloroethylene	U	103	ug/kg	15.5	103
87-61-6	1,2,3-Trichlorobenzene	U	103	ug/kg	15.5	103
120-82-1	1,2,4-Trichlorobenzene	U	103	ug/kg	15.5	103
96-12-8	1,2-Dibromo-3-chloropropane	U	103	ug/kg	25.8	103
106-93-4	1,2-Dibromoethane	U	103	ug/kg	15.5	103
95-50-1	1,2-Dichlorobenzene	U	103	ug/kg	15.5	103
107-06-2	1,2-Dichloroethane	U	103	ug/kg	15.5	103
78-87-5	1,2-Dichloropropane	U	103	ug/kg	15.5	103
541-73-1	1,3-Dichlorobenzene	U	103	ug/kg	15.5	103
106-46-7	1,4-Dichlorobenzene	U	103	ug/kg	15.5	103
123-91-1	1,4-Dioxane	U	2580	ug/kg	774	2580
78-93-3	2-Butanone	U	516	ug/kg	155	516
591-78-6	2-Hexanone	U	516	ug/kg	155	516
108-10-1	4-Methyl-2-pentanone	U	516	ug/kg	155	516
67-64-1	Acetone	U	516	ug/kg	155	516
71-43-2	Benzene	U	103	ug/kg	15.5	103
74-97-5	Bromochloromethane	U	103	ug/kg	15.5	103
75-27-4	Bromodichloromethane	U	103	ug/kg	15.5	103
75-25-2	Bromoform	U	103	ug/kg	15.5	103
74-83-9	Bromomethane	U	103	ug/kg	15.5	103
75-15-0	Carbon disulfide	U	516	ug/kg	82.6	516
56-23-5	Carbon tetrachloride	U	103	ug/kg	15.5	103
108-90-7	Chlorobenzene	U	103	ug/kg	15.5	103
75-00-3	Chloroethane	U	103	ug/kg	15.5	103
67-66-3	Chloroform	U	103	ug/kg	15.5	103
74-87-3	Chloromethane	U	103	ug/kg	15.5	103
110-82-7	Cyclohexane	U	103	ug/kg	15.5	103
124-48-1	Dibromochloromethane	U	103	ug/kg	15.5	103
75-71-8	Dichlorodifluoromethane	U	103	ug/kg	15.5	103
100-41-4	Ethylbenzene	U	103	ug/kg	15.5	103
98-82-8	Isopropylbenzene	U	103	ug/kg	15.5	103
79-20-9	Methyl acetate	U	258	ug/kg	77.4	258
108-87-2	Methylcyclohexane	U	103	ug/kg	15.5	103
75-09-2	Methylene chloride	U	258	ug/kg	82.6	258

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:40**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474002**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.2**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SET01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:37**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:21**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q313.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	103	ug/kg	15.5	103
127-18-4	Tetrachloroethylene	U	103	ug/kg	15.5	103
108-88-3	Toluene	U	103	ug/kg	15.5	103
79-01-6	Trichloroethylene	U	103	ug/kg	15.5	103
75-69-4	Trichlorofluoromethane	U	103	ug/kg	15.5	103
76-13-1	Trichlorotrifluoroethane	U	258	ug/kg	82.6	258
75-01-4	Vinyl chloride	U	103	ug/kg	15.5	103
156-59-2	cis-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-01-5	cis-1,3-Dichloropropylene	U	103	ug/kg	15.5	103
179601-23-1	m,p-Xylenes	U	207	ug/kg	15.5	207
95-47-6	o-Xylene	U	103	ug/kg	15.5	103
1634-04-4	tert-Butyl methyl ether	U	103	ug/kg	15.5	103
156-60-5	trans-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-02-6	trans-1,3-Dichloropropylene	U	103	ug/kg	15.5	103

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:50**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474003**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**1.4**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW17**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:08**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q314.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	101	ug/kg	15.2	101
79-34-5	1,1,2,2-Tetrachloroethane	U	101	ug/kg	15.2	101
79-00-5	1,1,2-Trichloroethane	U	101	ug/kg	15.2	101
75-34-3	1,1-Dichloroethane	U	101	ug/kg	15.2	101
75-35-4	1,1-Dichloroethylene	U	101	ug/kg	15.2	101
87-61-6	1,2,3-Trichlorobenzene	U	101	ug/kg	15.2	101
120-82-1	1,2,4-Trichlorobenzene	U	101	ug/kg	15.2	101
96-12-8	1,2-Dibromo-3-chloropropane	U	101	ug/kg	25.4	101
106-93-4	1,2-Dibromoethane	U	101	ug/kg	15.2	101
95-50-1	1,2-Dichlorobenzene	U	101	ug/kg	15.2	101
107-06-2	1,2-Dichloroethane	U	101	ug/kg	15.2	101
78-87-5	1,2-Dichloropropane	U	101	ug/kg	15.2	101
541-73-1	1,3-Dichlorobenzene	U	101	ug/kg	15.2	101
106-46-7	1,4-Dichlorobenzene	U	101	ug/kg	15.2	101
123-91-1	1,4-Dioxane	U	2540	ug/kg	761	2540
78-93-3	2-Butanone	U	507	ug/kg	152	507
591-78-6	2-Hexanone	U	507	ug/kg	152	507
108-10-1	4-Methyl-2-pentanone	U	507	ug/kg	152	507
67-64-1	Acetone	U	507	ug/kg	152	507
71-43-2	Benzene	U	101	ug/kg	15.2	101
74-97-5	Bromochloromethane	U	101	ug/kg	15.2	101
75-27-4	Bromodichloromethane	U	101	ug/kg	15.2	101
75-25-2	Bromoform	U	101	ug/kg	15.2	101
74-83-9	Bromomethane	U	101	ug/kg	15.2	101
75-15-0	Carbon disulfide	U	507	ug/kg	81.1	507
56-23-5	Carbon tetrachloride	U	101	ug/kg	15.2	101
108-90-7	Chlorobenzene	U	101	ug/kg	15.2	101
75-00-3	Chloroethane	U	101	ug/kg	15.2	101
67-66-3	Chloroform	U	101	ug/kg	15.2	101
74-87-3	Chloromethane	U	101	ug/kg	15.2	101
110-82-7	Cyclohexane	U	101	ug/kg	15.2	101
124-48-1	Dibromochloromethane	U	101	ug/kg	15.2	101
75-71-8	Dichlorodifluoromethane	U	101	ug/kg	15.2	101
100-41-4	Ethylbenzene	U	101	ug/kg	15.2	101
98-82-8	Isopropylbenzene	U	101	ug/kg	15.2	101
79-20-9	Methyl acetate	U	254	ug/kg	76.1	254
108-87-2	Methylcyclohexane	U	101	ug/kg	15.2	101
75-09-2	Methylene chloride	U	254	ug/kg	81.1	254

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:50**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474003**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**1.4**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW17**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:08**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q314.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	101	ug/kg	15.2	101
127-18-4	Tetrachloroethylene	U	101	ug/kg	15.2	101
108-88-3	Toluene	U	101	ug/kg	15.2	101
79-01-6	Trichloroethylene	U	101	ug/kg	15.2	101
75-69-4	Trichlorofluoromethane	U	101	ug/kg	15.2	101
76-13-1	Trichlorotrifluoroethane	U	254	ug/kg	81.1	254
75-01-4	Vinyl chloride	U	101	ug/kg	15.2	101
156-59-2	cis-1,2-Dichloroethylene	U	101	ug/kg	15.2	101
10061-01-5	cis-1,3-Dichloropropylene	U	101	ug/kg	15.2	101
179601-23-1	m,p-Xylenes	U	203	ug/kg	15.2	203
95-47-6	o-Xylene	U	101	ug/kg	15.2	101
1634-04-4	tert-Butyl methyl ether	U	101	ug/kg	15.2	101
156-60-5	trans-1,2-Dichloroethylene	U	101	ug/kg	15.2	101
10061-02-6	trans-1,3-Dichloropropylene	U	101	ug/kg	15.2	101

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:00**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474004**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.8**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW18**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:40**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q315.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	108	ug/kg	16.3	108
79-34-5	1,1,2,2-Tetrachloroethane	U	108	ug/kg	16.3	108
79-00-5	1,1,2-Trichloroethane	U	108	ug/kg	16.3	108
75-34-3	1,1-Dichloroethane	U	108	ug/kg	16.3	108
75-35-4	1,1-Dichloroethylene	U	108	ug/kg	16.3	108
87-61-6	1,2,3-Trichlorobenzene	U	108	ug/kg	16.3	108
120-82-1	1,2,4-Trichlorobenzene	U	108	ug/kg	16.3	108
96-12-8	1,2-Dibromo-3-chloropropane	U	108	ug/kg	27.1	108
106-93-4	1,2-Dibromoethane	U	108	ug/kg	16.3	108
95-50-1	1,2-Dichlorobenzene	U	108	ug/kg	16.3	108
107-06-2	1,2-Dichloroethane	U	108	ug/kg	16.3	108
78-87-5	1,2-Dichloropropane	U	108	ug/kg	16.3	108
541-73-1	1,3-Dichlorobenzene	U	108	ug/kg	16.3	108
106-46-7	1,4-Dichlorobenzene	U	108	ug/kg	16.3	108
123-91-1	1,4-Dioxane	U	2710	ug/kg	813	2710
78-93-3	2-Butanone	U	542	ug/kg	163	542
591-78-6	2-Hexanone	U	542	ug/kg	163	542
108-10-1	4-Methyl-2-pentanone	U	542	ug/kg	163	542
67-64-1	Acetone	U	542	ug/kg	163	542
71-43-2	Benzene	U	108	ug/kg	16.3	108
74-97-5	Bromochloromethane	U	108	ug/kg	16.3	108
75-27-4	Bromodichloromethane	U	108	ug/kg	16.3	108
75-25-2	Bromoform	U	108	ug/kg	16.3	108
74-83-9	Bromomethane	U	108	ug/kg	16.3	108
75-15-0	Carbon disulfide	U	542	ug/kg	86.7	542
56-23-5	Carbon tetrachloride	U	108	ug/kg	16.3	108
108-90-7	Chlorobenzene	U	108	ug/kg	16.3	108
75-00-3	Chloroethane	U	108	ug/kg	16.3	108
67-66-3	Chloroform	U	108	ug/kg	16.3	108
74-87-3	Chloromethane	U	108	ug/kg	16.3	108
110-82-7	Cyclohexane	U	108	ug/kg	16.3	108
124-48-1	Dibromochloromethane	U	108	ug/kg	16.3	108
75-71-8	Dichlorodifluoromethane	U	108	ug/kg	16.3	108
100-41-4	Ethylbenzene	U	108	ug/kg	16.3	108
98-82-8	Isopropylbenzene	U	108	ug/kg	16.3	108
79-20-9	Methyl acetate	U	271	ug/kg	81.3	271
108-87-2	Methylcyclohexane	U	108	ug/kg	16.3	108
75-09-2	Methylene chloride	U	271	ug/kg	86.7	271

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:00**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474004**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.8**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW18**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:40**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q315.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	108	ug/kg	16.3	108
127-18-4	Tetrachloroethylene	U	108	ug/kg	16.3	108
108-88-3	Toluene	U	108	ug/kg	16.3	108
79-01-6	Trichloroethylene	U	108	ug/kg	16.3	108
75-69-4	Trichlorofluoromethane	U	108	ug/kg	16.3	108
76-13-1	Trichlorotrifluoroethane	U	271	ug/kg	86.7	271
75-01-4	Vinyl chloride	U	108	ug/kg	16.3	108
156-59-2	cis-1,2-Dichloroethylene	U	108	ug/kg	16.3	108
10061-01-5	cis-1,3-Dichloropropylene	U	108	ug/kg	16.3	108
179601-23-1	m,p-Xylenes	U	217	ug/kg	16.3	217
95-47-6	o-Xylene	U	108	ug/kg	16.3	108
1634-04-4	tert-Butyl methyl ether	U	108	ug/kg	16.3	108
156-60-5	trans-1,2-Dichloroethylene	U	108	ug/kg	16.3	108
10061-02-6	trans-1,3-Dichloropropylene	U	108	ug/kg	16.3	108

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:10**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474005**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**2.7**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW19**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:11**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:24**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q316.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	103	ug/kg	15.4	103
79-34-5	1,1,2,2-Tetrachloroethane	U	103	ug/kg	15.4	103
79-00-5	1,1,2-Trichloroethane	U	103	ug/kg	15.4	103
75-34-3	1,1-Dichloroethane	U	103	ug/kg	15.4	103
75-35-4	1,1-Dichloroethylene	U	103	ug/kg	15.4	103
87-61-6	1,2,3-Trichlorobenzene	U	103	ug/kg	15.4	103
120-82-1	1,2,4-Trichlorobenzene	U	103	ug/kg	15.4	103
96-12-8	1,2-Dibromo-3-chloropropane	U	103	ug/kg	25.7	103
106-93-4	1,2-Dibromoethane	U	103	ug/kg	15.4	103
95-50-1	1,2-Dichlorobenzene	U	103	ug/kg	15.4	103
107-06-2	1,2-Dichloroethane	U	103	ug/kg	15.4	103
78-87-5	1,2-Dichloropropane	U	103	ug/kg	15.4	103
541-73-1	1,3-Dichlorobenzene	U	103	ug/kg	15.4	103
106-46-7	1,4-Dichlorobenzene	U	103	ug/kg	15.4	103
123-91-1	1,4-Dioxane	U	2570	ug/kg	771	2570
78-93-3	2-Butanone	U	514	ug/kg	154	514
591-78-6	2-Hexanone	U	514	ug/kg	154	514
108-10-1	4-Methyl-2-pentanone	U	514	ug/kg	154	514
67-64-1	Acetone	U	514	ug/kg	154	514
71-43-2	Benzene	U	103	ug/kg	15.4	103
74-97-5	Bromochloromethane	U	103	ug/kg	15.4	103
75-27-4	Bromodichloromethane	U	103	ug/kg	15.4	103
75-25-2	Bromoform	U	103	ug/kg	15.4	103
74-83-9	Bromomethane	U	103	ug/kg	15.4	103
75-15-0	Carbon disulfide	U	514	ug/kg	82.3	514
56-23-5	Carbon tetrachloride	U	103	ug/kg	15.4	103
108-90-7	Chlorobenzene	U	103	ug/kg	15.4	103
75-00-3	Chloroethane	U	103	ug/kg	15.4	103
67-66-3	Chloroform	U	103	ug/kg	15.4	103
74-87-3	Chloromethane	U	103	ug/kg	15.4	103
110-82-7	Cyclohexane	U	103	ug/kg	15.4	103
124-48-1	Dibromochloromethane	U	103	ug/kg	15.4	103
75-71-8	Dichlorodifluoromethane	U	103	ug/kg	15.4	103
100-41-4	Ethylbenzene	U	103	ug/kg	15.4	103
98-82-8	Isopropylbenzene	U	103	ug/kg	15.4	103
79-20-9	Methyl acetate	U	257	ug/kg	77.1	257
108-87-2	Methylcyclohexane	U	103	ug/kg	15.4	103
75-09-2	Methylene chloride	U	257	ug/kg	82.3	257

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:10**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474005**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**2.7**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW19**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:11**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:24**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q316.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	103	ug/kg	15.4	103
127-18-4	Tetrachloroethylene	U	103	ug/kg	15.4	103
108-88-3	Toluene	U	103	ug/kg	15.4	103
79-01-6	Trichloroethylene	U	103	ug/kg	15.4	103
75-69-4	Trichlorofluoromethane	U	103	ug/kg	15.4	103
76-13-1	Trichlorotrifluoroethane	U	257	ug/kg	82.3	257
75-01-4	Vinyl chloride	U	103	ug/kg	15.4	103
156-59-2	cis-1,2-Dichloroethylene	U	103	ug/kg	15.4	103
10061-01-5	cis-1,3-Dichloropropylene	U	103	ug/kg	15.4	103
179601-23-1	m,p-Xylenes	U	206	ug/kg	15.4	206
95-47-6	o-Xylene	U	103	ug/kg	15.4	103
1634-04-4	tert-Butyl methyl ether	U	103	ug/kg	15.4	103
156-60-5	trans-1,2-Dichloroethylene	U	103	ug/kg	15.4	103
10061-02-6	trans-1,3-Dichloropropylene	U	103	ug/kg	15.4	103

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:20**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474006**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.9**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW20**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:42**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:25**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q317.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	109	ug/kg	16.3	109
79-34-5	1,1,2,2-Tetrachloroethane	U	109	ug/kg	16.3	109
79-00-5	1,1,2-Trichloroethane	U	109	ug/kg	16.3	109
75-34-3	1,1-Dichloroethane	U	109	ug/kg	16.3	109
75-35-4	1,1-Dichloroethylene	U	109	ug/kg	16.3	109
87-61-6	1,2,3-Trichlorobenzene	U	109	ug/kg	16.3	109
120-82-1	1,2,4-Trichlorobenzene	U	109	ug/kg	16.3	109
96-12-8	1,2-Dibromo-3-chloropropane	U	109	ug/kg	27.1	109
106-93-4	1,2-Dibromoethane	U	109	ug/kg	16.3	109
95-50-1	1,2-Dichlorobenzene	U	109	ug/kg	16.3	109
107-06-2	1,2-Dichloroethane	U	109	ug/kg	16.3	109
78-87-5	1,2-Dichloropropane	U	109	ug/kg	16.3	109
541-73-1	1,3-Dichlorobenzene	U	109	ug/kg	16.3	109
106-46-7	1,4-Dichlorobenzene	U	109	ug/kg	16.3	109
123-91-1	1,4-Dioxane	U	2710	ug/kg	814	2710
78-93-3	2-Butanone	U	543	ug/kg	163	543
591-78-6	2-Hexanone	U	543	ug/kg	163	543
108-10-1	4-Methyl-2-pentanone	U	543	ug/kg	163	543
67-64-1	Acetone	U	543	ug/kg	163	543
71-43-2	Benzene	U	109	ug/kg	16.3	109
74-97-5	Bromochloromethane	U	109	ug/kg	16.3	109
75-27-4	Bromodichloromethane	U	109	ug/kg	16.3	109
75-25-2	Bromoform	U	109	ug/kg	16.3	109
74-83-9	Bromomethane	U	109	ug/kg	16.3	109
75-15-0	Carbon disulfide	U	543	ug/kg	86.8	543
56-23-5	Carbon tetrachloride	U	109	ug/kg	16.3	109
108-90-7	Chlorobenzene	U	109	ug/kg	16.3	109
75-00-3	Chloroethane	U	109	ug/kg	16.3	109
67-66-3	Chloroform	U	109	ug/kg	16.3	109
74-87-3	Chloromethane	U	109	ug/kg	16.3	109
110-82-7	Cyclohexane	U	109	ug/kg	16.3	109
124-48-1	Dibromochloromethane	U	109	ug/kg	16.3	109
75-71-8	Dichlorodifluoromethane	U	109	ug/kg	16.3	109
100-41-4	Ethylbenzene	U	109	ug/kg	16.3	109
98-82-8	Isopropylbenzene	U	109	ug/kg	16.3	109
79-20-9	Methyl acetate	U	271	ug/kg	81.4	271
108-87-2	Methylcyclohexane	U	109	ug/kg	16.3	109
75-09-2	Methylene chloride	U	271	ug/kg	86.8	271

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:20**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474006**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.9**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW20**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:42**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:25**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q317.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	109	ug/kg	16.3	109
127-18-4	Tetrachloroethylene	U	109	ug/kg	16.3	109
108-88-3	Toluene	U	109	ug/kg	16.3	109
79-01-6	Trichloroethylene	U	109	ug/kg	16.3	109
75-69-4	Trichlorofluoromethane	U	109	ug/kg	16.3	109
76-13-1	Trichlorotrifluoroethane	U	271	ug/kg	86.8	271
75-01-4	Vinyl chloride	U	109	ug/kg	16.3	109
156-59-2	cis-1,2-Dichloroethylene	U	109	ug/kg	16.3	109
10061-01-5	cis-1,3-Dichloropropylene	U	109	ug/kg	16.3	109
179601-23-1	m,p-Xylenes	U	217	ug/kg	16.3	217
95-47-6	o-Xylene	U	109	ug/kg	16.3	109
1634-04-4	tert-Butyl methyl ether	U	109	ug/kg	16.3	109
156-60-5	trans-1,2-Dichloroethylene	U	109	ug/kg	16.3	109
10061-02-6	trans-1,3-Dichloropropylene	U	109	ug/kg	16.3	109

Quality Control Summary

Surrogate Recovery Report

SDG Number: 454474

Matrix Type: SOLID

Sample ID	Client ID	DCED4 %REC		TOL %REC		BFB %REC	
1204070950	LCS for batch 1782978	105		88		105	
1204070948	MB for batch 1782978	106		91		111	
1204070949	HB for batch 1782978	111	D	84	D	113	D
454474001	SHS01	109	D	85	D	111	D
454474002	SET01	107	D	88	D	110	D
454474003	SW17	103	D	83	D	110	D
454474004	SW18	109	D	90	D	108	D
454474005	SW19	106	D	88	D	113	D
454474006	SW20	106	D	91	D	113	D
1204070951	CHEM Backfill/WinzingtonPS	107	D	87	D	105	D
1204070952	CHEM Backfill/WinzingtonPSD	109	D	87	D	105	D

Surrogate		Acceptance Limits
DCED4	= 1,2-Dichloroethane-d4	(81%-124%)
TOL	= Toluene-d8	(81%-120%)
BFB	= Bromofluorobenzene	(70%-130%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

Quality Control Summary
Spike Recovery Report

SDG Number: **454474**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1782978**
Matrix: **SOIL**
Lab Sample ID **1204070950**
Instrument: **VOA3.I**
Analysis Date: **07/18/2018 10:57**
Dilution: **1**
Analyst: **JP1**
Prep Batch ID: **1782978**
Purge Vol: **5 mL**
Batch ID: **1782981**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
179601-23-1	LCS	m,p-Xylenes	100	0.0	86.5	86	70-130
67-64-1	LCS	Acetone	250	0.0	258	103	70-130
79-20-9	LCS	Methyl acetate	250	0.0	251	101	70-130
75-15-0	LCS	Carbon disulfide	250	0.0	268	107	70-130
78-93-3	LCS	2-Butanone	250	0.0	264	106	70-130
108-10-1	LCS	4-Methyl-2-pentanone	250	0.0	225	90	70-130
591-78-6	LCS	2-Hexanone	250	0.0	237	95	70-130
75-71-8	LCS	Dichlorodifluoromethane	50.0	0.0	49.4	99	70-130
74-87-3	LCS	Chloromethane	50.0	0.0	47.3	95	70-130
75-01-4	LCS	Vinyl chloride	50.0	0.0	51.2	102	70-130
74-83-9	LCS	Bromomethane	50.0	0.0	50.3	101	70-130
75-00-3	LCS	Chloroethane	50.0	0.0	50.5	101	70-130
75-69-4	LCS	Trichlorofluoromethane	50.0	0.0	49.7	99	70-130
75-35-4	LCS	1,1-Dichloroethylene	50.0	0.0	53.2	106	70-130
75-09-2	LCS	Methylene chloride	50.0	0.0	51.1	102	70-130
1634-04-4	LCS	tert-Butyl methyl ether	50.0	0.0	54.7	109	70-130
156-60-5	LCS	trans-1,2-Dichloroethylene	50.0	0.0	50.6	101	70-130
75-34-3	LCS	1,1-Dichloroethane	50.0	0.0	49.4	99	70-130
156-59-2	LCS	cis-1,2-Dichloroethylene	50.0	0.0	51.0	102	70-130
74-97-5	LCS	Bromochloromethane	50.0	0.0	45.1	90	70-130
67-66-3	LCS	Chloroform	50.0	0.0	51.2	102	70-130
71-55-6	LCS	1,1,1-Trichloroethane	50.0	0.0	51.0	102	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: **454474**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1782978**
Matrix: **SOIL**
Lab Sample ID **1204070950**
Instrument: **VOA3.I**
Analysis Date: **07/18/2018 10:57**
Dilution: **1**
Analyst: **JP1**
Prep Batch ID: **1782978**
Purge Vol: **5 mL**
Batch ID: **1782981**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
110-82-7	LCS	Cyclohexane	50.0	0.0	46.3	93	70-130
56-23-5	LCS	Carbon tetrachloride	50.0	0.0	50.3	101	70-130
107-06-2	LCS	1,2-Dichloroethane	50.0	0.0	50.8	102	70-130
71-43-2	LCS	Benzene	50.0	0.0	48.3	97	70-130
79-01-6	LCS	Trichloroethylene	50.0	0.0	50.7	101	70-130
78-87-5	LCS	1,2-Dichloropropane	50.0	0.0	50.8	102	70-130
108-87-2	LCS	Methylcyclohexane	50.0	0.0	49.2	98	70-130
75-27-4	LCS	Bromodichloromethane	50.0	0.0	54.1	108	70-130
10061-01-5	LCS	cis-1,3-Dichloropropylene	50.0	0.0	56.8	114	70-130
108-88-3	LCS	Toluene	50.0	0.0	44.7	89	70-130
10061-02-6	LCS	trans-1,3-Dichloropropylene	50.0	0.0	51.8	104	70-130
79-00-5	LCS	1,1,2-Trichloroethane	50.0	0.0	45.1	90	70-130
127-18-4	LCS	Tetrachloroethylene	50.0	0.0	40.1	80	70-130
124-48-1	LCS	Dibromochloromethane	50.0	0.0	45.5	91	70-130
106-93-4	LCS	1,2-Dibromoethane	50.0	0.0	46.2	92	70-130
108-90-7	LCS	Chlorobenzene	50.0	0.0	43.5	87	70-130
100-41-4	LCS	Ethylbenzene	50.0	0.0	46.0	92	70-130
95-47-6	LCS	o-Xylene	50.0	0.0	45.7	91	70-130
100-42-5	LCS	Styrene	50.0	0.0	47.8	96	70-130
75-25-2	LCS	Bromoform	50.0	0.0	50.2	100	70-130
98-82-8	LCS	Isopropylbenzene	50.0	0.0	44.4	89	70-130
79-34-5	LCS	1,1,2,2-Tetrachloroethane	50.0	0.0	46.5	93	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: **454474**
Sample Type: **Laboratory Control Sample**
Client ID: **LCS for batch 1782978**
Matrix: **SOIL**
Lab Sample ID **1204070950**
Instrument: **VOA3.I**
Analysis Date: **07/18/2018 10:57**
Dilution: **1**
Analyst: **JP1**
Prep Batch ID: **1782978**
Purge Vol: **5 mL**
Batch ID: **1782981**

CAS No		Parmname	Amount Added ug/kg	Sample Conc. ug/kg	Spike Conc. ug/kg	Recovery %	Acceptance Limits
541-73-1	LCS	1,3-Dichlorobenzene	50.0	0.0	45.1	90	70-130
106-46-7	LCS	1,4-Dichlorobenzene	50.0	0.0	45.5	91	70-130
96-12-8	LCS	1,2-Dibromo-3-chloropropane	50.0	0.0	47.7	95	70-130
87-61-6	LCS	1,2,3-Trichlorobenzene	50.0	0.0	49.5	99	70-130
120-82-1	LCS	1,2,4-Trichlorobenzene	50.0	0.0	50.9	102	70-130
95-50-1	LCS	1,2-Dichlorobenzene	50.0	0.0	45.6	91	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 454474
Client ID: CHEM Backfill/WinzingtonPS
Lab Sample ID 1204070951
Instrument: VOA3.I
Analyst: JP1
Purge Vol: 5 mL

Sample Type: Post Spike
Matrix: Soil
%Moisture: 6.6
Analysis Date: 07/18/2018 19:46
Prep Batch ID: 1782978
Batch ID: 1782981
Dilution: 50

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
67-64-1	PS	Acetone	250	0.00	U	225	90	70-130
79-20-9	PS	Methyl acetate	250	0.00	U	251	100	70-130
75-15-0	PS	Carbon disulfide	250	0.00	U	235	94	70-130
78-93-3	PS	2-Butanone	250	0.00	U	220	88	70-130
108-10-1	PS	4-Methyl-2-pentanone	250	0.00	U	208	83	70-130
591-78-6	PS	2-Hexanone	250	0.00	U	214	86	70-130
75-71-8	PS	Dichlorodifluoromethane	50.0	0.00	U	45.2	90	70-130
74-87-3	PS	Chloromethane	50.0	0.00	U	45.0	90	70-130
75-01-4	PS	Vinyl chloride	50.0	0.00	U	46.1	92	70-130
74-83-9	PS	Bromomethane	50.0	0.00	U	16.4	33 *	70-130
75-00-3	PS	Chloroethane	50.0	0.00	U	4.78	10 *	70-130
75-69-4	PS	Trichlorofluoromethane	50.0	0.00	U	55.5	111	70-130
75-35-4	PS	1,1-Dichloroethylene	50.0	0.00	U	49.5	99	70-130
75-09-2	PS	Methylene chloride	50.0	0.00	U	46.7	93	70-130
1634-04-4	PS	tert-Butyl methyl ether	50.0	0.00	U	49.6	99	70-130
156-60-5	PS	trans-1,2-Dichloroethylene	50.0	0.00	U	47.6	95	70-130
75-34-3	PS	1,1-Dichloroethane	50.0	0.00	U	46.7	93	70-130
156-59-2	PS	cis-1,2-Dichloroethylene	50.0	0.00	U	45.6	91	70-130
74-97-5	PS	Bromochloromethane	50.0	0.00	U	41.2	82	70-130
67-66-3	PS	Chloroform	50.0	0.00	U	49.5	99	70-130
71-55-6	PS	1,1,1-Trichloroethane	50.0	0.00	U	49.9	100	70-130
110-82-7	PS	Cyclohexane	50.0	0.00	U	41.8	84	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: **454474**
Client ID: **CHEM Backfill/WinzingtonPS**
Lab Sample ID **1204070951**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 19:46**
Prep Batch ID: **1782978**
Batch ID: **1782981**
Dilution: **50**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
56-23-5	PS	Carbon tetrachloride	50.0	0.00	U	49.5	99	70-130
107-06-2	PS	1,2-Dichloroethane	50.0	0.00	U	52.1	104	70-130
71-43-2	PS	Benzene	50.0	0.00	U	45.0	90	70-130
79-01-6	PS	Trichloroethylene	50.0	0.00	U	48.5	97	70-130
78-87-5	PS	1,2-Dichloropropane	50.0	0.00	U	49.1	98	70-130
108-87-2	PS	Methylcyclohexane	50.0	0.00	U	45.0	90	70-130
75-27-4	PS	Bromodichloromethane	50.0	0.00	U	52.0	104	70-130
10061-01-5	PS	cis-1,3-Dichloropropylene	50.0	0.00	U	51.4	103	70-130
108-88-3	PS	Toluene	50.0	0.00	U	40.8	82	70-130
10061-02-6	PS	trans-1,3-Dichloropropylene	50.0	0.00	U	49.0	98	70-130
79-00-5	PS	1,1,2-Trichloroethane	50.0	0.00	U	43.4	87	70-130
127-18-4	PS	Tetrachloroethylene	50.0	0.00	U	36.9	74	70-130
124-48-1	PS	Dibromochloromethane	50.0	0.00	U	43.1	86	70-130
106-93-4	PS	1,2-Dibromoethane	50.0	0.00	U	44.0	88	70-130
108-90-7	PS	Chlorobenzene	50.0	0.00	U	39.4	79	70-130
100-41-4	PS	Ethylbenzene	50.0	0.00	U	41.4	83	70-130
95-47-6	PS	o-Xylene	50.0	0.00	U	40.9	82	70-130
100-42-5	PS	Styrene	50.0	0.00	U	42.6	85	70-130
75-25-2	PS	Bromoform	50.0	0.00	U	45.4	91	70-130
98-82-8	PS	Isopropylbenzene	50.0	0.00	U	41.1	82	70-130
79-34-5	PS	1,1,2,2-Tetrachloroethane	50.0	0.00	U	46.0	92	70-130
541-73-1	PS	1,3-Dichlorobenzene	50.0	0.00	U	38.5	77	70-130

Quality Control Summary
Spike Recovery Report

SDG Number: **454474**
Client ID: **CHEM Backfill/WinzingtonPS**
Lab Sample ID **1204070951**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 19:46**
Prep Batch ID: **1782978**
Batch ID: **1782981**
Dilution: **50**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits
106-46-7	PS	1,4-Dichlorobenzene	50.0	0.00	U	38.7	77	70-130
96-12-8	PS	1,2-Dibromo-3-chloropropane	50.0	0.00	U	43.6	87	70-130
87-61-6	PS	1,2,3-Trichlorobenzene	50.0	0.00	U	39.9	80	70-130
120-82-1	PS	1,2,4-Trichlorobenzene	50.0	0.00	U	38.8	78	70-130
95-50-1	PS	1,2-Dichlorobenzene	50.0	0.00	U	40.4	81	70-130
179601-23-1	PS	m,p-Xylenes	100	0.00	U	74.2	74	70-130

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 454474
Client ID: CHEM Backfill/WinzingtonPSD
Lab Sample ID 1204070952
Instrument: VOA3.I
Analyst: JP1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: Soil
%Moisture: 6.6
Analysis Date: 07/18/2018 20:17
Dilution: 50
Prep Batch ID: 1782978
Batch ID: 1782981

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
67-64-1	PSD	Acetone	250	0.00	U	211	84	70-130	6	0-20
79-20-9	PSD	Methyl acetate	250	0.00	U	246	98	70-130	2	0-20
75-15-0	PSD	Carbon disulfide	250	0.00	U	249	100	70-130	6	0-20
78-93-3	PSD	2-Butanone	250	0.00	U	221	88	70-130	0	0-20
108-10-1	PSD	4-Methyl-2-pentanone	250	0.00	U	203	81	70-130	2	0-20
591-78-6	PSD	2-Hexanone	250	0.00	U	196	79	70-130	9	0-20
75-71-8	PSD	Dichlorodifluoromethane	50.0	0.00	U	50.1	100	70-130	10	0-20
74-87-3	PSD	Chloromethane	50.0	0.00	U	51.9	104	70-130	14	0-20
75-01-4	PSD	Vinyl chloride	50.0	0.00	U	54.8	110	70-130	17	0-20
74-83-9	PSD	Bromomethane	50.0	0.00	U	16.1	32 *	70-130	2	0-20
75-00-3	PSD	Chloroethane	50.0	0.00	U	4.61	9 *	70-130	4	0-20
75-69-4	PSD	Trichlorofluoromethane	50.0	0.00	U	56.1	112	70-130	1	0-20
75-35-4	PSD	1,1-Dichloroethylene	50.0	0.00	U	53.8	108	70-130	8	0-20
75-09-2	PSD	Methylene chloride	50.0	0.00	U	47.6	95	70-130	2	0-20
1634-04-4	PSD	tert-Butyl methyl ether	50.0	0.00	U	48.5	97	70-130	2	0-20
156-60-5	PSD	trans-1,2-Dichloroethylene	50.0	0.00	U	47.0	94	70-130	1	0-20
75-34-3	PSD	1,1-Dichloroethane	50.0	0.00	U	48.1	96	70-130	3	0-20
156-59-2	PSD	cis-1,2-Dichloroethylene	50.0	0.00	U	46.1	92	70-130	1	0-20
74-97-5	PSD	Bromochloromethane	50.0	0.00	U	43.6	87	70-130	6	0-20
67-66-3	PSD	Chloroform	50.0	0.00	U	50.9	102	70-130	3	0-20
71-55-6	PSD	1,1,1-Trichloroethane	50.0	0.00	U	50.5	101	70-130	1	0-20
110-82-7	PSD	Cyclohexane	50.0	0.00	U	43.7	87	70-130	4	0-20

Volatile

Quality Control Summary
Spike Recovery Report

SDG Number: 454474
Client ID: CHEM Backfill/WinzingtonPSD
Lab Sample ID 1204070952
Instrument: VOA3.I
Analyst: JP1
Purge Vol: 5 mL

Sample Type: Post Spike Duplicate
Matrix: Soil
%Moisture: 6.6
Analysis Date: 07/18/2018 20:17
Dilution: 50
Prep Batch ID: 1782978
Batch ID: 1782981

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
56-23-5	PSD	Carbon tetrachloride	50.0	0.00	U	50.6	101	70-130	2	0-20
107-06-2	PSD	1,2-Dichloroethane	50.0	0.00	U	53.8	108	70-130	3	0-20
71-43-2	PSD	Benzene	50.0	0.00	U	46.1	92	70-130	2	0-20
79-01-6	PSD	Trichloroethylene	50.0	0.00	U	49.4	99	70-130	2	0-20
78-87-5	PSD	1,2-Dichloropropane	50.0	0.00	U	49.6	99	70-130	1	0-20
108-87-2	PSD	Methylcyclohexane	50.0	0.00	U	43.9	88	70-130	3	0-20
75-27-4	PSD	Bromodichloromethane	50.0	0.00	U	53.8	108	70-130	3	0-20
10061-01-5	PSD	cis-1,3-Dichloropropylene	50.0	0.00	U	55.9	112	70-130	8	0-20
108-88-3	PSD	Toluene	50.0	0.00	U	42.9	86	70-130	5	0-20
10061-02-6	PSD	trans-1,3-Dichloropropylene	50.0	0.00	U	50.1	100	70-130	2	0-20
79-00-5	PSD	1,1,2-Trichloroethane	50.0	0.00	U	44.0	88	70-130	2	0-20
127-18-4	PSD	Tetrachloroethylene	50.0	0.00	U	38.2	76	70-130	4	0-20
124-48-1	PSD	Dibromochloromethane	50.0	0.00	U	43.2	86	70-130	0	0-20
106-93-4	PSD	1,2-Dibromoethane	50.0	0.00	U	42.9	86	70-130	2	0-20
108-90-7	PSD	Chlorobenzene	50.0	0.00	U	40.2	80	70-130	2	0-20
100-41-4	PSD	Ethylbenzene	50.0	0.00	U	43.1	86	70-130	4	0-20
95-47-6	PSD	o-Xylene	50.0	0.00	U	40.5	81	70-130	1	0-20
100-42-5	PSD	Styrene	50.0	0.00	U	42.5	85	70-130	0	0-20
75-25-2	PSD	Bromoform	50.0	0.00	U	46.1	92	70-130	2	0-20
98-82-8	PSD	Isopropylbenzene	50.0	0.00	U	42.4	85	70-130	3	0-20
79-34-5	PSD	1,1,2,2-Tetrachloroethane	50.0	0.00	U	42.8	86	70-130	7	0-20
541-73-1	PSD	1,3-Dichlorobenzene	50.0	0.00	U	42.0	84	70-130	9	0-20

Quality Control Summary
Spike Recovery Report

SDG Number: **454474**
Client ID: **CHEM Backfill/WinzingtonPSD**
Lab Sample ID **1204070952**
Instrument: **VOA3.I**
Analyst: **JP1**
Purge Vol: **5 mL**

Sample Type: **Post Spike Duplicate**
Matrix: **Soil**
%Moisture: **6.6**
Analysis Date: **07/18/2018 20:17**
Prep Batch ID: **1782978**
Batch ID: **1782981**
Dilution: **50**

CAS No		Parmname	Amount Added ug/L	Sample Conc. ug/L		Spike Conc. ug/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
106-46-7	PSD	1,4-Dichlorobenzene	50.0	0.00	U	42.2	84	70-130	9	0-20
96-12-8	PSD	1,2-Dibromo-3-chloropropane	50.0	0.00	U	42.7	85	70-130	2	0-20
87-61-6	PSD	1,2,3-Trichlorobenzene	50.0	0.00	U	43.2	86	70-130	8	0-20
120-82-1	PSD	1,2,4-Trichlorobenzene	50.0	0.00	U	42.6	85	70-130	9	0-20
95-50-1	PSD	1,2-Dichlorobenzene	50.0	0.00	U	42.3	85	70-130	5	0-20
179601-23-1	PSD	m,p-Xylenes	100	0.00	U	81.2	81	70-130	9	0-20

Method Blank Summary

SDG Number:	**454474**	**Client:**	**URSC013**	**Matrix:**	**SOIL**
Client ID:	**MB for batch 1782978**	**Instrument ID:**	**VOA3.I**	**Data File:**	**071818V3\3Q307B81.D**
Lab Sample ID:	**1204070948**	**Prep Date:**	**07/18/2018 09:00**	**Analyzed:**	**07/18/18 12:30**
Column:	**DB-624**				

This method blank applies to the following samples and quality control samples:

	Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01	LCS for batch 1782978	1204070950	071818V3\3Q304L81.D	07/18/18	1057
02	HB for batch 1782978	1204070949	071818V3\3Q310.D	07/18/18	1404
03	SHS01	454474001	071818V3\3Q312.D	07/18/18	1506
04	SET01	454474002	071818V3\3Q313.D	07/18/18	1537
05	SW17	454474003	071818V3\3Q314.D	07/18/18	1608
06	SW18	454474004	071818V3\3Q315.D	07/18/18	1640
07	SW19	454474005	071818V3\3Q316.D	07/18/18	1711
08	SW20	454474006	071818V3\3Q317.D	07/18/18	1742
09	CHEM Backfill/WinzingtonPS	1204070951	071818V3\3Q321.D	07/18/18	1946
10	CHEM Backfill/WinzingtonPSD	1204070952	071818V3\3Q322.D	07/18/18	2017

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 454474

Instrument ID: VOA3.I **Injection Date/Time:** 02-JUL-18 12:28

Column Description: DB-624 **Lab File ID** 070218V3\3O101.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	54.9
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8
174	50.0 - 100.0% of mass 95	78.5
175	5.0 -9.0% of mass 174	6.7
176	95.0 - 101.0% of mass 174	97.6
177	5.0 - 9.0% of mass 176	6.7

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
ICALMIX[A]	W3VM180702-03	070218V3\3O104.D	02-JUL-18 13:56
ICALMIX[A]	W3VM180702-04	070218V3\3O105.D	02-JUL-18 14:28
ICALMIX[A]	W3VM180702-05	070218V3\3O106.D	02-JUL-18 14:59
ICALMIX[A]	W3VM180702-06	070218V3\3O107.D	02-JUL-18 15:30
ICALMIX[A]	W3VM180702-07	070218V3\3O108.D	02-JUL-18 16:01
ICALMIX[A]	W3VM180702-08	070218V3\3O109.D	02-JUL-18 16:32
ICALMIX[A]	W3VM180702-09	070218V3\3O110.D	02-JUL-18 17:03
ICVMIX[A]01	W3VM180702-10	070218V3\3O112.D	02-JUL-18 18:05
ICALMIX[B]	W3VM180702-11	070218V3\3O113.D	02-JUL-18 18:36
ICALMIX[B]	W3VM180702-12	070218V3\3O114.D	02-JUL-18 19:07
ICALMIX[B]	W3VM180702-13	070218V3\3O115.D	02-JUL-18 19:38
ICALMIX[B]	W3VM180702-14	070218V3\3O116.D	02-JUL-18 20:10
ICALMIX[B]	W3VM180702-15	070218V3\3O117.D	02-JUL-18 20:41
ICALMIX[B]	W3VM180702-16	070218V3\3O118.D	02-JUL-18 21:12
ICALMIX[B]	W3VM180702-17	070218V3\3O119.D	02-JUL-18 21:44
ICALMIX[B]	W3VM180702-18	070218V3\3O120.D	02-JUL-18 22:15
ICVMIX[B]02	W3VM180702-19	070218V3\3O122.D	02-JUL-18 23:17

Instrument Performance Check

BROMOFLUOROBENZENE

Lab Name GEL Laboratories LLC **Client SDG:** 454474

Instrument ID: VOA3.I **Injection Date/Time:** 18-JUL-18 09:28

Column Description: DB-624 **Lab File ID** 071818V3\3Q301.D

m/e	Ion Abundance Criteria	% Relative Abundance
50	15.0 - 40.0% of mass 95	21.7
75	30.0 - 60.0% of mass 95	58.6
95	Base Peak, 100% Relative Abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.5
174	50.0 - 100.0% of mass 95	71
175	5.0 -9.0% of mass 174	7.2
176	95.0 - 101.0% of mass 174	96.4
177	5.0 - 9.0% of mass 176	6.5

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, LCS, LCSD,BLANKS AND STANDARDS

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
CCVMIX[A]01	W3VM180718-02	071818V3\3Q303.D	18-JUL-18 10:26
BLK01LCS	1204070950	071818V3\3Q304L81.D	18-JUL-18 10:57
CCVMIX[B]02	W3VM180718-05	071818V3\3Q305.D	18-JUL-18 11:28
BLK01	1204070948	071818V3\3Q307B81.D	18-JUL-18 12:30
HBLK01	1204070949	071818V3\3Q310.D	18-JUL-18 14:04
SHS01	454474001	071818V3\3Q312.D	18-JUL-18 15:06
SET01	454474002	071818V3\3Q313.D	18-JUL-18 15:37
SW17	454474003	071818V3\3Q314.D	18-JUL-18 16:08
SW18	454474004	071818V3\3Q315.D	18-JUL-18 16:40
SW19	454474005	071818V3\3Q316.D	18-JUL-18 17:11
SW20	454474006	071818V3\3Q317.D	18-JUL-18 17:42
CHEM Backfill/WinzingtonMS	1204070951	071818V3\3Q321.D	18-JUL-18 19:46
CHEM Backfill/WinzingtonMSD	1204070952	071818V3\3Q322.D	18-JUL-18 20:17

Internal Standard
Area and RT Summary

Lab Name : GEL Laboratories LLC

Client SDG: 454474

Instrument: VOA3.I

STD Analysis Time: 18-JUL-18 10:26

GC Column: DB-624

Data File: 071818V3\3Q303.D

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area #	RT #	Area #	RT #	Area #	RT #
12 Hour STD	1205721	12.8	580894	16.3	539269	18.8
Upper Limit	2411442	13.3	1161788	16.8	1078538	19.3
Lower Limit	602861	12.3	290447	15.8	269635	18.3
Sample ID						
BLK01LCS	1265620	12.8	622409	16.3	567034	18.8
BLK01	1226605	12.8	583334	16.3	467199	18.8
HBLK01	1110510	12.8	538311	16.3	437128	18.8
SHS01	1144906	12.8	534601	16.3	430487	18.8
SET01	1132409	12.8	517203	16.3	431046	18.8
SW17	1136151	12.8	533024	16.3	427125	18.8
SW18	1105016	12.8	498028	16.3	426794	18.8
SW19	1092268	12.8	518343	16.3	427906	18.8
SW20	1077196	12.8	482768	16.3	393317	18.8
CHEM Backfill/WinzingtonMS	1069789	12.8	537249	16.3	483068	18.8
CHEM Backfill/WinzingtonMSD	1056892	12.8	546341	16.3	483451	18.8

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area

RT Upper Limit = + 0.50 minutes of internal standard RT
RT Lower Limit = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk
* Value outside of QC Limits

Sample Data

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:30**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474001**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.1**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SHS01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:06**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:20**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q312.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	103	ug/kg	15.5	103
79-34-5	1,1,2,2-Tetrachloroethane	U	103	ug/kg	15.5	103
79-00-5	1,1,2-Trichloroethane	U	103	ug/kg	15.5	103
75-34-3	1,1-Dichloroethane	U	103	ug/kg	15.5	103
75-35-4	1,1-Dichloroethylene	U	103	ug/kg	15.5	103
87-61-6	1,2,3-Trichlorobenzene	U	103	ug/kg	15.5	103
120-82-1	1,2,4-Trichlorobenzene	U	103	ug/kg	15.5	103
96-12-8	1,2-Dibromo-3-chloropropane	U	103	ug/kg	25.8	103
106-93-4	1,2-Dibromoethane	U	103	ug/kg	15.5	103
95-50-1	1,2-Dichlorobenzene	U	103	ug/kg	15.5	103
107-06-2	1,2-Dichloroethane	U	103	ug/kg	15.5	103
78-87-5	1,2-Dichloropropane	U	103	ug/kg	15.5	103
541-73-1	1,3-Dichlorobenzene	U	103	ug/kg	15.5	103
106-46-7	1,4-Dichlorobenzene	U	103	ug/kg	15.5	103
123-91-1	1,4-Dioxane	U	2580	ug/kg	774	2580
78-93-3	2-Butanone	U	516	ug/kg	155	516
591-78-6	2-Hexanone	U	516	ug/kg	155	516
108-10-1	4-Methyl-2-pentanone	U	516	ug/kg	155	516
67-64-1	Acetone	U	516	ug/kg	155	516
71-43-2	Benzene	U	103	ug/kg	15.5	103
74-97-5	Bromochloromethane	U	103	ug/kg	15.5	103
75-27-4	Bromodichloromethane	U	103	ug/kg	15.5	103
75-25-2	Bromoform	U	103	ug/kg	15.5	103
74-83-9	Bromomethane	U	103	ug/kg	15.5	103
75-15-0	Carbon disulfide	U	516	ug/kg	82.5	516
56-23-5	Carbon tetrachloride	U	103	ug/kg	15.5	103
108-90-7	Chlorobenzene	U	103	ug/kg	15.5	103
75-00-3	Chloroethane	U	103	ug/kg	15.5	103
67-66-3	Chloroform	U	103	ug/kg	15.5	103
74-87-3	Chloromethane	U	103	ug/kg	15.5	103
110-82-7	Cyclohexane	U	103	ug/kg	15.5	103
124-48-1	Dibromochloromethane	U	103	ug/kg	15.5	103
75-71-8	Dichlorodifluoromethane	U	103	ug/kg	15.5	103
100-41-4	Ethylbenzene	U	103	ug/kg	15.5	103
98-82-8	Isopropylbenzene	U	103	ug/kg	15.5	103
79-20-9	Methyl acetate	U	258	ug/kg	77.4	258
108-87-2	Methylcyclohexane	U	103	ug/kg	15.5	103
75-09-2	Methylene chloride	U	258	ug/kg	82.5	258

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:30**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474001**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.1**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SHS01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:06**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:20**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q312.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	103	ug/kg	15.5	103
127-18-4	Tetrachloroethylene	U	103	ug/kg	15.5	103
108-88-3	Toluene	U	103	ug/kg	15.5	103
79-01-6	Trichloroethylene	U	103	ug/kg	15.5	103
75-69-4	Trichlorofluoromethane	U	103	ug/kg	15.5	103
76-13-1	Trichlorotrifluoroethane	U	258	ug/kg	82.5	258
75-01-4	Vinyl chloride	U	103	ug/kg	15.5	103
156-59-2	cis-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-01-5	cis-1,3-Dichloropropylene	U	103	ug/kg	15.5	103
179601-23-1	m,p-Xylenes	U	206	ug/kg	15.5	206
95-47-6	o-Xylene	U	103	ug/kg	15.5	103
1634-04-4	tert-Butyl methyl ether	U	103	ug/kg	15.5	103
156-60-5	trans-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-02-6	trans-1,3-Dichloropropylene	U	103	ug/kg	15.5	103

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q312.D
Acq On : 18 Jul 2018 15:06
Operator : JP1
InstName : VOA3
Sample : |454474001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 18 15:38:23 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.755	12.761	1.000	1144906	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	534601	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	430487	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.755	12.762	1.000	1147920	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	543269	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	430824	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	232797	54.33	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1055102	42.36	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	469304	55.46	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	109%
45) Toluene-d8	50.000	81 - 120	85%
63) Bromofluorobenzene	50.000	70 - 130	111%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.991	4.990	0.391	228	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.251	6.159	0.490	217	N.D.		
6) Chloroethane	64	6.312	6.372	0.495	127	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.268	8.232	0.648	1084	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.653	8.665	0.678	617	N.D.		
15) Methylene chloride	84	9.067	9.091	0.711	3594	Below Cal		95
16) tert-Butyl methyl ether	73	9.537	9.537	0.748	120	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.975	9.988	0.782	1058	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.195	11.183	0.878	1087	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	402	N.D.		
32) Benzene	78	12.420	12.426	0.974	333	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.420	13.396	1.052	1836	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q312.D
Acq On : 18 Jul 2018 15:06
Operator : JP1
InstName : VOA3
Sample : |454474001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 18 15:38:23 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	866	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.346	16.352	1.002	183	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.413	16.425	1.006	416	N.D.	
57) m,p-Xylenes	106	16.535	16.541	1.013	141	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene	91	17.803	17.791	0.947	322	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	388	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene		0.000	18.364	0.000	0	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	274	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	590	N.D.	
77) n-Butylbenzene	91	18.955	19.108	1.009	454	N.D.	
78) 1,2-Dichlorobenzene	146	19.242	19.236	1.024	187	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	487	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	1773	N.D.	
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	418	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.689	8.464	0.681	570	N.D.	
88) Allyl chloride	76	8.653	8.842	0.678	617	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.878	5994	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.603	11.597	0.910	1516	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q312.D
Acq On : 18 Jul 2018 15:06
Operator : JP1
InstName : VOA3
Sample : |454474001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 18 15:38:23 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

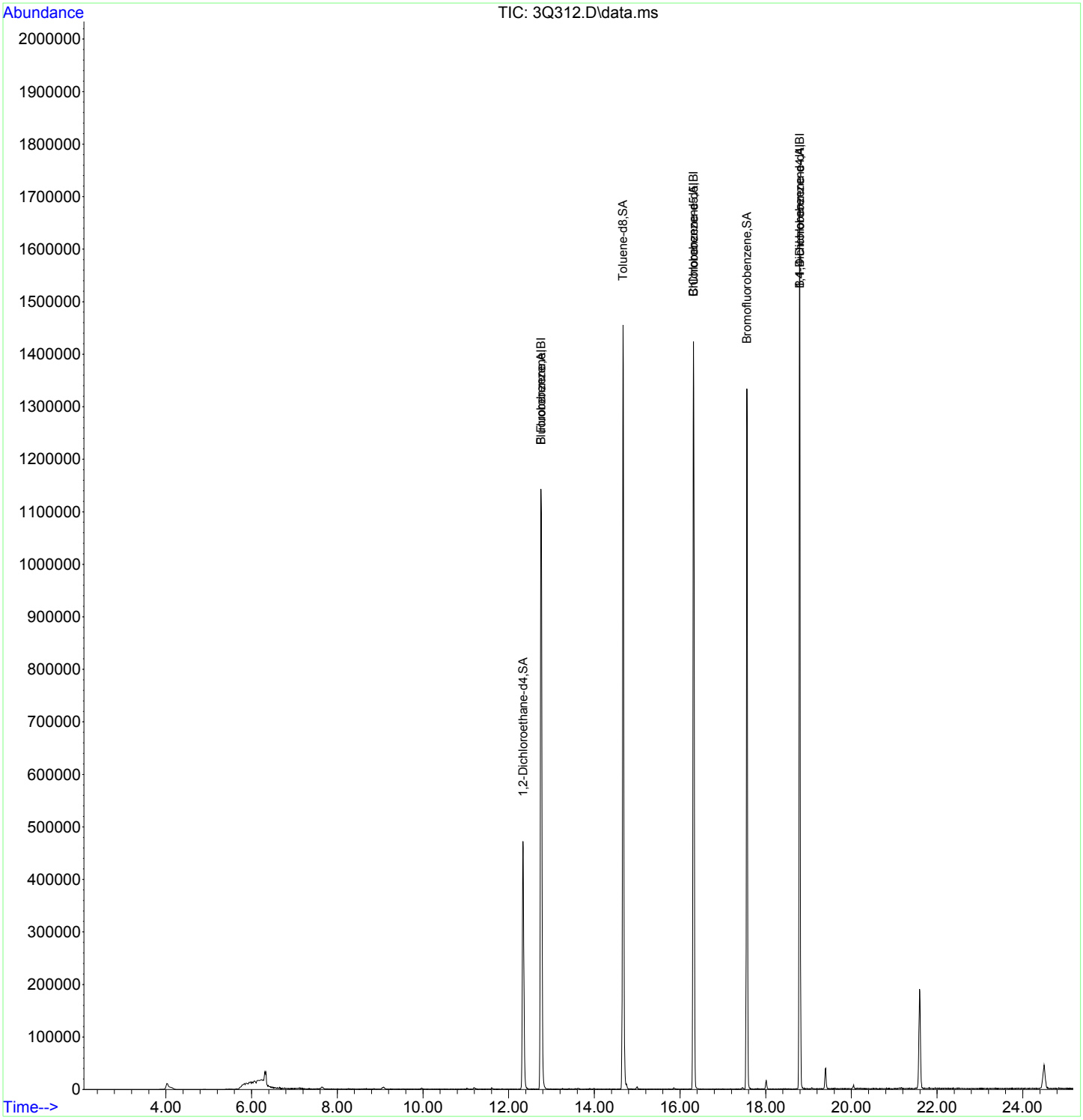
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.559	17.535	0.934	1334	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride	91	18.955	18.943	1.009	454	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	1678	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q312.D
Acq On : 18 Jul 2018 15:06
Operator : JP1
InstName : VOA3
Sample : |454474001|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 18 15:38:23 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:40**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474002**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.2**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SET01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:37**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:21**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q313.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	103	ug/kg	15.5	103
79-34-5	1,1,2,2-Tetrachloroethane	U	103	ug/kg	15.5	103
79-00-5	1,1,2-Trichloroethane	U	103	ug/kg	15.5	103
75-34-3	1,1-Dichloroethane	U	103	ug/kg	15.5	103
75-35-4	1,1-Dichloroethylene	U	103	ug/kg	15.5	103
87-61-6	1,2,3-Trichlorobenzene	U	103	ug/kg	15.5	103
120-82-1	1,2,4-Trichlorobenzene	U	103	ug/kg	15.5	103
96-12-8	1,2-Dibromo-3-chloropropane	U	103	ug/kg	25.8	103
106-93-4	1,2-Dibromoethane	U	103	ug/kg	15.5	103
95-50-1	1,2-Dichlorobenzene	U	103	ug/kg	15.5	103
107-06-2	1,2-Dichloroethane	U	103	ug/kg	15.5	103
78-87-5	1,2-Dichloropropane	U	103	ug/kg	15.5	103
541-73-1	1,3-Dichlorobenzene	U	103	ug/kg	15.5	103
106-46-7	1,4-Dichlorobenzene	U	103	ug/kg	15.5	103
123-91-1	1,4-Dioxane	U	2580	ug/kg	774	2580
78-93-3	2-Butanone	U	516	ug/kg	155	516
591-78-6	2-Hexanone	U	516	ug/kg	155	516
108-10-1	4-Methyl-2-pentanone	U	516	ug/kg	155	516
67-64-1	Acetone	U	516	ug/kg	155	516
71-43-2	Benzene	U	103	ug/kg	15.5	103
74-97-5	Bromochloromethane	U	103	ug/kg	15.5	103
75-27-4	Bromodichloromethane	U	103	ug/kg	15.5	103
75-25-2	Bromoform	U	103	ug/kg	15.5	103
74-83-9	Bromomethane	U	103	ug/kg	15.5	103
75-15-0	Carbon disulfide	U	516	ug/kg	82.6	516
56-23-5	Carbon tetrachloride	U	103	ug/kg	15.5	103
108-90-7	Chlorobenzene	U	103	ug/kg	15.5	103
75-00-3	Chloroethane	U	103	ug/kg	15.5	103
67-66-3	Chloroform	U	103	ug/kg	15.5	103
74-87-3	Chloromethane	U	103	ug/kg	15.5	103
110-82-7	Cyclohexane	U	103	ug/kg	15.5	103
124-48-1	Dibromochloromethane	U	103	ug/kg	15.5	103
75-71-8	Dichlorodifluoromethane	U	103	ug/kg	15.5	103
100-41-4	Ethylbenzene	U	103	ug/kg	15.5	103
98-82-8	Isopropylbenzene	U	103	ug/kg	15.5	103
79-20-9	Methyl acetate	U	258	ug/kg	77.4	258
108-87-2	Methylcyclohexane	U	103	ug/kg	15.5	103
75-09-2	Methylene chloride	U	258	ug/kg	82.6	258

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:40**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474002**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**3.2**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SET01**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 15:37**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:21**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q313.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	103	ug/kg	15.5	103
127-18-4	Tetrachloroethylene	U	103	ug/kg	15.5	103
108-88-3	Toluene	U	103	ug/kg	15.5	103
79-01-6	Trichloroethylene	U	103	ug/kg	15.5	103
75-69-4	Trichlorofluoromethane	U	103	ug/kg	15.5	103
76-13-1	Trichlorotrifluoroethane	U	258	ug/kg	82.6	258
75-01-4	Vinyl chloride	U	103	ug/kg	15.5	103
156-59-2	cis-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-01-5	cis-1,3-Dichloropropylene	U	103	ug/kg	15.5	103
179601-23-1	m,p-Xylenes	U	207	ug/kg	15.5	207
95-47-6	o-Xylene	U	103	ug/kg	15.5	103
1634-04-4	tert-Butyl methyl ether	U	103	ug/kg	15.5	103
156-60-5	trans-1,2-Dichloroethylene	U	103	ug/kg	15.5	103
10061-02-6	trans-1,3-Dichloropropylene	U	103	ug/kg	15.5	103

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q313.D
Acq On : 18 Jul 2018 15:37
Operator : JP1
InstName : VOA3
Sample : |454474002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:25 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.755	12.761	1.000	1132409	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	517203	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	431046	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.755	12.762	1.000	1134941	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	525865	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	431084	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	225967	53.32	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1062419	44.09	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	464284	54.79	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	107%
45) Toluene-d8	50.000	81 - 120	88%
63) Bromofluorobenzene	50.000	70 - 130	110%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane	64	6.354	6.372	0.498	165	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.281	8.232	0.649	905	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.665	8.665	0.679	302	N.D.		
15) Methylene chloride	84	9.079	9.091	0.712	3288	Below Cal		99
16) tert-Butyl methyl ether	73	9.543	9.537	0.748	157	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.969	9.988	0.782	679	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.201	11.183	0.878	1019	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.451	12.438	0.976	464	N.D.		
32) Benzene	78	12.438	12.426	0.975	168	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.408	13.396	1.051	1821	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q313.D
Acq On : 18 Jul 2018 15:37
Operator : JP1
InstName : VOA3
Sample : |454474002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:40:25 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	1464	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene		0.000	16.352	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.425	16.425	1.007	553	N.D.	
57) m,p-Xylenes	106	16.529	16.541	1.013	474	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene	91	17.785	17.791	0.946	278	N.D.	
68) 1,3,5-Trimethylbenzene	105	17.956	17.949	0.956	429	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.041	18.041	0.960	128	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.358	18.364	0.977	408	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	404	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	611	N.D.	
77) n-Butylbenzene	91	19.096	19.108	1.016	308	N.D.	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	188	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.107	21.113	1.123	394	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	1774	N.D.	
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	221	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.543	8.464	0.670	262	N.D.	
88) Allyl chloride	76	8.665	8.842	0.679	302	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.878	6051	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.615	11.597	0.911	1754	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q313.D
Acq On : 18 Jul 2018 15:37
Operator : JP1
InstName : VOA3
Sample : |454474002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:40:25 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

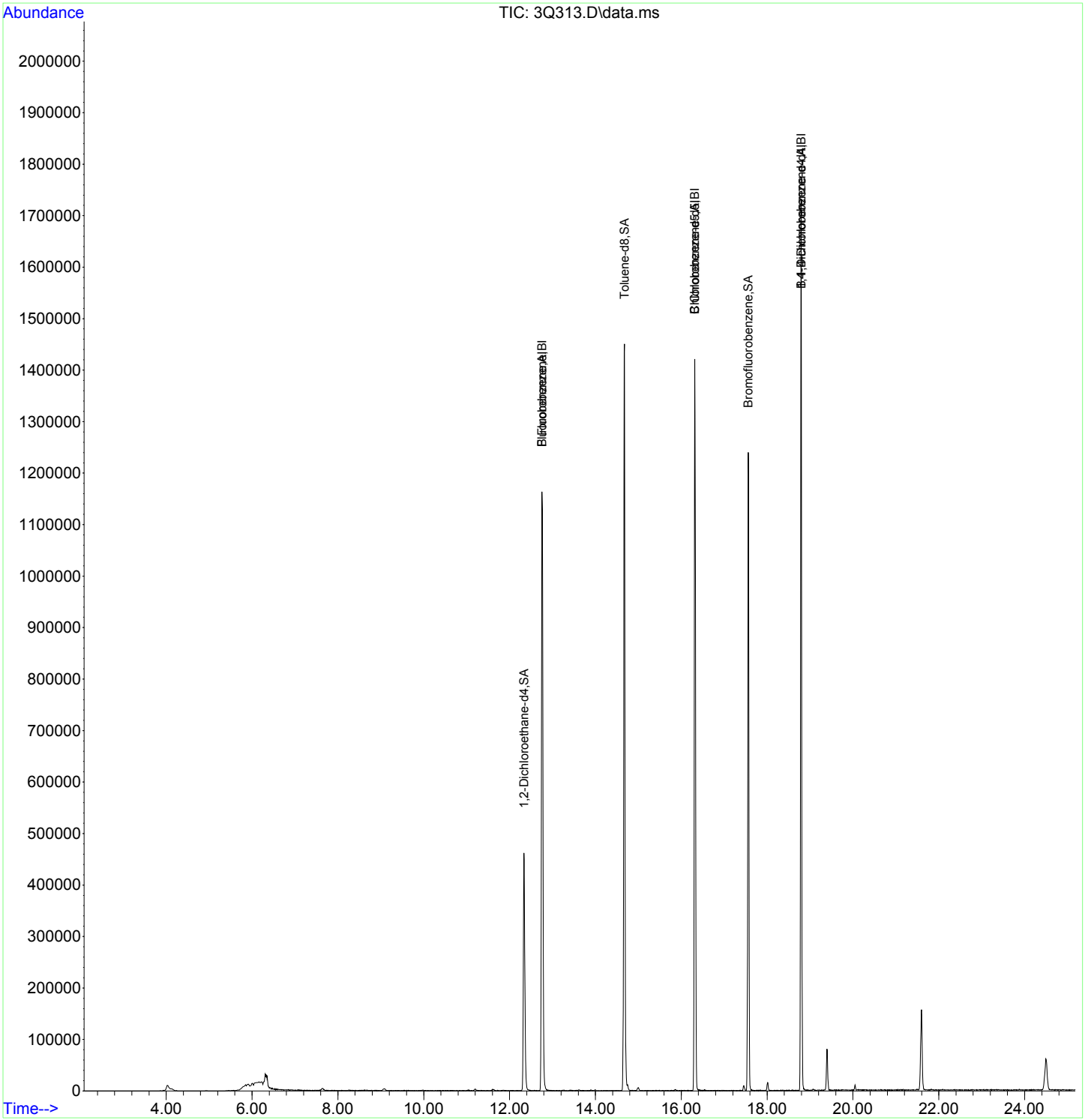
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99) Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100) Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102) 2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone	55	17.553	17.535	0.934	1501	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110) Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111) Benzyl chloride	91	18.943	18.943	1.008	294	N.D.	
112) bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	3330	N.D.	

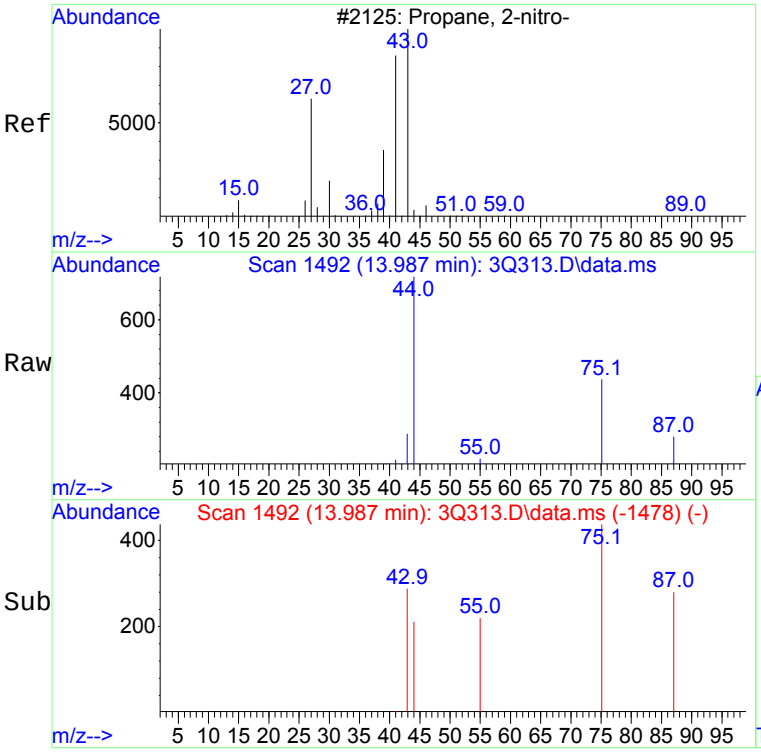
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q313.D
Acq On : 18 Jul 2018 15:37
Operator : JP1
InstName : VOA3
Sample : |454474002|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 19 08:40:25 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

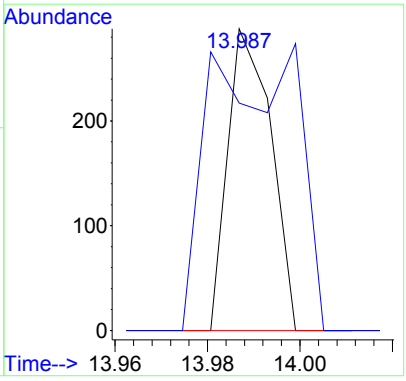




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.42 ug/L
RT: 13.987 min Scan# 1492
Delta R.T. -0.116 min
Lab File: 3Q313.D
Acq: 18 Jul 2018 15:37

Tgt Ion: 43 Resp: 187

Ion	Ratio	Lower	Upper
43	100		
41	188.8	55.3	115.3#



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:50**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474003**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**1.4**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW17**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:08**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q314.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	101	ug/kg	15.2	101
79-34-5	1,1,2,2-Tetrachloroethane	U	101	ug/kg	15.2	101
79-00-5	1,1,2-Trichloroethane	U	101	ug/kg	15.2	101
75-34-3	1,1-Dichloroethane	U	101	ug/kg	15.2	101
75-35-4	1,1-Dichloroethylene	U	101	ug/kg	15.2	101
87-61-6	1,2,3-Trichlorobenzene	U	101	ug/kg	15.2	101
120-82-1	1,2,4-Trichlorobenzene	U	101	ug/kg	15.2	101
96-12-8	1,2-Dibromo-3-chloropropane	U	101	ug/kg	25.4	101
106-93-4	1,2-Dibromoethane	U	101	ug/kg	15.2	101
95-50-1	1,2-Dichlorobenzene	U	101	ug/kg	15.2	101
107-06-2	1,2-Dichloroethane	U	101	ug/kg	15.2	101
78-87-5	1,2-Dichloropropane	U	101	ug/kg	15.2	101
541-73-1	1,3-Dichlorobenzene	U	101	ug/kg	15.2	101
106-46-7	1,4-Dichlorobenzene	U	101	ug/kg	15.2	101
123-91-1	1,4-Dioxane	U	2540	ug/kg	761	2540
78-93-3	2-Butanone	U	507	ug/kg	152	507
591-78-6	2-Hexanone	U	507	ug/kg	152	507
108-10-1	4-Methyl-2-pentanone	U	507	ug/kg	152	507
67-64-1	Acetone	U	507	ug/kg	152	507
71-43-2	Benzene	U	101	ug/kg	15.2	101
74-97-5	Bromochloromethane	U	101	ug/kg	15.2	101
75-27-4	Bromodichloromethane	U	101	ug/kg	15.2	101
75-25-2	Bromoform	U	101	ug/kg	15.2	101
74-83-9	Bromomethane	U	101	ug/kg	15.2	101
75-15-0	Carbon disulfide	U	507	ug/kg	81.1	507
56-23-5	Carbon tetrachloride	U	101	ug/kg	15.2	101
108-90-7	Chlorobenzene	U	101	ug/kg	15.2	101
75-00-3	Chloroethane	U	101	ug/kg	15.2	101
67-66-3	Chloroform	U	101	ug/kg	15.2	101
74-87-3	Chloromethane	U	101	ug/kg	15.2	101
110-82-7	Cyclohexane	U	101	ug/kg	15.2	101
124-48-1	Dibromochloromethane	U	101	ug/kg	15.2	101
75-71-8	Dichlorodifluoromethane	U	101	ug/kg	15.2	101
100-41-4	Ethylbenzene	U	101	ug/kg	15.2	101
98-82-8	Isopropylbenzene	U	101	ug/kg	15.2	101
79-20-9	Methyl acetate	U	254	ug/kg	76.1	254
108-87-2	Methylcyclohexane	U	101	ug/kg	15.2	101
75-09-2	Methylene chloride	U	254	ug/kg	81.1	254

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 14:50**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474003**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**1.4**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW17**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:08**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:22**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q314.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	101	ug/kg	15.2	101
127-18-4	Tetrachloroethylene	U	101	ug/kg	15.2	101
108-88-3	Toluene	U	101	ug/kg	15.2	101
79-01-6	Trichloroethylene	U	101	ug/kg	15.2	101
75-69-4	Trichlorofluoromethane	U	101	ug/kg	15.2	101
76-13-1	Trichlorotrifluoroethane	U	254	ug/kg	81.1	254
75-01-4	Vinyl chloride	U	101	ug/kg	15.2	101
156-59-2	cis-1,2-Dichloroethylene	U	101	ug/kg	15.2	101
10061-01-5	cis-1,3-Dichloropropylene	U	101	ug/kg	15.2	101
179601-23-1	m,p-Xylenes	U	203	ug/kg	15.2	203
95-47-6	o-Xylene	U	101	ug/kg	15.2	101
1634-04-4	tert-Butyl methyl ether	U	101	ug/kg	15.2	101
156-60-5	trans-1,2-Dichloroethylene	U	101	ug/kg	15.2	101
10061-02-6	trans-1,3-Dichloropropylene	U	101	ug/kg	15.2	101

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q314.D
Acq On : 18 Jul 2018 16:08
Operator : JP1
InstName : VOA3
Sample : |454474003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:27 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1136151	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	533024	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	427125	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1138319	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	543217	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	427614	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	218875	51.48	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1035712	41.71	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	463809	55.24	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	103%
45) Toluene-d8	50.000	81 - 120	83%
63) Bromofluorobenzene	50.000	70 - 130	110%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.954	4.990	0.388	232	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.196	6.159	0.486	437	N.D.		
6) Chloroethane	64	6.232	6.372	0.488	316	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.275	8.232	0.648	1041	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.640	8.665	0.677	181	N.D.		
15) Methylene chloride	84	9.079	9.091	0.711	3927	Below Cal		93
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.975	9.988	0.782	586	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.189	11.183	0.877	428	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.451	12.438	0.976	326	N.D.		
32) Benzene	78	12.438	12.426	0.975	770	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.051	1345	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q314.D
Acq On : 18 Jul 2018 16:08
Operator : JP1
InstName : VOA3
Sample : |454474003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 19 08:40:27 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	1042	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.352	16.352	1.002	172	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.431	16.425	1.007	226	N.D.	
57) m,p-Xylenes	106	16.535	16.541	1.013	316	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene	91	17.797	17.791	0.947	191	N.D.	
68) 1,3,5-Trimethylbenzene	105	17.956	17.949	0.956	393	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.041	18.041	0.960	331	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	518	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	401	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	279	N.D.	
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	542	N.D.	
77) n-Butylbenzene	91	19.120	19.108	1.018	129	N.D.	
78) 1,2-Dichlorobenzene		0.000	19.236	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	344	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	1370	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.677	8.464	0.680	276	N.D.	
88) Allyl chloride	76	8.640	8.842	0.677	181	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.877	5656	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.609	11.597	0.910	1629	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q314.D
Acq On : 18 Jul 2018 16:08
Operator : JP1
InstName : VOA3
Sample : |454474003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 19 08:40:27 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

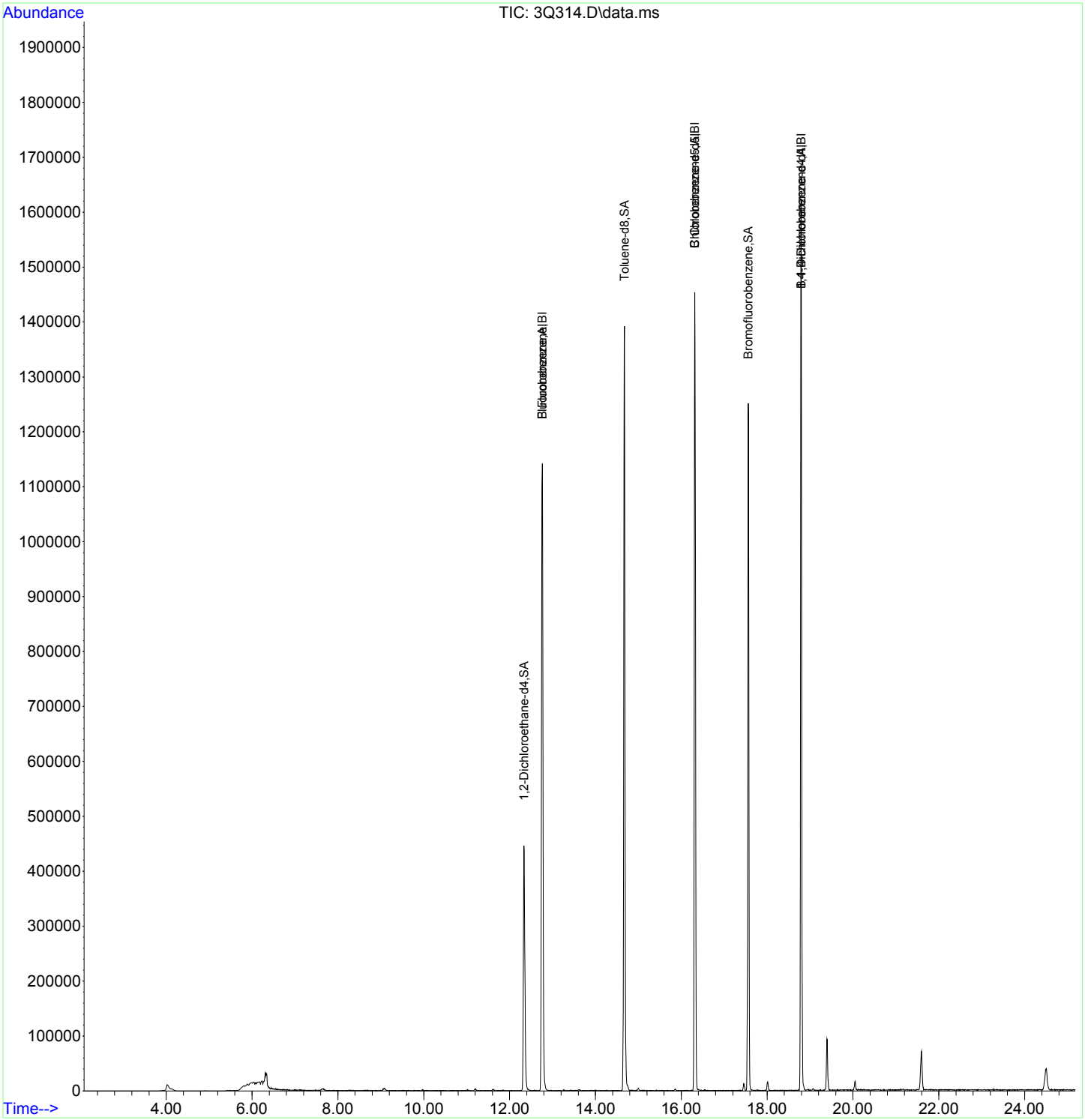
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99) Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100) Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102) 2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone	55	17.559	17.535	0.934	1214	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110) Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111) Benzyl chloride	91	18.955	18.943	1.009	407	N.D.	
112) bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	3926	N.D.	

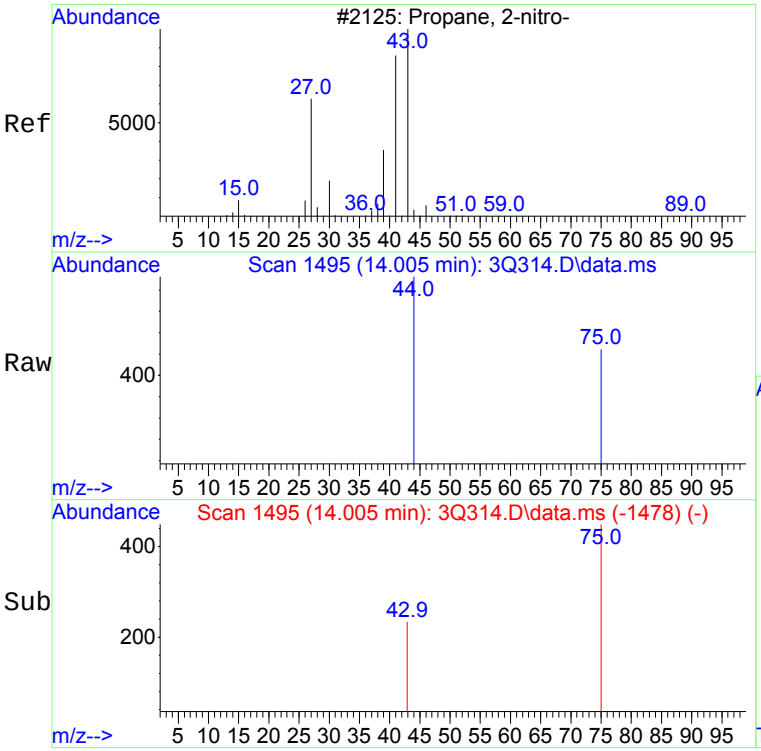
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q314.D
Acq On : 18 Jul 2018 16:08
Operator : JP1
InstName : VOA3
Sample : |454474003|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 19 08:40:27 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

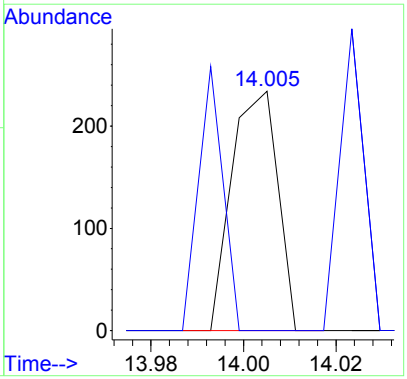




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.40 ug/L
RT: 14.005 min Scan# 1495
Delta R.T. -0.098 min
Lab File: 3Q314.D
Acq: 18 Jul 2018 16:08

Tgt Ion: 43 Resp: 162

Ion	Ratio	Lower	Upper
43	100		
41	66.7	55.3	115.3



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:00**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474004**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.8**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW18**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:40**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q315.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	108	ug/kg	16.3	108
79-34-5	1,1,2,2-Tetrachloroethane	U	108	ug/kg	16.3	108
79-00-5	1,1,2-Trichloroethane	U	108	ug/kg	16.3	108
75-34-3	1,1-Dichloroethane	U	108	ug/kg	16.3	108
75-35-4	1,1-Dichloroethylene	U	108	ug/kg	16.3	108
87-61-6	1,2,3-Trichlorobenzene	U	108	ug/kg	16.3	108
120-82-1	1,2,4-Trichlorobenzene	U	108	ug/kg	16.3	108
96-12-8	1,2-Dibromo-3-chloropropane	U	108	ug/kg	27.1	108
106-93-4	1,2-Dibromoethane	U	108	ug/kg	16.3	108
95-50-1	1,2-Dichlorobenzene	U	108	ug/kg	16.3	108
107-06-2	1,2-Dichloroethane	U	108	ug/kg	16.3	108
78-87-5	1,2-Dichloropropane	U	108	ug/kg	16.3	108
541-73-1	1,3-Dichlorobenzene	U	108	ug/kg	16.3	108
106-46-7	1,4-Dichlorobenzene	U	108	ug/kg	16.3	108
123-91-1	1,4-Dioxane	U	2710	ug/kg	813	2710
78-93-3	2-Butanone	U	542	ug/kg	163	542
591-78-6	2-Hexanone	U	542	ug/kg	163	542
108-10-1	4-Methyl-2-pentanone	U	542	ug/kg	163	542
67-64-1	Acetone	U	542	ug/kg	163	542
71-43-2	Benzene	U	108	ug/kg	16.3	108
74-97-5	Bromochloromethane	U	108	ug/kg	16.3	108
75-27-4	Bromodichloromethane	U	108	ug/kg	16.3	108
75-25-2	Bromoform	U	108	ug/kg	16.3	108
74-83-9	Bromomethane	U	108	ug/kg	16.3	108
75-15-0	Carbon disulfide	U	542	ug/kg	86.7	542
56-23-5	Carbon tetrachloride	U	108	ug/kg	16.3	108
108-90-7	Chlorobenzene	U	108	ug/kg	16.3	108
75-00-3	Chloroethane	U	108	ug/kg	16.3	108
67-66-3	Chloroform	U	108	ug/kg	16.3	108
74-87-3	Chloromethane	U	108	ug/kg	16.3	108
110-82-7	Cyclohexane	U	108	ug/kg	16.3	108
124-48-1	Dibromochloromethane	U	108	ug/kg	16.3	108
75-71-8	Dichlorodifluoromethane	U	108	ug/kg	16.3	108
100-41-4	Ethylbenzene	U	108	ug/kg	16.3	108
98-82-8	Isopropylbenzene	U	108	ug/kg	16.3	108
79-20-9	Methyl acetate	U	271	ug/kg	81.3	271
108-87-2	Methylcyclohexane	U	108	ug/kg	16.3	108
75-09-2	Methylene chloride	U	271	ug/kg	86.7	271

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:00**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474004**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.8**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW18**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 16:40**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:23**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q315.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	108	ug/kg	16.3	108
127-18-4	Tetrachloroethylene	U	108	ug/kg	16.3	108
108-88-3	Toluene	U	108	ug/kg	16.3	108
79-01-6	Trichloroethylene	U	108	ug/kg	16.3	108
75-69-4	Trichlorofluoromethane	U	108	ug/kg	16.3	108
76-13-1	Trichlorotrifluoroethane	U	271	ug/kg	86.7	271
75-01-4	Vinyl chloride	U	108	ug/kg	16.3	108
156-59-2	cis-1,2-Dichloroethylene	U	108	ug/kg	16.3	108
10061-01-5	cis-1,3-Dichloropropylene	U	108	ug/kg	16.3	108
179601-23-1	m,p-Xylenes	U	217	ug/kg	16.3	217
95-47-6	o-Xylene	U	108	ug/kg	16.3	108
1634-04-4	tert-Butyl methyl ether	U	108	ug/kg	16.3	108
156-60-5	trans-1,2-Dichloroethylene	U	108	ug/kg	16.3	108
10061-02-6	trans-1,3-Dichloropropylene	U	108	ug/kg	16.3	108

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q315.D
Acq On : 18 Jul 2018 16:40
Operator : JP1
InstName : VOA3
Sample : |454474004|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1105016	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	498028	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	426794	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1107666	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	506264	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	426883	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	225072	54.43	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1045891	45.08	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	452623	53.95	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	109%
45) Toluene-d8	50.000	81 - 120	90%
63) Bromofluorobenzene	50.000	70 - 130	108%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.123	6.159	0.480	890	N.D.		
6) Chloroethane	64	6.287	6.372	0.493	218	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.275	8.232	0.648	694	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide		0.000	8.665	0.000	0	N.D.		
15) Methylene chloride	84	9.067	9.091	0.711	2972	Below Cal		93
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.976	9.988	0.782	274	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.207	11.183	0.878	1018	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	577	N.D.		
32) Benzene	78	12.433	12.426	0.974	171	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.051	1195	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q315.D
Acq On : 18 Jul 2018 16:40
Operator : JP1
InstName : VOA3
Sample : |454474004|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 19 08:40:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.743	14.755	0.904	341	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene		0.000	16.352	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.413	16.425	1.006	105	N.D.	
57) m,p-Xylenes		0.000	16.541	0.000	0	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane	75	17.645	17.748	0.939	161	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene		0.000	17.791	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene		0.000	18.041	0.000	0	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene		0.000	18.364	0.000	0	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	150	N.D.	
76) 1,4-Dichlorobenzene	146	18.822	18.821	1.002	545	N.D.	
77) n-Butylbenzene	91	18.950	19.108	1.008	122	N.D.	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	112	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.108	21.113	1.123	185	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	1340	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.549	8.464	0.670	185	N.D.	
88) Allyl chloride		0.000	8.842	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.189	11.225	0.877	5353	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.616	11.597	0.910	1606	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q315.D
Acq On : 18 Jul 2018 16:40
Operator : JP1
InstName : VOA3
Sample : |454474004|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 19 08:40:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

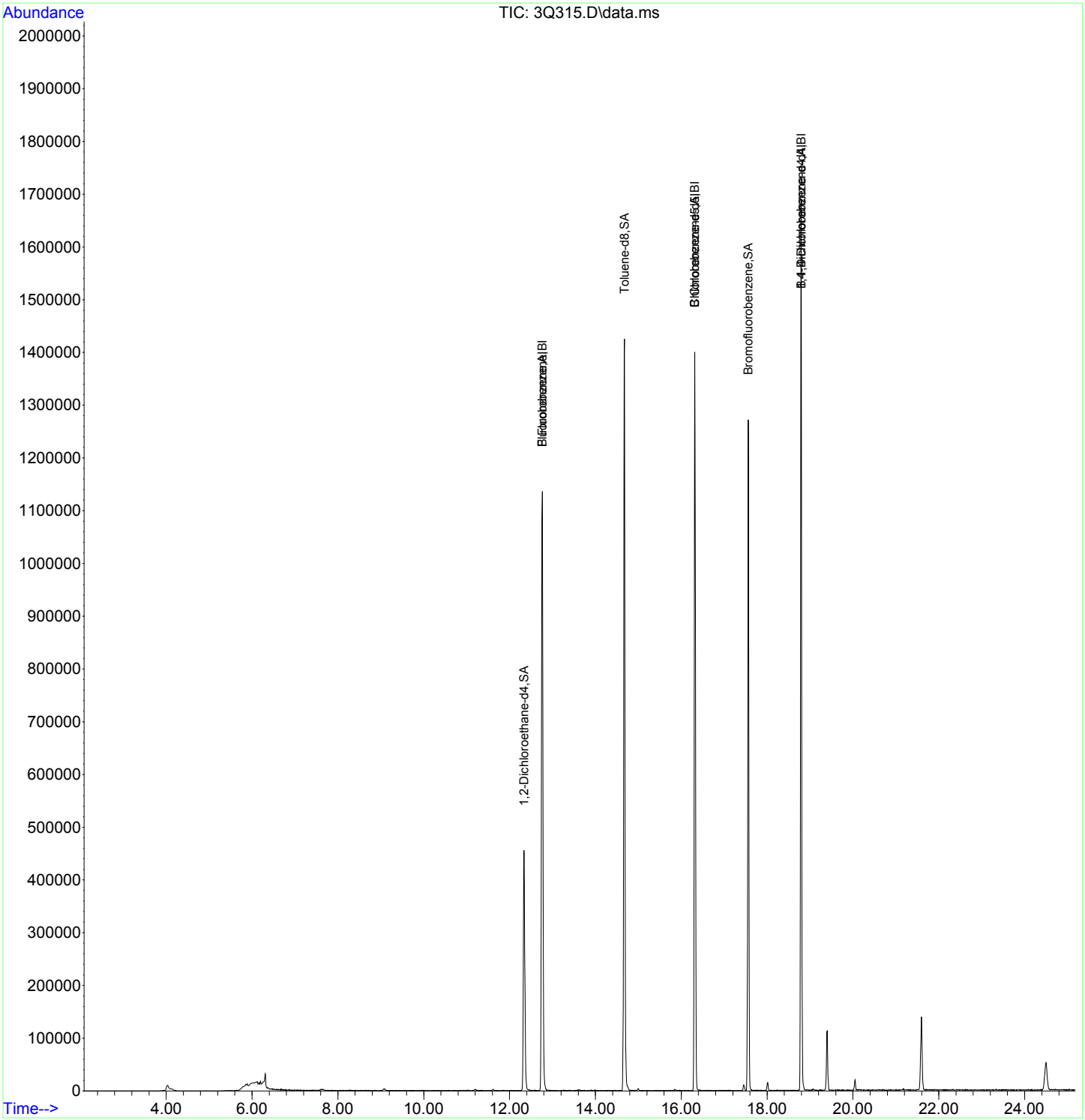
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99) Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100) Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101) 1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102) 2-Nitropropane		0.000	14.103	0.000	0m	N.D.	d
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone	55	17.566	17.535	0.935	1442	N.D.	
109) trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110) Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111) Benzyl chloride	91	18.950	18.943	1.008	122	N.D.	
112) bis(2-Chloroisopropyl)...	45	19.395	19.346	1.032	4660	N.D.	

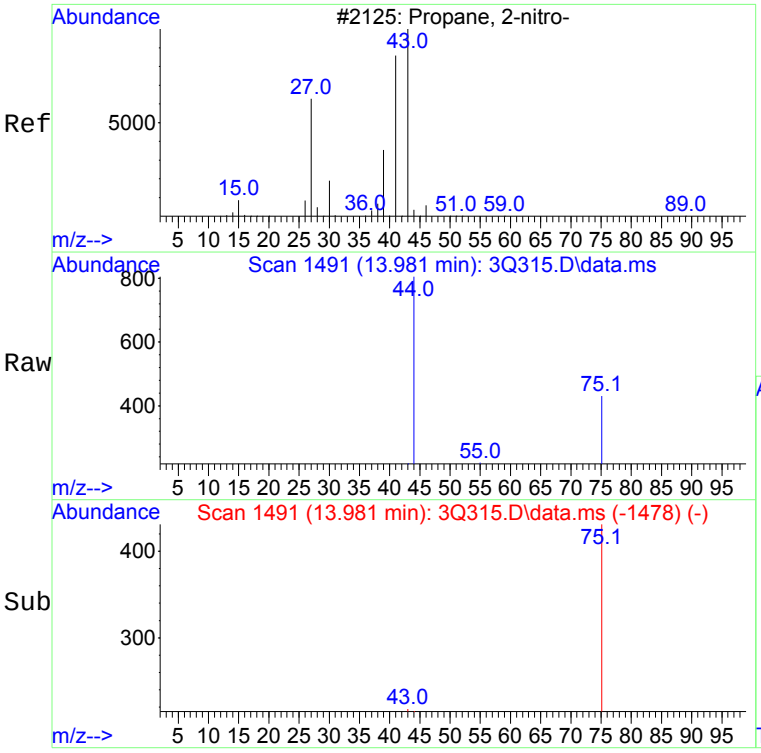
(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q315.D
Acq On : 18 Jul 2018 16:40
Operator : JP1
InstName : VOA3
Sample : |454474004|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 19 08:40:29 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

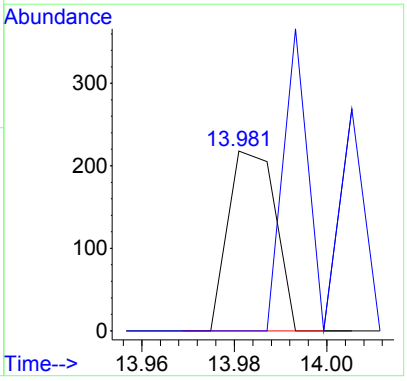




#102 BEFORE analyst DELETION
2-Nitropropane
Concen: 3.40 ug/L
RT: 13.981 min Scan# 1491
Delta R.T. -0.122 min
Lab File: 3Q315.D
Acq: 18 Jul 2018 16:40

Tgt Ion: 43 Resp: 155

Ion	Ratio	Lower	Upper
43	100		
41	86.5	55.3	115.3



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:10**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474005**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**2.7**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW19**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:11**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:24**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q316.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	103	ug/kg	15.4	103
79-34-5	1,1,2,2-Tetrachloroethane	U	103	ug/kg	15.4	103
79-00-5	1,1,2-Trichloroethane	U	103	ug/kg	15.4	103
75-34-3	1,1-Dichloroethane	U	103	ug/kg	15.4	103
75-35-4	1,1-Dichloroethylene	U	103	ug/kg	15.4	103
87-61-6	1,2,3-Trichlorobenzene	U	103	ug/kg	15.4	103
120-82-1	1,2,4-Trichlorobenzene	U	103	ug/kg	15.4	103
96-12-8	1,2-Dibromo-3-chloropropane	U	103	ug/kg	25.7	103
106-93-4	1,2-Dibromoethane	U	103	ug/kg	15.4	103
95-50-1	1,2-Dichlorobenzene	U	103	ug/kg	15.4	103
107-06-2	1,2-Dichloroethane	U	103	ug/kg	15.4	103
78-87-5	1,2-Dichloropropane	U	103	ug/kg	15.4	103
541-73-1	1,3-Dichlorobenzene	U	103	ug/kg	15.4	103
106-46-7	1,4-Dichlorobenzene	U	103	ug/kg	15.4	103
123-91-1	1,4-Dioxane	U	2570	ug/kg	771	2570
78-93-3	2-Butanone	U	514	ug/kg	154	514
591-78-6	2-Hexanone	U	514	ug/kg	154	514
108-10-1	4-Methyl-2-pentanone	U	514	ug/kg	154	514
67-64-1	Acetone	U	514	ug/kg	154	514
71-43-2	Benzene	U	103	ug/kg	15.4	103
74-97-5	Bromochloromethane	U	103	ug/kg	15.4	103
75-27-4	Bromodichloromethane	U	103	ug/kg	15.4	103
75-25-2	Bromoform	U	103	ug/kg	15.4	103
74-83-9	Bromomethane	U	103	ug/kg	15.4	103
75-15-0	Carbon disulfide	U	514	ug/kg	82.3	514
56-23-5	Carbon tetrachloride	U	103	ug/kg	15.4	103
108-90-7	Chlorobenzene	U	103	ug/kg	15.4	103
75-00-3	Chloroethane	U	103	ug/kg	15.4	103
67-66-3	Chloroform	U	103	ug/kg	15.4	103
74-87-3	Chloromethane	U	103	ug/kg	15.4	103
110-82-7	Cyclohexane	U	103	ug/kg	15.4	103
124-48-1	Dibromochloromethane	U	103	ug/kg	15.4	103
75-71-8	Dichlorodifluoromethane	U	103	ug/kg	15.4	103
100-41-4	Ethylbenzene	U	103	ug/kg	15.4	103
98-82-8	Isopropylbenzene	U	103	ug/kg	15.4	103
79-20-9	Methyl acetate	U	257	ug/kg	77.1	257
108-87-2	Methylcyclohexane	U	103	ug/kg	15.4	103
75-09-2	Methylene chloride	U	257	ug/kg	82.3	257

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:10**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474005**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**2.7**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW19**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:11**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:24**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q316.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	103	ug/kg	15.4	103
127-18-4	Tetrachloroethylene	U	103	ug/kg	15.4	103
108-88-3	Toluene	U	103	ug/kg	15.4	103
79-01-6	Trichloroethylene	U	103	ug/kg	15.4	103
75-69-4	Trichlorofluoromethane	U	103	ug/kg	15.4	103
76-13-1	Trichlorotrifluoroethane	U	257	ug/kg	82.3	257
75-01-4	Vinyl chloride	U	103	ug/kg	15.4	103
156-59-2	cis-1,2-Dichloroethylene	U	103	ug/kg	15.4	103
10061-01-5	cis-1,3-Dichloropropylene	U	103	ug/kg	15.4	103
179601-23-1	m,p-Xylenes	U	206	ug/kg	15.4	206
95-47-6	o-Xylene	U	103	ug/kg	15.4	103
1634-04-4	tert-Butyl methyl ether	U	103	ug/kg	15.4	103
156-60-5	trans-1,2-Dichloroethylene	U	103	ug/kg	15.4	103
10061-02-6	trans-1,3-Dichloropropylene	U	103	ug/kg	15.4	103

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q316.D
Acq On : 18 Jul 2018 17:11
Operator : JP1
InstName : VOA3
Sample : |454474005|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:31 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1092268	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	518343	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	427906	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1094797	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	526734	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	428234	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	215996	52.84	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1063969	44.06	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	473796	56.33	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	106%
45) Toluene-d8	50.000	81 - 120	88%
63) Bromofluorobenzene	50.000	70 - 130	113%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.954	4.990	0.388	234	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	5.977	6.159	0.468	930	N.D.		
6) Chloroethane	64	6.324	6.372	0.496	169	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.269	8.232	0.648	1012	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.628	8.665	0.676	156	N.D.		
15) Methylene chloride	84	9.086	9.091	0.712	3329	Below Cal		91
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.970	9.988	0.781	532	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.189	11.183	0.877	916	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.439	12.438	0.975	247	N.D.		
32) Benzene	78	12.420	12.426	0.973	269	N.D.		
33) Cyclohexene	67	12.530	12.548	0.982	100	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.414	13.396	1.051	1354	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q316.D
Acq On : 18 Jul 2018 17:11
Operator : JP1
InstName : VOA3
Sample : |454474005|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 19 08:40:31 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.743	14.755	0.904	703	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.340	16.352	1.001	164	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene		0.000	16.425	0.000	0	N.D.	
57) m,p-Xylenes	106	16.541	16.541	1.014	158	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane	75	17.645	17.748	0.939	206	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene	91	17.797	17.791	0.947	111	N.D.	
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	112	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	239	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.370	18.364	0.978	222	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	18.669	18.675	0.994	175	N.D.	
75) 1,3-Dichlorobenzene	146	18.742	18.730	0.997	340	N.D.	
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	689	N.D.	
77) n-Butylbenzene	91	18.937	19.108	1.008	103	N.D.	
78) 1,2-Dichlorobenzene		0.000	19.236	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	165	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.504	21.491	1.144	1121	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.665	8.464	0.679	285	N.D.	
88) Allyl chloride	76	8.628	8.842	0.676	156	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.201	11.225	0.878	4679	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.609	11.597	0.910	1394	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q316.D
Acq On : 18 Jul 2018 17:11
Operator : JP1
InstName : VOA3
Sample : |454474005|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 19 08:40:31 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

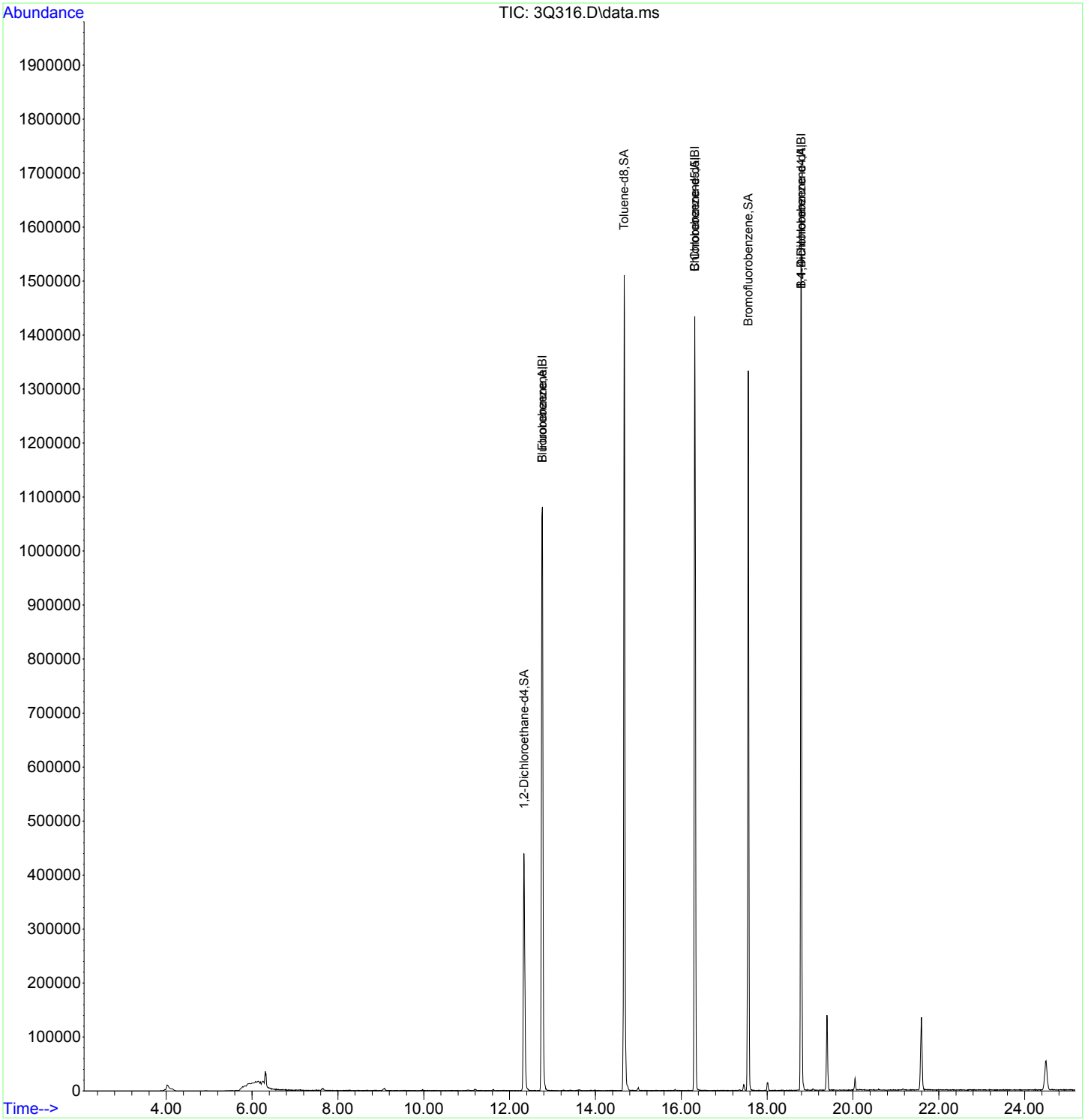
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.553	17.535	0.934	1487	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride	91	18.937	18.943	1.008	103	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.395	19.346	1.032	5618	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q316.D
Acq On : 18 Jul 2018 17:11
Operator : JP1
InstName : VOA3
Sample : |454474005|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 19 08:40:31 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:20**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474006**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.9**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW20**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:42**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:25**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q317.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	109	ug/kg	16.3	109
79-34-5	1,1,2,2-Tetrachloroethane	U	109	ug/kg	16.3	109
79-00-5	1,1,2-Trichloroethane	U	109	ug/kg	16.3	109
75-34-3	1,1-Dichloroethane	U	109	ug/kg	16.3	109
75-35-4	1,1-Dichloroethylene	U	109	ug/kg	16.3	109
87-61-6	1,2,3-Trichlorobenzene	U	109	ug/kg	16.3	109
120-82-1	1,2,4-Trichlorobenzene	U	109	ug/kg	16.3	109
96-12-8	1,2-Dibromo-3-chloropropane	U	109	ug/kg	27.1	109
106-93-4	1,2-Dibromoethane	U	109	ug/kg	16.3	109
95-50-1	1,2-Dichlorobenzene	U	109	ug/kg	16.3	109
107-06-2	1,2-Dichloroethane	U	109	ug/kg	16.3	109
78-87-5	1,2-Dichloropropane	U	109	ug/kg	16.3	109
541-73-1	1,3-Dichlorobenzene	U	109	ug/kg	16.3	109
106-46-7	1,4-Dichlorobenzene	U	109	ug/kg	16.3	109
123-91-1	1,4-Dioxane	U	2710	ug/kg	814	2710
78-93-3	2-Butanone	U	543	ug/kg	163	543
591-78-6	2-Hexanone	U	543	ug/kg	163	543
108-10-1	4-Methyl-2-pentanone	U	543	ug/kg	163	543
67-64-1	Acetone	U	543	ug/kg	163	543
71-43-2	Benzene	U	109	ug/kg	16.3	109
74-97-5	Bromochloromethane	U	109	ug/kg	16.3	109
75-27-4	Bromodichloromethane	U	109	ug/kg	16.3	109
75-25-2	Bromoform	U	109	ug/kg	16.3	109
74-83-9	Bromomethane	U	109	ug/kg	16.3	109
75-15-0	Carbon disulfide	U	543	ug/kg	86.8	543
56-23-5	Carbon tetrachloride	U	109	ug/kg	16.3	109
108-90-7	Chlorobenzene	U	109	ug/kg	16.3	109
75-00-3	Chloroethane	U	109	ug/kg	16.3	109
67-66-3	Chloroform	U	109	ug/kg	16.3	109
74-87-3	Chloromethane	U	109	ug/kg	16.3	109
110-82-7	Cyclohexane	U	109	ug/kg	16.3	109
124-48-1	Dibromochloromethane	U	109	ug/kg	16.3	109
75-71-8	Dichlorodifluoromethane	U	109	ug/kg	16.3	109
100-41-4	Ethylbenzene	U	109	ug/kg	16.3	109
98-82-8	Isopropylbenzene	U	109	ug/kg	16.3	109
79-20-9	Methyl acetate	U	271	ug/kg	81.4	271
108-87-2	Methylcyclohexane	U	109	ug/kg	16.3	109
75-09-2	Methylene chloride	U	271	ug/kg	86.8	271

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/10/2018 15:20**	**Matrix:**	**SOIL**
Lab Sample ID:	**454474006**	**Date Received:**	**07/12/2018 09:15**	**%Moisture:**	**7.9**
		Client:	**URSC013**	**Project:**	**URSC00114**
Client ID:	**SW20**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 17:42**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:25**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q317.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	109	ug/kg	16.3	109
127-18-4	Tetrachloroethylene	U	109	ug/kg	16.3	109
108-88-3	Toluene	U	109	ug/kg	16.3	109
79-01-6	Trichloroethylene	U	109	ug/kg	16.3	109
75-69-4	Trichlorofluoromethane	U	109	ug/kg	16.3	109
76-13-1	Trichlorotrifluoroethane	U	271	ug/kg	86.8	271
75-01-4	Vinyl chloride	U	109	ug/kg	16.3	109
156-59-2	cis-1,2-Dichloroethylene	U	109	ug/kg	16.3	109
10061-01-5	cis-1,3-Dichloropropylene	U	109	ug/kg	16.3	109
179601-23-1	m,p-Xylenes	U	217	ug/kg	16.3	217
95-47-6	o-Xylene	U	109	ug/kg	16.3	109
1634-04-4	tert-Butyl methyl ether	U	109	ug/kg	16.3	109
156-60-5	trans-1,2-Dichloroethylene	U	109	ug/kg	16.3	109
10061-02-6	trans-1,3-Dichloropropylene	U	109	ug/kg	16.3	109

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q317.D
Acq On : 18 Jul 2018 17:42
Operator : JP1
InstName : VOA3
Sample : |454474006|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:33 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1077196	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	482768	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	393317	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1079389	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	491796	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	393412	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	213822	53.04	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1024254	45.54	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	436028	56.40	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	106%
45) Toluene-d8	50.000	81 - 120	91%
63) Bromofluorobenzene	50.000	70 - 130	113%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.196	6.159	0.486	392	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.262	8.232	0.647	544	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide		0.000	8.665	0.000	0	N.D.		
15) Methylene chloride	84	9.079	9.091	0.711	3124	Below Cal		99
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.963	9.988	0.781	104	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.170	11.183	0.875	199	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	319	N.D.		
32) Benzene		0.000	12.426	0.000	0	N.D.		
33) Cyclohexene	67	12.457	12.548	0.976	102	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.408	13.396	1.051	1334	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q317.D
Acq On : 18 Jul 2018 17:42
Operator : JP1
InstName : VOA3
Sample : |454474006|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 19 08:40:33 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.761	14.755	0.905	626	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene		0.000	16.352	0.000	0	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.438	16.425	1.007	243	N.D.	
57) m,p-Xylenes	106	16.529	16.541	1.013	210	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene	91	17.803	17.791	0.947	108	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	107	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene		0.000	18.364	0.000	0	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene	119	18.797	18.675	1.000	390	N.D.	
75) 1,3-Dichlorobenzene	146	18.742	18.730	0.997	121	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	663	N.D.	
77) n-Butylbenzene	91	18.943	19.108	1.008	264	N.D.	
78) 1,2-Dichlorobenzene		0.000	19.236	0.000	0	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.126	21.113	1.124	149	N.D.	
81) Hexachlorobutadiene		0.000	21.278	0.000	0	N.D.	
82) Naphthalene	128	21.504	21.491	1.144	1415	N.D.	
83) 1,2,3-Trichlorobenzene		0.000	21.821	0.000	0	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.659	8.464	0.678	158	N.D.	
88) Allyl chloride		0.000	8.842	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.877	4920	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.609	11.597	0.910	1637	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q317.D
Acq On : 18 Jul 2018 17:42
Operator : JP1
InstName : VOA3
Sample : |454474006|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 19 08:40:33 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

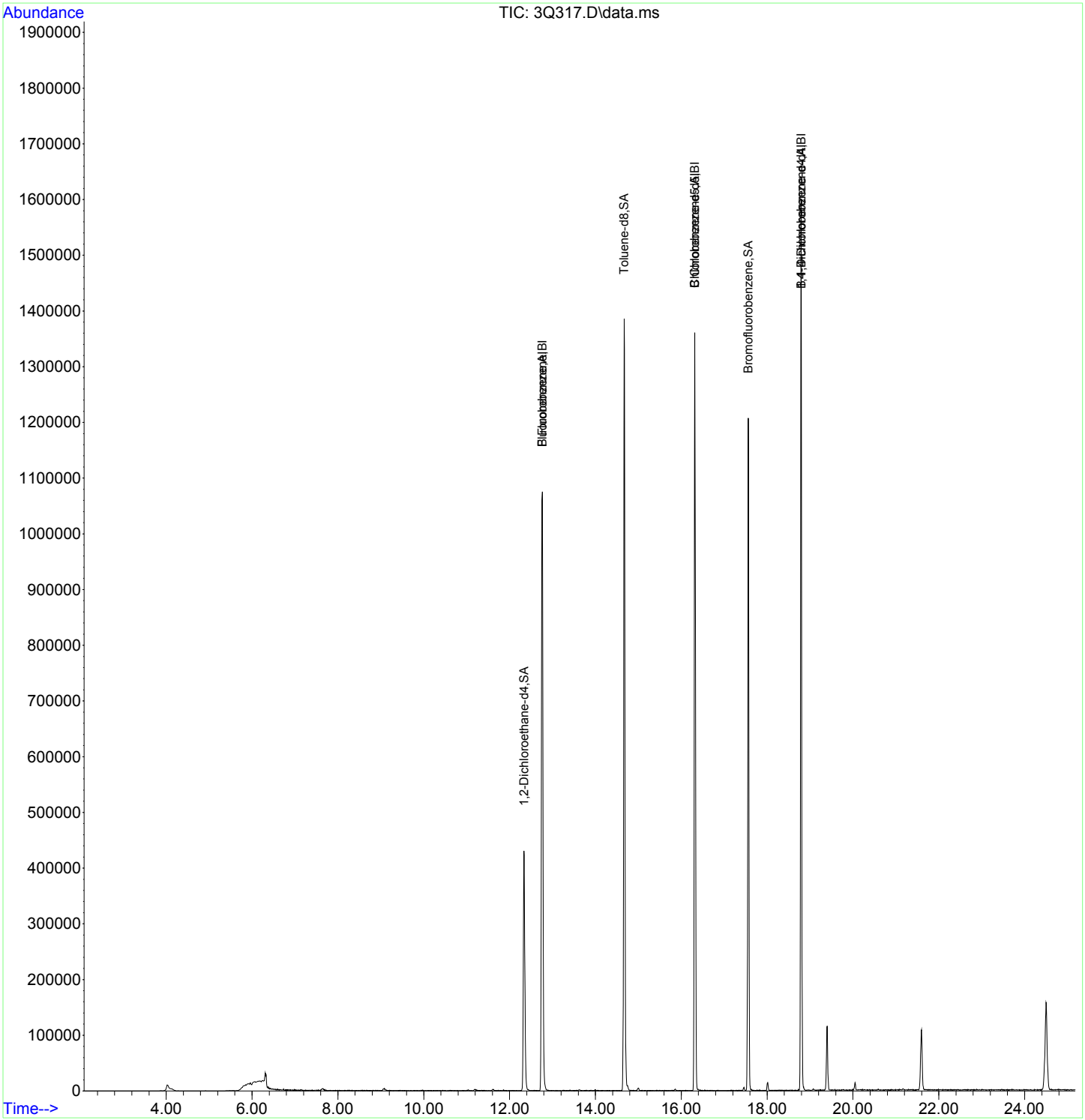
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.559	17.535	0.934	1499	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride	91	18.943	18.943	1.008	264	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	5036	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q317.D
Acq On : 18 Jul 2018 17:42
Operator : JP1
InstName : VOA3
Sample : |454474006|1782981|50|VOA|1|VOA3560C_S|
Misc : URSC 100UL N/A SOIL
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 19 08:40:33 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Standards

Low level SW846 8260B and Regular level 8260B and EPA 624

Calibration Standard Concentration Levels

	Level 1	Level 1a	Level 2	Level 3	Level 4	Level 5	Level 6 #	Level 7 !	Level 7a
Fluorobenzene (IS)	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50	20/50
1,2-Dichloroethane-d4(surr)		20/50	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Dichlorodifluoromethane		0.5	1	2	5	10	20	50	100
Chloromethane		0.5	1	2	5	10	20	50	100
Vinyl chloride		0.5	1	2	5	10	20	50	100
Bromomethane		0.5	1	2	5	10	20	50	100
Chloroethane		0.5	1	2	5	10	20	50	100
Trichlorofluoromethane		0.5	1	2	5	10	20	50	100
1,1-Dichloroethene		0.5	1	2	5	10	20	50	100
Acetone	1	2.5	5	10	25	50	100	250	500
Iodomethane	1	2.5	5	10	25	50	100	250	500
Carbon disulfide	1	2.5	5	10	25	50	100	250	500
Methylene chloride		0.5	1	2	5	10	20	50	100
trans-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,1-Dichloroethane		0.5	1	2	5	10	20	50	100
Ethyl ether		0.5	1	2	5	10	20	50	100
Vinyl acetate	1	2.5	5	10	25	50	100	250	500
cis-1,2-Dichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethene (total)		1	2	4	10	20	40	100	200
Cyclohexene		0.5	1	2	5	10	20	50	100
2-Chloroethylvinyl ether			5	10	25	50	100	250	500
2,2-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Butanone	1	2.5	5	10	25	50	100	250	500
Bromochloromethane		0.5	1	2	5	10	20	50	100
Chloroform		0.5	1	2	5	10	20	50	100
1,1,1-Trichloroethane		0.5	1	2	5	10	20	50	100
1,1-Dichloropropene		0.5	1	2	5	10	20	50	100
Carbon tetrachloride		0.5	1	2	5	10	20	50	100
Benzene		0.5	1	2	5	10	20	50	100
1,2-Dichloroethane		0.5	1	2	5	10	20	50	100
Trichloroethene		0.5	1	2	5	10	20	50	100
1,2-Dichloropropane		0.5	1	2	5	10	20	50	100
Dibromomethane		0.5	1	2	5	10	20	50	100
Bromodichloromethane		0.5	1	2	5	10	20	50	100
cis-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
tert-Butylmethylether		0.5	1	2	5	10	20	50	100
Ethyl Ether			1	2	5	10	20	50	100
Acetonitrile			25	50	125	250	500	1250	2500
Methyl acetate			5	10	25	50	100	250	500
Cyclohexane			1	2	5	10	20	50	100
Methylcyclohexane			1	2	5	10	20	50	100
n-Butyl alcohol		50	100	200	500	1000	2000	5000	10000
2-Nitropropane			5	10	25	50	100	250	500
Ethyl acetate			5	10	25	50	100	250	500
Acrolein			5	10	25	50	100	250	500
Trichlorotrifluoroethane		2	5	10	25	50	100	250	500
Allyl chloride			5	10	25	50	100	250	500
Acrylonitrile			5	10	25	50	100	250	500
1,4-Dioxane			50	100	250	500	1000	2500	5000
Isobutyl alcohol			50	100	250	500	1000	2500	5000
Methacrylonitrile			5	10	25	50	100	250	500
Propionitrile			5	10	25	50	100	250	500
Methyl methacrylate			5	10	25	50	100	250	500
Chlorotrifluoroethylene			5	10	25	50	100	150	200
2-Chloro-1,1,1-trifluoroethane			5	10	25	50	100	150	200
Tetrahydrofuran			5	10	25	50	100	250	500
tert-Butyl alcohol			50	100	250	500	1000	2500	5000
Isopropyl ether			1	2	5	10	20	50	100
Ethyl tert-butyl ether			1	2	5	10	20	50	100
Isopropyl alcohol			50	100	250	500	1000	2500	5000
Methyl tert-amyl ether			1	2	5	10	20	50	100
1-Chlorohexane			1	2	5	10	20	50	100
2-Chloro-1,3-butadiene(chloroprene)			1	2	5	10	20	50	100
Chlorobenzene-d5 (IS)	20	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Toluene-d8 (surr)		20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
4-Methyl-2-pentanone	1	2.5	5	10	25	50	100	250	500
Toluene		0.5	1	2	5	10	20	50	100
trans-1,3-Dichloropropene		0.5	1	2	5	10	20	50	100
1,1,2-Trichloroethane		0.5	1	2	5	10	20	50	100
Tetrachloroethene		0.5	1	2	5	10	20	50	100
1,3-Dichloropropane		0.5	1	2	5	10	20	50	100
2-Hexanone	1	2.5	5	10	25	50	20	250	500
Dibromochloromethane		0.5	1	2	5	10	20	50	100
1,2-Dibromoethane		0.5	1	2	5	10	20	50	100
Chlorobenzene		0.5	1	2	5	10	20	50	100
1,1,1,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Ethylbenzene		0.5	1	2	5	10	20	50	100
m,p-Xylene		1	2	4	10	20	20	100	200
o-Xylene		0.5	1	2	5	10	20	50	100
Xylenes (total)		1.5	3	6	15	30	60	150	300
Stryene		0.5	1	2	5	10	20	50	100
Ethyl methacrylate			5	10	25	50	100	250	500
1,4-Dichlorobenzene-d4 (IS)	20	20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Bromofluorobenzene (surr)		20	20/50	20/50	20/50	20/50	20/50	20/50	20/50
Bromoform		0.5	1	2	5	10	20	50	100
Isopropylbenzene		0.5	1	2	5	10	20	50	100
1,1,2,2-Tetrachloroethane		0.5	1	2	5	10	20	50	100
Bromobenzene		0.5	1	2	5	10	20	50	100
1,2,3-Trichloropropane		0.5	1	2	5	10	20	50	100
n-Propylbenzene		0.5	1	2	5	10	20	50	100
2-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,3,5-Trimethylbenzene		0.5	1	2	5	10	20	50	100
4-Chlorotoluene		0.5	1	2	5	10	20	50	100
1,2,4-Trimethylbenzene		0.5	1	2	5	10	20	50	100
sec-Butylbenzene		0.5	1	2	5	10	20	50	100
1,3-Dichlorobenzene		0.5	1	2	5	10	20	50	100
tert-Butylbenzene		0.5	1	2	5	10	20	50	100
Isopropyltoluene		0.5	1	2	5	10	20	50	100
1,4-Dichlorobenzene		0.5	1	2	5	10	20	50	100
n-Butylbenzene		0.5	1	2	5	10	20	50	100
1,2-Dichlorobenzene		0.5	1	2	5	10	20	50	100
1,2-Dibromo-3-chloropropa		0.5	1	2	5	10	20	50	100
1,2,4-Trichlorobenzene		0.5	1	2	5	10	20	50	100
Hexachlorobutadiene		0.5	1	2	5	10	20	50	100
Naphthalene		0.5	1	2	5	10	20	50	100
1,2,3-Trichlorobenzene		0.5	1	2	5	10	20	50	100
cis-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
trans-1,4-Dichloro-2-butene			5	10	25	50	100	250	500
Pentachloroethane			5	10	25	50	100	250	500
Benzyl chloride			5	10	25	50	100	250	500
Cyclohexanone			25	50	125	250	500	1250	2500
bis(2-Chloro-isopropyl)ether			5	10	25	50	100	250	500

Method	PQL	Concentration range		
SW 846 8260B low level	Level 1 &1a	Levels 1-> 7a	IS/SS @ 20 ppb	
EPA 524.2	Level 1a	Levels 1a-> 7a	IS/SS @ 20 ppb	
SW846 8260B/624	Level 2	Levels 1a-> 7a	IS/SS @ 50 ppb	n-butyl alchol only in 1a

#: Indicates calibration verification concentration level used for low level analysis

!: Indicates calibration verification concentration level used for regular level analysis

Calibration History Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

JP 07/03/2018

Cal Lvl:8 Amt:0.00 None of the compounds use this level.

Injection Date	Mix	Calibration File

GH 07/03/2018

Cal Lvl:1 Amt:1.00 Last Updated with: C:\msdchem\1\data\070218V3\3O113.D

Injection Date	Mix	Calibration File
02 Jul 2018 18:36	B	C:\msdchem\1\data\070218V3\3O113.D

Cal Lvl:2 Amt:2.00 Last Updated with: C:\msdchem\1\data\070218V3\3O114.D

Injection Date	Mix	Calibration File
02 Jul 2018 19:07	B	C:\msdchem\1\data\070218V3\3O114.D
02 Jul 2018 13:56	A	C:\msdchem\1\data\070218V3\3O104.D

Cal Lvl:3 Amt:5.00 Last Updated with: C:\msdchem\1\data\070218V3\3O115.D

Injection Date	Mix	Calibration File
02 Jul 2018 19:38	B	C:\msdchem\1\data\070218V3\3O115.D
02 Jul 2018 14:28	A	C:\msdchem\1\data\070218V3\3O105.D

Cal Lvl:4 Amt:10.00 Last Updated with: C:\msdchem\1\data\070218V3\3O116.D

Injection Date	Mix	Calibration File
02 Jul 2018 20:10	B	C:\msdchem\1\data\070218V3\3O116.D
02 Jul 2018 14:59	A	C:\msdchem\1\data\070218V3\3O106.D

Cal Lvl:5 Amt:20.00 Last Updated with: C:\msdchem\1\data\070218V3\3O117.D

Injection Date	Mix	Calibration File
02 Jul 2018 20:41	B	C:\msdchem\1\data\070218V3\3O117.D
02 Jul 2018 15:30	A	C:\msdchem\1\data\070218V3\3O107.D

Cal Lvl:6 Amt:50.00 Last Updated with: C:\msdchem\1\data\070218V3\3O118.D

Injection Date	Mix	Calibration File
02 Jul 2018 21:12	B	C:\msdchem\1\data\070218V3\3O118.D
02 Jul 2018 16:01	A	C:\msdchem\1\data\070218V3\3O108.D

Cal Lvl:7 Amt:100.00 Last Updated with: C:\msdchem\1\data\070218V3\3O120.D

Injection Date	Mix	Calibration File
02 Jul 2018 22:15	B	C:\msdchem\1\data\070218V3\3O120.D
02 Jul 2018 17:03	A	C:\msdchem\1\data\070218V3\3O110.D

Cal Lvl:9 Amt:80.00 Last Updated with: C:\msdchem\1\data\070218V3\3O119.D

Injection Date	Mix	Calibration File
02 Jul 2018 21:44	B	C:\msdchem\1\data\070218V3\3O119.D
02 Jul 2018 16:32	A	C:\msdchem\1\data\070218V3\3O109.D

Calibration History Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

VOA3-8260C-070218.M Tue Jul 03 07:36:13 2018

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

JP 07/03/2018

GH 07/03/2018

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
2)MA Dichlorodifluoromethane			0.4349253	0.4641413	0.4097957	0.4152493				
	0.4430749	0.3973842	0.4446952				0.4299	AVRG		5.4274
3)MPA Chloromethane			0.4778414	0.4635193	0.4398552	0.4220475				
	0.4219674	0.3978988	0.4287036				0.4360	AVRG		6.2251
4)MCA Vinyl chloride			0.4275732	0.4410897	0.4317088	0.4089242				
	0.4134703	0.3932422	0.4156330				0.4188	AVRG		3.8124
5)MA Bromomethane			0.3340713	0.2971923	0.2884670	0.2883162				
	0.2920593	0.2867536	0.2967414				0.2977	AVRG		5.5695
6)MA Chloroethane			0.2700025	0.2945198	0.2924243	0.2993887				
	0.2920457	0.2904114	0.3041445				0.2918	AVRG		3.6874
7)MA Trichlorofluoromethane			0.6745666	0.6734811	0.6588232	0.6503476				
	0.6296055	0.5696052	0.6217520				0.6397	AVRG		5.7692
8)MA Ethyl ether			0.2031980	0.2180181	0.2189778	0.2316374				
	0.2406893	0.2437905	0.2378351				0.2277	AVRG		6.5031
9)MA Acetone			0.1981028	0.1911551	0.2056602	0.1842015				
	0.1597838	0.1577013	0.1670119				0.1805	AVRG		10.6100
10)MCA 1,1-Dichloroethylene			0.5567611	0.5416051	0.5346622	0.5126101				
	0.5508728	0.5122771	0.5598584				0.5384	AVRG		3.6563
11)MA Iodomethane			0.5099564	0.5022444	0.4913552	0.4694601				
	0.5125338	0.4765436	0.5041454				0.4952	AVRG		3.3724
12)MA Acetonitrile			0.0416801	0.0405412	0.0415635	0.0393517				
	0.0355409	0.0372862	0.0391922				0.0393	AVRG		5.7386
13)MA Methyl acetate			0.0489834	0.0507446	0.0558549	0.0505099				
	0.0496502	0.0494446	0.0504300				0.0508	AVRG		4.5625
14)MA Carbon disulfide			1.1094626	1.0831713	1.0659149	0.9414782				
	1.0467680	0.9448779	1.0279679				1.0314	AVRG		6.3561
15)MA Methylene chloride 0.0075 | 0.3190 | 0.00	369057	842937	20622 585311	41401	71667	142017		1/x LINR	#|	0.9997
16)MA tert-Butyl methyl ether			0.7663831	0.8145991	0.8468187	0.8260659				
	0.8463122	0.8642065	0.8590133				0.8319	AVRG		4.0571

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r2
b m1 m2	6	7	9							
17)MA trans-1,2-Dichloroethyle			0.4585939	0.4875136	0.4723869	0.4427987				
	0.4540031	0.4192659	0.4373546				0.4531	AVRG		5.0050
18)MA Hexane				0.4054434	0.4017726	0.4190248				
	0.4009881	0.4239066	0.4369114				0.4147	AVRG		3.4740
19)MA Vinyl acetate			0.3303342	0.3573324	0.3928041	0.4204739				
	0.3861603	0.4063191	0.4096010				0.3861	AVRG		8.2742
20)MPA 1,1-Dichloroethane			0.6240785	0.5932768	0.5756660	0.5667300				
	0.5811452	0.5340992	0.5595119				0.5764	AVRG		4.8814
21)MA 2-Butanone			0.0407373	0.0454248	0.0477459	0.0442132				
	0.0410077	0.0422177	0.0434109				0.0435	AVRG		5.7597
22)MA cis-1,2-Dichloroethylene			0.3084487	0.3139465	0.2913980	0.3019849				
	0.3006410	0.2907330	0.3032967				0.3015	AVRG		2.7928
23)MA 2,2-Dichloropropane			0.5178753	0.5080773	0.4902785	0.5005775				
	0.5051629	0.4568636	0.4961261				0.4964	AVRG		3.9375
24)MA Bromochloromethane			0.1319480	0.1432657	0.1373798	0.1383760				
	0.1400665	0.1384244	0.1391132				0.1384	AVRG		2.4619
25)MCA Chloroform			0.6269119	0.6220038	0.5903257	0.6028697				
	0.5820169	0.5450123	0.5728848				0.5917	AVRG		4.8356
26)MA 1,1,1-Trichloroethane			0.5745919	0.5508860	0.5395225	0.5461676				
	0.5424294	0.4948470	0.5407725				0.5413	AVRG		4.3888
27)MA Cyclohexane			0.4720281	0.4744912	0.4814610	0.4647361				
	0.5026463	0.4707914	0.5100191				0.4823	AVRG		3.5816
28)MA 1,1-Dichloropropene			0.4108660	0.4253268	0.3951212	0.4160533				
	0.4206272	0.3871916	0.4194343				0.4107	AVRG		3.4621
29)MA Carbon tetrachloride			0.5028046	0.5096322	0.5008132	0.5063340				
	0.5095520	0.4586876	0.5048185				0.4989	AVRG		3.6177
30)SA 1,2-Dichloroethane-d4			0.1873017	0.1917712	0.1909304	0.1885102				
	0.1883021	0.1812673	0.1817233				0.1871	AVRG		2.2132
31)MA 1,2-Dichloroethane			0.4855844	0.5046662	0.4826452	0.4744475				
	0.4549794	0.4153229	0.4483478				0.4666	AVRG		6.3255

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
32)MA Benzene			1.1981575	1.1886915	1.1550573	1.1063651				
	1.1474308	1.0864302	1.1801104				1.1517	AVRG		3.6629
33)MA Cyclohexene			0.5665070	0.5760658	0.5810394	0.5724981				
	0.6019989	0.5739733	0.6062899				0.5826	AVRG		2.6387
34)MA n-Butyl alcohol -0.0158 | 0.0087 | 0.00	876103	2209438	25497 1623255	72339	166645	374899		1/x LINR	# #	0.9975
35)MA Trichloroethylene			0.3185854	0.3072312	0.3021695	0.2960513				
	0.2944850	0.2833105	0.3090632				0.3016	AVRG		3.8103
36)MA 2-Pentanone			0.1615912	0.1825584	0.2166123	0.2077666				
	0.1906852	0.2012445	0.2116673				0.1960	AVRG		9.8333
37)MCA 1,2-Dichloropropane			0.2850976	0.2998843	0.2879440	0.2915767				
	0.2954603	0.2832820	0.3017414				0.2921	AVRG		2.4571
38)MA Methylcyclohexane			0.4781101	0.4984368	0.4816238	0.4814577				
	0.5155388	0.4786550	0.5097190				0.4919	AVRG		3.2133
39)MA Dibromomethane			0.1832910	0.1914777	0.1848919	0.1841363				
	0.1876707	0.1791555	0.1887143				0.1856	AVRG		2.1777
40)MA Bromodichloromethane			0.4141879	0.4280187	0.4225162	0.4498882				
	0.4615166	0.4207322	0.4441121				0.4344	AVRG		4.0385
41)MA 2-Chloroethylvinyl ether			0.1267502	0.1875652	0.1591439	0.1658923				
	0.1671099	0.1629268	0.1635748				0.1619	AVRG		11.1348
42)MA cis-1,3-Dichloropropylen			0.4243490	0.4447146	0.4676105	0.4697747				
	0.5039365	0.4725926	0.4831621				0.4666	AVRG		5.5195
44)MA 4-Methyl-2-pentanone			0.1937403	0.2045945	0.2420022	0.2360378				
	0.2067994	0.2222088	0.2352369				0.2201	AVRG		8.4587
45)SA Toluene-d8			2.3804049	2.3030637	2.3265207	2.2446754				
	2.2541839	2.4147300	2.3822858				2.3294	AVRG		2.8377
46)MCA Toluene			2.6659321	2.5964825	2.5137000	2.4598715				
	2.3721519	2.4567995	2.5370078				2.5146	AVRG		3.8672
47)MA trans-1,3-Dichloropropyl			0.9173811	0.8668760	0.9791499	0.9943851				
	1.0019639	1.0271628	1.0702696				0.9796	AVRG		6.9461

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r2
b m1 m2	6	7	9							
48)MA 1,1,2-Trichloroethane			0.4697210	0.4624015	0.4836470	0.4757038				
	0.4611492	0.4728239	0.4724642				0.4711	AVRG		1.6442
49)MA 2-Hexanone			0.2478706	0.2774409	0.3265093	0.2671198				
	0.2651757	0.2677829	0.2789905				0.2758	AVRG		8.9008
50)MA 1,3-Dichloropropane			0.9423447	0.9621567	0.9868361	0.9399092				
	0.9249110	0.9043085	0.9483339				0.9441	AVRG		2.7831
51)MA Tetrachloroethylene			0.5592414	0.5297220	0.5422157	0.5387267				
	0.5076993	0.5060613	0.5384044				0.5317	AVRG		3.6018
52)MA Dibromochloromethane			0.5878043	0.6013645	0.6376920	0.6822386				
	0.6875603	0.7071491	0.7194339				0.6605	AVRG		7.8568
53)MA 1,2-Dibromoethane			0.5226088	0.5257529	0.5362707	0.5493078				
	0.5511653	0.5725864	0.5732181				0.5473	AVRG		3.7490
54)MPA Chlorobenzene			1.7359531	1.6190006	1.6720428	1.6512527				
	1.5901504	1.6271377	1.7165281				1.6589	AVRG		3.1914
55)MA 1,1,1,2-Tetrachloroethan			0.6653655	0.6422243	0.6730990	0.6816558				
	0.6725556	0.6635017	0.7056926				0.6720	AVRG		2.8706
56)MCA Ethylbenzene			2.9722289	2.7925125	2.8586287	2.9776139				
	2.9220776	2.7473610	3.0413878				2.9017	AVRG		3.6759
57)MA m,p-Xylenes			1.0510522	1.0375257	1.1039677	1.0883825				
	1.0623138	1.0628932	1.1077830				1.0734	AVRG		2.5115
58)MA o-Xylene			1.0244921	0.9994002	1.0901704	1.0845111				
	1.0925450	1.0917941	1.1519962				1.0764	AVRG		4.6591
59)MA Styrene			1.5180736	1.5702687	1.7306344	1.7442869				
	1.7857522	1.7741902	1.8495062				1.7104	AVRG		7.0517
61)MPA Bromoform			0.3850241	0.4013735	0.4272025	0.4658675				
	0.4948788	0.5130686	0.5128489				0.4572	AVRG		11.6219
62)MA Isopropylbenzene			2.8867071	3.0980908	3.1530483	3.3120896				
	3.4099075	3.0278098	3.3132434				3.1716	AVRG		5.8164
63)SA Bromofluorobenzene			0.9905776	1.0098627	0.9718630	0.9827040				
	0.9815082	0.9599144	0.9837241				0.9829	AVRG		1.5755

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r2
b m1 m2	6	7	9							
64)MPA 1,1,2,2-Tetrachloroethan			0.8229882	0.8308494	0.8482282	0.8436838				
	0.8127642	0.8301846	0.8424010				0.8330	AVRG		1.5159
65)MA 1,2,3-Trichloropropane			0.8396300	0.8460695	0.8361775	0.8408952				
	0.7859705	0.8114538	0.8080740				0.8240	AVRG		2.7236
66)MA Bromobenzene			0.7829220	0.7777615	0.7317052	0.8178553				
	0.7877683	0.7628307	0.7845431				0.7779	AVRG		3.3703
67)MA n-Propylbenzene			3.6097812	3.7974381	3.6581508	4.0059051				
	3.9339947	3.5771820	3.8668083				3.7785	AVRG		4.4223
68)MA 1,3,5-Trimethylbenzene			2.5555650	2.7987532	2.7716145	2.8169078				
	2.8410265	2.6031986	2.7626222				2.7357	AVRG		4.0509
69)MA 2-Chlorotoluene			0.7191805	0.7402104	0.7451125	0.7551068				
	0.7701217	0.7255462	0.7628397				0.7454	AVRG		2.5205
70)MA 4-Chlorotoluene			2.4071069	2.4105543	2.2659427	2.5335371				
	2.5200832	2.3520864	2.4135073				2.4147	AVRG		3.8313
71)MA tert-Butylbenzene			0.4531616	0.4990746	0.5127932	0.5254445				
	0.5642953	0.5221345	0.5592740				0.5195	AVRG		7.2432
72)MA 1,2,4-Trimethylbenzene			2.6635803	2.7698714	2.8348477	2.9626504				
	2.8964009	2.5956050	2.9066270				2.8042	AVRG		4.8175
73)MA sec-Butylbenzene			3.4747621	3.6215176	3.7015214	3.8615340				
	3.9099119	3.4861721	3.7664593				3.6888	AVRG		4.6471
74)MA 4-Isopropyltoluene			2.7702139	3.0348967	3.0873807	3.2429126				
	3.3168274	3.0519284	3.2009508				3.1007	AVRG		5.7855
75)MA 1,3-Dichlorobenzene			1.7056987	1.6317943	1.6036838	1.5822535				
	1.5402806	1.4468755	1.5544072				1.5807	AVRG		5.1004
76)MA 1,4-Dichlorobenzene			1.6866076	1.5837960	1.5700143	1.5751564				
	1.5820935	1.4611244	1.5013559				1.5657	AVRG		4.5461
77)MA n-Butylbenzene			2.9521442	3.0120787	3.0962099	3.2510554				
	3.2860583	2.9850483	3.0849508				3.0954	AVRG		4.1776
78)MA 1,2-Dichlorobenzene			1.5613853	1.5208699	1.4863130	1.5571564				
	1.5218942	1.5418185	1.4920127				1.5259	AVRG		1.9379

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b m1 m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
79)MA 1,2-Dibromo-3-chloroprop	0.1815899	0.1955788	0.1525401 0.1997888	0.1416569	0.1617466	0.1763196	0.1727	AVRG		12.5931
80)MA 1,2,4-Trichlorobenzene	1.3383529	1.2619601	1.2251565 1.3334023	1.1792568	1.2110833	1.3567683	1.2723	AVRG		5.5546
81)MA Hexachlorobutadiene	0.8952023	0.8182871	0.8743582 0.8721821	0.8797974	0.8824669	0.9242436	0.8781	AVRG		3.6224
82)MA Naphthalene	2.9688270	2.9235598	2.2271862 3.0910857	2.3727839	2.7987196	2.9914903	2.7677	AVRG		12.0602
83)MA 1,2,3-Trichlorobenzene	1.2915527	1.2268043	1.2142922 1.2990269	1.2144457	1.2205907	1.3578369	1.2606	AVRG		4.4529
85)B Acrolein	0.0543665	0.0527212	0.0342511 0.0530230	0.0484091	0.0455606	0.0522235 0.0553973	0.0495	AVRG		14.0377
86)B Trichlorotrifluoroethane	0.3641965	0.3485107	0.3319524 0.3633008	0.3426199	0.3592841	0.3568861 0.3688235	0.3544	AVRG		3.5215
87)B Isopropyl Alcohol	0.0226396	0.0216397	0.0176753 0.0248701	0.0206532	0.0204542	0.0225680 0.0242076	0.0218	AVRG		10.4805
88)B Allyl chloride	0.1683419	0.1596406	0.1381970 0.1648914	0.1545143	0.1603514	0.1691382 0.1714192	0.1608	AVRG		6.6804
89)B tert-Butyl Alcohol	0.0367116	0.0357291	0.0262596 0.0405004	0.0341863	0.0345612	0.0386705 0.0405905	0.0359	AVRG		12.8593
90)B Acrylonitrile	0.0948205	0.0950253	0.0823423 0.0993914	0.0897266	0.0944099	0.0982053 0.0967783	0.0938	AVRG		5.8413
91)B Isopropyl ether	0.8884932	0.8980140	0.7647030 0.9454771	0.8006504	0.8551917	0.8793898 0.9388461	0.8713	AVRG		7.2263
92)B 2-Chloro-1,3-butadiene	0.4614680	0.4589907	0.3577201 0.4633113	0.3585299	0.3979053	0.4125080 0.4410182	0.4189	AVRG		10.5794
93)B Ethyl tert-butyl ether	0.9215402	0.9438652	0.7362251 0.9152722	0.7955955	0.8533042	0.8697873 0.9747609	0.8763	AVRG		9.1019
94)B Ethyl acetate	0.2454912	0.2170561	0.2379790 0.2466668	0.2440121	0.2483098	0.2636880 0.2753584	0.2473	AVRG		6.9580

Response Factor Report VOA3
GEL Laboratories, LLC
Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound b | m1 | m2	8 6	1 7	2 9	3	4	5	Avg	Curve	Exp	%RSD/r2
95)B Propionitrile		0.0341523	0.0365282	0.0365878	0.0387881	0.0404251				
	0.0376503	0.0366106	0.0398923				0.0376	AVRG		5.4799
96)B Methacrylonitrile		0.0842267	0.1036110	0.1046824	0.1055435	0.1123269				
	0.1034972	0.1021372	0.1115734				0.1034	AVRG		8.3473
97)B Tetrahydrofuran		0.0843467	0.0853100	0.0769385	0.0839426	0.0874733				
	0.0778115	0.0763049	0.0842100				0.0820	AVRG		5.2660
98)B Isobutyl alcohol		0.0097552	0.0118466	0.0121744	0.0134804	0.0147126				
	0.0132780	0.0130695	0.0146183				0.0129	AVRG	$	12.5538
99)B Methyl tert-amyl ether		0.6816337	0.7307856	0.8034835	0.8110923	0.8503573				
	0.8336265	0.8509845	0.8745490				0.8046	AVRG		8.2168
100)B Methyl methacrylate		0.1215973	0.1446739	0.1625029	0.1700932	0.1813319				
	0.1672783	0.1554777	0.1816427				0.1606	AVRG		12.4820
101)B 1,4-Dioxane		0.0027483	0.0029322	0.0031057	0.0033326	0.0034283				
	0.0031470	0.0031868	0.0037766				0.0032	AVRG	#	9.7849
102)B 2-Nitropropane		7038	15931	44101	97872	207529		1/x		
-0.0061 | 0.0918 | 0.00	524270	1043063	666527					LINR	#	0.9978
104)B Ethyl methacrylate		0.5682944	0.6548561	0.7189086	0.7657168	0.7538755				
	0.7125975	0.7162156	0.7441546				0.7043	AVRG		9.1675
106)B 1-Chlorohexane		0.6895834	0.6718532	0.7925257	0.7412232	0.8585489				
	0.8945375	0.9049018	0.8832223				0.8045	AVRG		11.7215
107)B cis-1,4-Dichloro-2-buten		0.2047927	0.2212962	0.2478673	0.2477764	0.2755915				
	0.2853779	0.2497477	0.2762270				0.2511	AVRG		11.1253
108)B Cyclohexanone		0.0221061	0.0212493	0.0191393	0.0210490	0.0227748				
	0.0210087	0.0196631	0.0216124				0.0211	AVRG		5.6760
109)B trans-1,4-Dichloro-2-but		0.1751010	0.2187715	0.2318751	0.2416506	0.2549697				
	0.2365454	0.2074053	0.2411871				0.2259	AVRG		11.1585
110)B Pentachloroethane		0.4508414	0.4716120	0.5044529	0.5234995	0.5316345				
	0.5727900	0.4998805	0.5162774				0.5089	AVRG		7.3260
111)B Benzyl chloride		1.0864145	1.1701698	1.2784486	1.4284990	1.4578242				
	1.3937283	1.2262258	1.3754649				1.3021	AVRG		10.2318

Response Factor Report VOA3
GEL Laboratories, LLC

Method File : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Last Update : Tue Jul 03 07:30:47 2018
Integrator : (RTE Integrator) Response via : Initial Calibration

For Linear Calibration: x = concentration ratio, y = response ratio. y = b + m1(x) + m2(xE2)

Compound	8	1	2	3	4	5	Avg	Curve	Exp	%RSD/r2
b m1 m2	6	7	9							
112)B bis(2-Chloroisopropyl)et		0.3549430	0.3619071	0.3653618	0.3731773	0.4021177				
	0.3799905	0.3720901	0.4201239				0.3787	AVRG		5.7889

(#) = Out of Range ($) = Individual RF Out of Range
AVRG = Average, LINR = Linear Regression, 1/x = the inverse of concentration, 1/x^2 = the inverse square of concentration

Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		Dev(Min)
Internal Standards									
1) Fluorobenzene	96	12.768	12.761	1.000	1023509	50.00	ug/L		0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	430628	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	398092	50.00	ug/L		0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	0m	50.00	ug/L		0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L		0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L		0.00
System Monitoring Compounds									Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	191705	50.05	ug/L		0.00
45) Toluene-d8	98	14.676	14.676	0.899	1025069	51.09	ug/L		0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	394341	50.39	ug/L		0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	17806	2.02	ug/L		100
3) Chloromethane	50	4.991	4.990	0.391	19563	2.19	ug/L		96
4) Vinyl chloride	62	5.301	5.319	0.415	17505	2.04	ug/L		100
5) Bromomethane	94	6.123	6.159	0.480	13677	2.24	ug/L		92
6) Chloroethane	64	6.372	6.372	0.499	11054	1.85	ug/L		93
7) Trichlorofluoromethane	101	7.055	7.061	0.553	27617	2.11	ug/L		98
8) Ethyl ether	59	7.610	7.610	0.596	8319	1.78	ug/L		93
9) Acetone	43	8.250	8.232	0.646	40552	10.97	ug/L		96
10) 1,1-Dichloroethylene	61	8.171	8.177	0.640	22794	2.07	ug/L		100
11) Iodomethane	142	8.494	8.500	0.665	104389	10.30	ug/L		99
12) Acetonitrile	41	8.829	8.817	0.692	42660	53.02	ug/L		96
13) Methyl acetate	74	8.860	8.854	0.694	10027	9.64	ug/L	#	86
14) Carbon disulfide	76	8.671	8.665	0.679	227109	10.76	ug/L		95
15) Methylene chloride	84	9.091	9.091	0.712	20622	1.98	ug/L		98
16) tert-Butyl methyl ether	73	9.524	9.537	0.746	31376	1.84	ug/L		99
17) trans-1,2-Dichloroethy...	61	9.573	9.567	0.750	18775	2.02	ug/L		98
18) Hexane	57	9.994	9.988	0.783	17800	2.10	ug/L		87
19) Vinyl acetate	43	10.323	10.317	0.809	67620	8.55	ug/L		97
20) 1,1-Dichloroethane	63	10.292	10.286	0.806	25550	2.17	ug/L		96
21) 2-Butanone	72	11.189	11.183	0.876	8339	9.36	ug/L	#	74
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	12628	2.05	ug/L		99
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	21202	2.09	ug/L		89
24) Bromochloromethane	128	11.548	11.548	0.905	5402	1.91	ug/L		90
25) Chloroform	83	11.621	11.628	0.910	25666	2.12	ug/L		98
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.933	23524	2.12	ug/L		99
27) Cyclohexane	56	11.999	11.999	0.940	19325	1.96	ug/L		98
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	16821	2.00	ug/L		96
29) Carbon tetrachloride	117	12.140	12.146	0.951	20585	2.02	ug/L		99
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	19880	2.08	ug/L		97
32) Benzene	78	12.420	12.426	0.973	49053	2.08	ug/L		99
33) Cyclohexene	67	12.542	12.548	0.982	23193	1.94	ug/L		97
34) n-Butyl alcohol	56	13.024	13.024	1.020	25497	235.29	ug/L		91
35) Trichloroethylene	95	13.225	13.225	1.036	13043	2.11	ug/L		99
36) 2-Pentanone	43	13.402	13.396	1.050	33078	8.24	ug/L		98
37) 1,2-Dichloropropane	63	13.524	13.524	1.059	11672	1.95	ug/L		99
38) Methylcyclohexane	83	13.475	13.475	1.055	19574	1.94	ug/L		97
39) Dibromomethane	93	13.688	13.682	1.072	7504	1.97	ug/L		98
40) Bromodichloromethane	83	13.834	13.834	1.084	16957	1.91	ug/L		98
41) 2-Chloroethylvinyl ether	63	14.133	14.127	1.107	25946	7.83	ug/L		98
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.124	17373	1.82	ug/L		96

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	16686	8.80	ug/L		97
46)	Toluene	91	14.755	14.755	0.904	45921	2.12	ug/L		99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	15802	1.87	ug/L		98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	8091	1.99	ug/L		96
49)	2-Hexanone	58	15.420	15.413	0.945	21348	8.99	ug/L		93
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	16232	2.00	ug/L		96
51)	Tetrachloroethylene	164	15.383	15.383	0.943	9633	2.10	ug/L		97
52)	Dibromochloromethane	129	15.682	15.676	0.961	10125	1.78	ug/L		100
53)	1,2-Dibromoethane	107	15.834	15.840	0.970	9002	1.91	ug/L		97
54)	Chlorobenzene	112	16.352	16.352	1.002	29902	2.09	ug/L		76
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	11461	1.98	ug/L		98
56)	Ethylbenzene	91	16.419	16.425	1.006	51197	2.05	ug/L		97
57)	m,p-Xylenes	106	16.541	16.541	1.014	36209	3.92	ug/L		96
58)	o-Xylene	106	16.986	16.986	1.041	17647	1.90	ug/L		97
59)	Styrene	104	16.998	16.992	1.042	26149	1.78	ug/L		99
61)	Bromoform	173	17.261	17.261	0.919	6131	1.68	ug/L		99
62)	Isopropylbenzene	105	17.358	17.358	0.924	45967	1.82	ug/L		98
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	13105	1.98	ug/L		98
65)	1,2,3-Trichloropropane	75	17.754	17.748	0.945	13370	2.04	ug/L		93
66)	Bromobenzene	156	17.767	17.767	0.945	12467	2.01	ug/L		98
67)	n-Propylbenzene	91	17.791	17.791	0.947	57481	1.91	ug/L		97
68)	1,3,5-Trimethylbenzene	105	17.943	17.949	0.955	40694	1.87	ug/L		97
69)	2-Chlorotoluene	126	17.937	17.937	0.955	11452	1.93	ug/L		96
70)	4-Chlorotoluene	91	18.041	18.041	0.960	38330	1.99	ug/L		99
71)	tert-Butylbenzene	134	18.321	18.321	0.975	7216	1.74	ug/L	#	90
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	42414	1.90	ug/L		89
73)	sec-Butylbenzene	105	18.547	18.547	0.987	55331	1.88	ug/L		99
74)	4-Isopropyltoluene	119	18.669	18.675	0.994	44112	1.79	ug/L		97
75)	1,3-Dichlorobenzene	146	18.736	18.730	0.997	27161	2.16	ug/L		98
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	26857	2.15	ug/L		85
77)	n-Butylbenzene	91	19.108	19.108	1.017	47009	1.91	ug/L		95
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	24863	2.05	ug/L		99
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	2429	1.77	ug/L		93
80)	1,2,4-Trichlorobenzene	180	21.126	21.113	1.124	19509	1.93	ug/L		100
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	13923	1.99	ug/L		99
82)	Naphthalene	128	21.498	21.491	1.144	35465	1.61	ug/L		99
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	19336	1.93	ug/L		98
85)	Acrolein		0.000	7.927	0.000	0	N.D.			
86)	Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.			
87)	Isopropyl Alcohol		0.000	8.464	0.000	0	N.D.			
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90)	Acrylonitrile		0.000	9.531	0.000	0	N.D.			
91)	Isopropyl ether		10.323	10.317	0.809	0m	N.D.	d		
92)	2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.			
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94)	Ethyl acetate		11.189	11.225	0.876	0m	N.D.	d		
95)	Propionitrile		0.000	11.305	0.000	0	N.D.			
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97)	Tetrahydrofuran		11.609	11.597	0.909	0m	N.D.	d		
98)	Isobutyl alcohol		0.000	12.176	0.000	0	N.D.			
99)	Methyl tert-amyl ether		12.426	12.500	0.973	0m	N.D.	d		
100)	Methyl methacrylate		13.481	13.560	1.056	0m	N.D.	d		
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.			
102)	2-Nitropropane		14.133	14.103	1.107	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

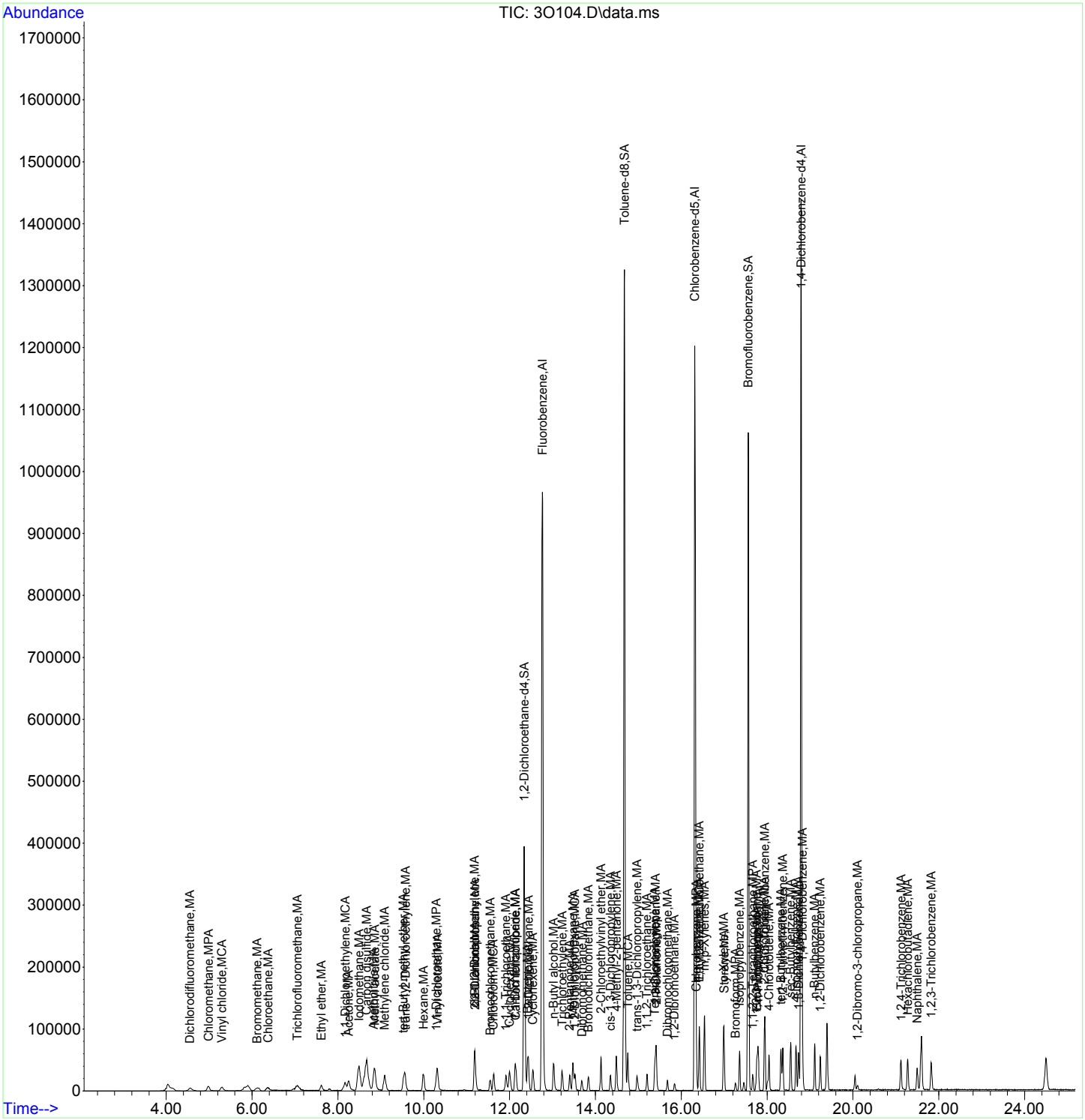
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.797	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O104.D
Acq On : 02 Jul 2018 13:56
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-03|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD002 5UL/5ML N/A MIX[A]
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 03 07:34:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

EH
07/03/2018

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		Dev(Min)
Internal Standards									
1) Fluorobenzene	96	12.761	12.761	1.000	1028997	50.00	ug/L		0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	453502	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	410640	50.00	ug/L		0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L		0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L		0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L		0.00
System Monitoring Compounds									Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	197332	51.24	ug/L		0.00
45) Toluene-d8	98	14.676	14.676	0.899	1044444	49.43	ug/L		0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	414690	51.37	ug/L		0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	47760	5.40	ug/L		97
3) Chloromethane	50	4.972	4.990	0.390	47696	5.32	ug/L		99
4) Vinyl chloride	62	5.301	5.319	0.415	45388	5.27	ug/L		99
5) Bromomethane	94	6.123	6.159	0.480	30581	4.99	ug/L		96
6) Chloroethane	64	6.372	6.372	0.499	30306	5.05	ug/L		100
7) Trichlorofluoromethane	101	7.061	7.061	0.553	69301	5.26	ug/L		100
8) Ethyl ether	59	7.610	7.610	0.596	22434	4.79	ug/L		96
9) Acetone	43	8.244	8.232	0.646	98349	26.47	ug/L		97
10) 1,1-Dichloroethylene	61	8.171	8.177	0.640	55731	5.03	ug/L		99
11) Iodomethane	142	8.488	8.500	0.665	258404	25.36	ug/L		99
12) Acetonitrile	41	8.835	8.817	0.692	104292	128.92	ug/L		97
13) Methyl acetate	74	8.860	8.854	0.694	26108	24.97	ug/L	#	87
14) Carbon disulfide	76	8.671	8.665	0.679	557290	26.26	ug/L		99
15) Methylene chloride	84	9.085	9.091	0.712	41401	5.12	ug/L		98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	83822	4.90	ug/L		98
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	50165	5.38	ug/L		99
18) Hexane	57	9.994	9.988	0.783	41720	4.89	ug/L		90
19) Vinyl acetate	43	10.317	10.317	0.808	183847	23.13	ug/L		98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	61048	5.15	ug/L		100
21) 2-Butanone	72	11.176	11.183	0.876	23371	26.08	ug/L	#	87
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.877	32305	5.21	ug/L		97
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	52281	5.12	ug/L		91
24) Bromochloromethane	128	11.548	11.548	0.905	14742	5.18	ug/L		98
25) Chloroform	83	11.628	11.628	0.911	64004	5.26	ug/L		97
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	56686	5.09	ug/L		98
27) Cyclohexane	56	11.993	11.999	0.940	48825	4.92	ug/L		99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	43766	5.18	ug/L		98
29) Carbon tetrachloride	117	12.146	12.146	0.952	52441	5.11	ug/L		99
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	51930	5.41	ug/L		98
32) Benzene	78	12.426	12.426	0.974	122316	5.16	ug/L		100
33) Cyclohexene	67	12.542	12.548	0.983	59277	4.94	ug/L		99
34) n-Butyl alcohol	56	13.024	13.024	1.021	72339	497.65	ug/L		95
35) Trichloroethylene	95	13.225	13.225	1.036	31614	5.09	ug/L		100
36) 2-Pentanone	43	13.402	13.396	1.050	93926	23.28	ug/L		98
37) 1,2-Dichloropropane	63	13.530	13.524	1.060	30858	5.13	ug/L		100
38) Methylcyclohexane	83	13.475	13.475	1.056	51289	5.07	ug/L		97
39) Dibromomethane	93	13.682	13.682	1.072	19703	5.16	ug/L		98
40) Bromodichloromethane	83	13.834	13.834	1.084	44043	4.93	ug/L		99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	77202	23.18	ug/L		99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	45761	4.77	ug/L		98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	46392	23.24	ug/L	92
46)	Toluene	91	14.755	14.755	0.904	117751	5.16	ug/L	98
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	39313	4.42	ug/L	97
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	20970	4.91	ug/L	98
49)	2-Hexanone	58	15.413	15.413	0.945	62910	25.14	ug/L	91
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	43634	5.10	ug/L	90
51)	Tetrachloroethylene	164	15.383	15.383	0.943	24023	4.98	ug/L	98
52)	Dibromochloromethane	129	15.682	15.676	0.961	27272	4.55	ug/L	99
53)	1,2-Dibromoethane	107	15.846	15.840	0.971	23843	4.80	ug/L	97
54)	Chlorobenzene	112	16.352	16.352	1.002	73422	4.88	ug/L	89
55)	1,1,1,2-Tetrachloroethane	131	16.413	16.419	1.006	29125	4.78	ug/L	99
56)	Ethylbenzene	91	16.425	16.425	1.007	126641	4.81	ug/L	98
57)	m,p-Xylenes	106	16.535	16.541	1.013	94104	9.67	ug/L	96
58)	o-Xylene	106	16.986	16.986	1.041	45323	4.64	ug/L	94
59)	Styrene	104	16.998	16.992	1.042	71212	4.59	ug/L	96
61)	Bromoform	173	17.261	17.261	0.919	16482	4.39	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	127220	4.88	ug/L	99
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	34118	4.99	ug/L	99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	34743	5.13	ug/L	98
66)	Bromobenzene	156	17.767	17.767	0.945	31938	5.00	ug/L	92
67)	n-Propylbenzene	91	17.791	17.791	0.947	155938	5.03	ug/L	99
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	114928	5.12	ug/L	99
69)	2-Chlorotoluene	126	17.937	17.937	0.955	30396	4.96	ug/L	93
70)	4-Chlorotoluene	91	18.041	18.041	0.960	98987	4.99	ug/L	99
71)	tert-Butylbenzene	134	18.321	18.321	0.975	20494	4.80	ug/L	96
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	113742	4.94	ug/L	99
73)	sec-Butylbenzene	105	18.547	18.547	0.987	148714	4.91	ug/L	98
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	124625	4.89	ug/L	98
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	67008	5.16	ug/L	99
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	65037	5.06	ug/L	93
77)	n-Butylbenzene	91	19.108	19.108	1.017	123688	4.87	ug/L	99
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	62453	4.98	ug/L	98
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	5817	4.10	ug/L	89
80)	1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	48425	4.63	ug/L	98
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	36128	5.01	ug/L	98
82)	Naphthalene	128	21.498	21.491	1.144	97436	4.29	ug/L	99
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	49870	4.82	ug/L	97
85)	Acrolein		0.000	7.927	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		8.159	8.165	0.639	0m	N.D.	d	
87)	Isopropyl Alcohol		8.634	8.464	0.677	0m	N.D.	d	
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		9.226	9.220	0.723	0m	N.D.	d	
90)	Acrylonitrile		9.537	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.183	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		0.000	11.305	0.000	0	N.D.		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.615	11.597	0.910	0m	N.D.	d	
98)	Isobutyl alcohol		12.176	12.176	0.954	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.426	12.500	0.974	0m	N.D.	d	
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

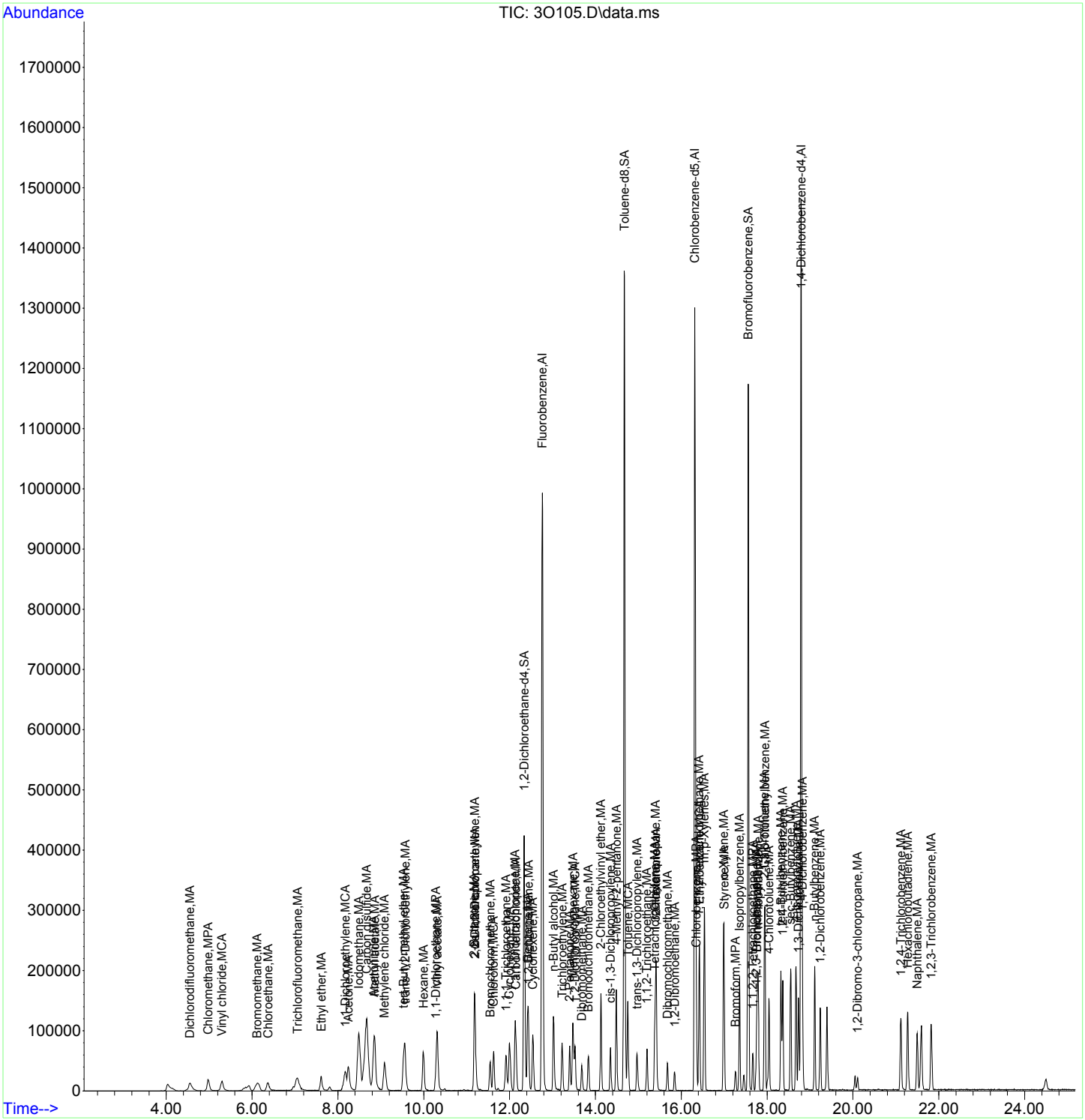
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		15.005	14.987	0.920	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.797	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.937	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O105.D
Acq On : 02 Jul 2018 14:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-04|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[A]
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 03 07:34:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

EH 07/03/2018

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1013322	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	436496	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	412837	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	193474	51.02	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1015517	49.94	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	401221	49.44	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	83051	9.53	ug/L	96
3) Chloromethane	50	4.990	4.990	0.391	89143	10.09	ug/L	99
4) Vinyl chloride	62	5.301	5.319	0.415	87492	10.31	ug/L	98
5) Bromomethane	94	6.123	6.159	0.480	58462	9.69	ug/L	96
6) Chloroethane	64	6.354	6.372	0.498	59264	10.02	ug/L	99
7) Trichlorofluoromethane	101	7.049	7.061	0.552	133520	10.30	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	44379	9.62	ug/L	96
9) Acetone	43	8.238	8.232	0.646	208400	56.96	ug/L	98
10) 1,1-Dichloroethylene	61	8.165	8.177	0.640	108357	9.93	ug/L	99
11) Iodomethane	142	8.494	8.500	0.666	497901	49.61	ug/L	99
12) Acetonitrile	41	8.817	8.817	0.691	210586	264.35	ug/L	98
13) Methyl acetate	74	8.854	8.854	0.694	56599	54.97	ug/L	96
14) Carbon disulfide	76	8.671	8.665	0.679	1080115	51.67	ug/L	100
15) Methylene chloride	84	9.085	9.091	0.712	71667	9.90	ug/L	99
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	171620	10.18	ug/L	99
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	95736	10.42	ug/L	97
18) Hexane	57	9.988	9.988	0.783	81425	9.69	ug/L	96
19) Vinyl acetate	43	10.317	10.317	0.808	398037	50.86	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	116667	9.99	ug/L	99
21) 2-Butanone	72	11.182	11.183	0.876	48382	54.83	ug/L	92
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.877	59056	9.67	ug/L	97
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	99362	9.88	ug/L	96
24) Bromochloromethane	128	11.542	11.548	0.904	27842	9.93	ug/L	96
25) Chloroform	83	11.628	11.628	0.911	119638	9.98	ug/L	100
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	109342	9.97	ug/L	98
27) Cyclohexane	56	11.999	11.999	0.940	97575	9.98	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	80077	9.62	ug/L	95
29) Carbon tetrachloride	117	12.146	12.146	0.952	101497	10.04	ug/L	99
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	97815	10.34	ug/L	99
32) Benzene	78	12.426	12.426	0.974	234089	10.03	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	117756	9.97	ug/L	97
34) n-Butyl alcohol	56	13.024	13.024	1.021	166645	1041.87	ug/L	96
35) Trichloroethylene	95	13.225	13.225	1.036	61239	10.02	ug/L	98
36) 2-Pentanone	43	13.402	13.396	1.050	219498	55.25	ug/L	97
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	58356	9.86	ug/L	97
38) Methylcyclohexane	83	13.475	13.475	1.056	97608	9.79	ug/L	96
39) Dibromomethane	93	13.682	13.682	1.072	37471	9.96	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	85629	9.73	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	161264	49.16	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.124	94768	10.02	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	105633	54.98	ug/L	96
46) Toluene	91	14.755	14.755	0.904	219444	10.00	ug/L	99
47) trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	85479	10.00	ug/L	98
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	42222	10.27	ug/L	98
49) 2-Hexanone	58	15.413	15.413	0.945	142520	59.18	ug/L	95
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	86150	10.45	ug/L	89
51) Tetrachloroethylene	164	15.383	15.383	0.943	47335	10.20	ug/L	99
52) Dibromochloromethane	129	15.682	15.676	0.961	55670	9.66	ug/L	99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	46816	9.80	ug/L	100
54) Chlorobenzene	112	16.352	16.352	1.002	145968	10.08	ug/L	95
55) 1,1,1,2-Tetrachloroethane	131	16.413	16.419	1.006	58761	10.02	ug/L	99
56) Ethylbenzene	91	16.419	16.425	1.006	249556	9.85	ug/L	99
57) m,p-Xylenes	106	16.535	16.541	1.013	192751	20.57	ug/L	97
58) o-Xylene	106	16.986	16.986	1.041	95171	10.13	ug/L	98
59) Styrene	104	16.992	16.992	1.041	151083	10.12	ug/L	97
61) Bromoform	173	17.261	17.261	0.919	35273	9.34	ug/L	99
62) Isopropylbenzene	105	17.358	17.358	0.924	260339	9.94	ug/L	99
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	70036	10.18	ug/L	100
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	69041	10.15	ug/L	92
66) Bromobenzene	156	17.767	17.767	0.945	60415	9.41	ug/L	93
67) n-Propylbenzene	91	17.791	17.791	0.947	302044	9.68	ug/L	99
68) 1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	228845	10.13	ug/L	100
69) 2-Chlorotoluene	126	17.943	17.937	0.955	61522	10.00	ug/L	95
70) 4-Chlorotoluene	91	18.047	18.041	0.960	187093	9.38	ug/L	99
71) tert-Butylbenzene	134	18.321	18.321	0.975	42340	9.87	ug/L	94
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	234066	10.11	ug/L	100
73) sec-Butylbenzene	105	18.547	18.547	0.987	305625	10.03	ug/L	99
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	254917	9.96	ug/L	99
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	132412	10.15	ug/L	99
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	129632	10.03	ug/L	98
77) n-Butylbenzene	91	19.108	19.108	1.017	255646	10.00	ug/L	98
78) 1,2-Dichlorobenzene	146	19.242	19.236	1.024	122721	9.74	ug/L	98
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	13355	9.36	ug/L	94
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	99996	9.52	ug/L	99
81) Hexachlorobutadiene	225	21.272	21.278	1.132	72863	10.05	ug/L	98
82) Naphthalene	128	21.498	21.491	1.144	231083	10.11	ug/L	100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	100781	9.68	ug/L	98
85) Acrolein		0.000	7.927	0.000	0	N.D.		
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.		
87) Isopropyl Alcohol		8.683	8.464	0.680	0m	N.D.	d	
88) Allyl chloride		8.939	8.842	0.700	0m	N.D.	d	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90) Acrylonitrile		9.543	9.531	0.748	0m	N.D.	d	
91) Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate		11.176	11.225	0.876	0m	N.D.	d	
95) Propionitrile		0.000	11.305	0.000	0	N.D.		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97) Tetrahydrofuran		11.615	11.597	0.910	0m	N.D.	d	
98) Isobutyl alcohol		12.134	12.176	0.951	0m	N.D.	d	
99) Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d	
100) Methyl methacrylate		13.481	13.560	1.056	0m	N.D.	d	
101) 1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102) 2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

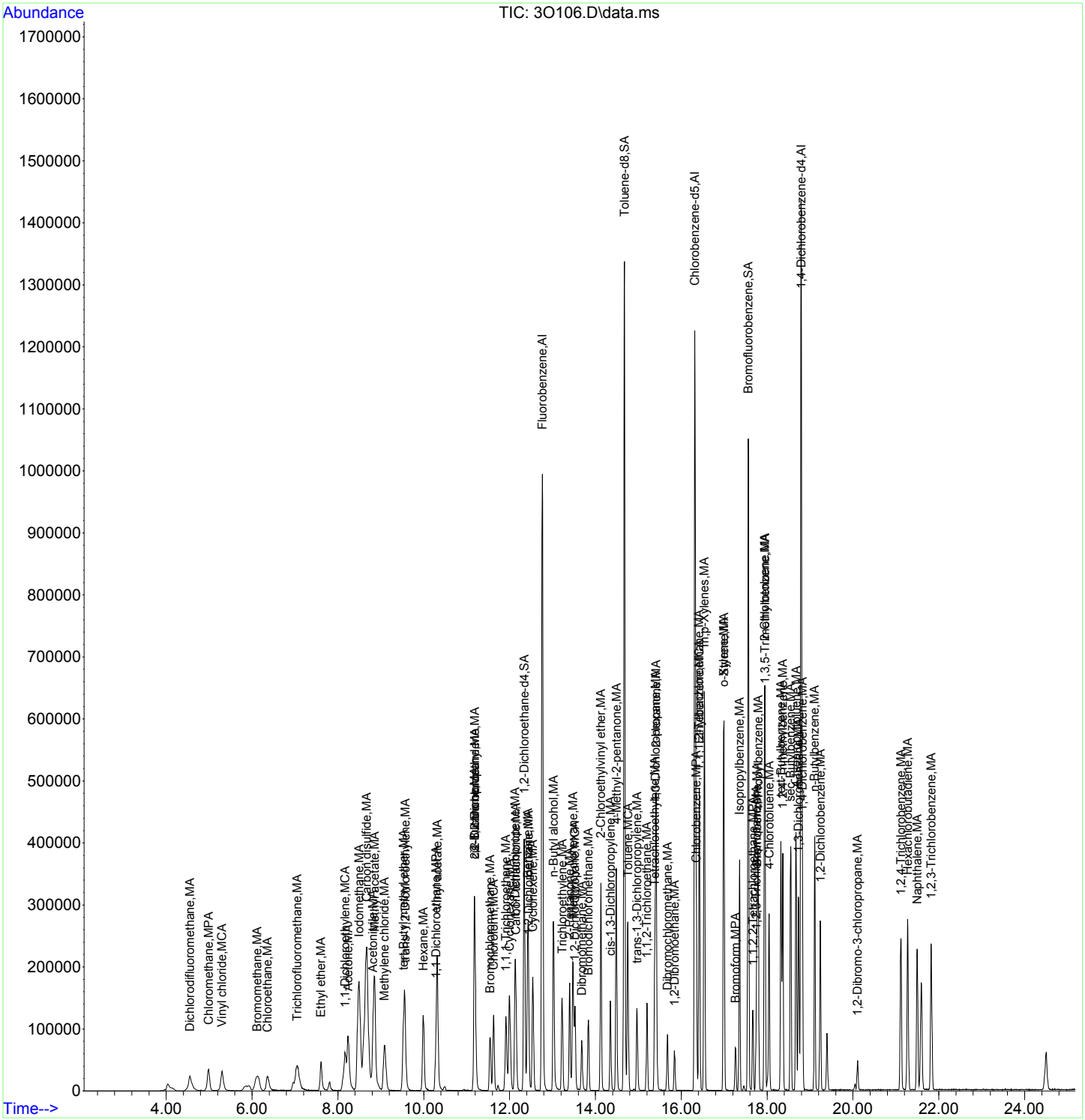
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O106.D
Acq On : 02 Jul 2018 14:59
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-05|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[A]
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 03 07:35:00 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1072711	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	463324	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	437501	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	202217	50.37	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1040012	48.18	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	429934	49.99	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	178177	19.32	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	181094	19.36	ug/L	100
4) Vinyl chloride	62	5.301	5.319	0.415	175463	19.53	ug/L	98
5) Bromomethane	94	6.141	6.159	0.481	123712	19.37	ug/L	100
6) Chloroethane	64	6.366	6.372	0.499	128463	20.52	ug/L	99
7) Trichlorofluoromethane	101	7.055	7.061	0.553	279054	20.33	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	99392	20.34	ug/L	98
9) Acetone	43	8.238	8.232	0.646	395190	102.04	ug/L	100
10) 1,1-Dichloroethylene	61	8.171	8.177	0.640	219953	19.04	ug/L	100
11) Iodomethane	142	8.494	8.500	0.666	1007190	94.81	ug/L	99
12) Acetonitrile	41	8.817	8.817	0.691	422130	500.56	ug/L	99
13) Methyl acetate	74	8.854	8.854	0.694	108365	99.42	ug/L	97
14) Carbon disulfide	76	8.677	8.665	0.680	2019868	91.28	ug/L	100
15) Methylene chloride	84	9.085	9.091	0.712	142017	19.57	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	354452	19.86	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	189998	19.54	ug/L	99
18) Hexane	57	9.994	9.988	0.783	179797	20.21	ug/L	97
19) Vinyl acetate	43	10.317	10.317	0.808	902094	108.89	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	243175	19.67	ug/L	99
21) 2-Butanone	72	11.182	11.183	0.876	94856	101.55	ug/L	93
22) cis-1,2-Dichloroethylene	96	11.182	11.183	0.876	129577	20.03	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	214790	20.17	ug/L	97
24) Bromochloromethane	128	11.548	11.548	0.905	59375	20.00	ug/L	99
25) Chloroform	83	11.627	11.628	0.911	258682	20.38	ug/L	99
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	234352	20.18	ug/L	99
27) Cyclohexane	56	11.993	11.999	0.940	199411	19.27	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	178522	20.26	ug/L	100
29) Carbon tetrachloride	117	12.146	12.146	0.952	217260	20.30	ug/L	99
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	203578	20.34	ug/L	99
32) Benzene	78	12.426	12.426	0.974	474724	19.21	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	245650	19.65	ug/L	100
34) n-Butyl alcohol	56	13.024	13.024	1.021	374899	2111.39	ug/L	98
35) Trichloroethylene	95	13.225	13.225	1.036	127031	19.63	ug/L	98
36) 2-Pentanone	43	13.395	13.396	1.050	445747	105.99	ug/L	99
37) 1,2-Dichloropropane	63	13.523	13.524	1.060	125111	19.96	ug/L	99
38) Methylcyclohexane	83	13.481	13.475	1.056	206586	19.57	ug/L	98
39) Dibromomethane	93	13.682	13.682	1.072	79010	19.84	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	193044	20.71	ug/L	98
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	355909	102.50	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	201573	20.14	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	218724	107.25	ug/L	96
46)	Toluene	91	14.755	14.755	0.904	455887	19.56	ug/L	99
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	184289	20.30	ug/L	98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	88162	20.19	ug/L	99
49)	2-Hexanone	58	15.419	15.413	0.945	247526	96.84	ug/L	95
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	174193	19.91	ug/L	96
51)	Tetrachloroethylene	164	15.383	15.383	0.943	99842	20.26	ug/L	99
52)	Dibromochloromethane	129	15.675	15.676	0.961	126439	20.66	ug/L	100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	101803	20.07	ug/L	100
54)	Chlorobenzene	112	16.352	16.352	1.002	306026	19.91	ug/L	98
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	126331	20.29	ug/L	100
56)	Ethylbenzene	91	16.425	16.425	1.007	551840	20.52	ug/L	98
57)	m,p-Xylenes	106	16.541	16.541	1.014	403419	40.56	ug/L	98
58)	o-Xylene	106	16.986	16.986	1.041	200992	20.15	ug/L	98
59)	Styrene	104	16.992	16.992	1.041	323268	20.40	ug/L	98
61)	Bromoform	173	17.261	17.261	0.919	81527	20.38	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	579617	20.89	ug/L	98
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	147645	20.26	ug/L	99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	147157	20.41	ug/L	97
66)	Bromobenzene	156	17.767	17.767	0.945	143125	21.03	ug/L	99
67)	n-Propylbenzene	91	17.791	17.791	0.947	701035	21.20	ug/L	100
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	492960	20.59	ug/L	100
69)	2-Chlorotoluene	126	17.937	17.937	0.955	132144	20.26	ug/L	100
70)	4-Chlorotoluene	91	18.047	18.041	0.960	443370	20.98	ug/L	100
71)	tert-Butylbenzene	134	18.321	18.321	0.975	91953	20.23	ug/L	94
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	518465	21.13	ug/L	100
73)	sec-Butylbenzene	105	18.547	18.547	0.987	675770	20.94	ug/L	100
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	567511	20.92	ug/L	99
75)	1,3-Dichlorobenzene	146	18.736	18.730	0.997	276895	20.02	ug/L	99
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	275653	20.12	ug/L	99
77)	n-Butylbenzene	91	19.108	19.108	1.017	568936	21.01	ug/L	99
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	272503	20.41	ug/L	99
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	30856	20.41	ug/L	95
80)	1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	237435	21.33	ug/L	100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	161743	21.05	ug/L	99
82)	Naphthalene	128	21.497	21.491	1.144	523512	21.62	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	237622	21.54	ug/L	98
85)	Acrolein		0.000	7.927	0.000	0	N.D.		
86)	Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.		
87)	Isopropyl Alcohol		8.652	8.464	0.678	0m	N.D.	d	
88)	Allyl chloride		8.677	8.842	0.680	0m	N.D.	d	
89)	tert-Butyl Alcohol		8.982	9.220	0.704	0m	N.D.	d	
90)	Acrylonitrile		9.536	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.481	10.427	0.821	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.182	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.182	11.305	0.876	0m	N.D.	d	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.609	11.597	0.910	0m	N.D.	d	
98)	Isobutyl alcohol		12.170	12.176	0.954	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d	
100)	Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

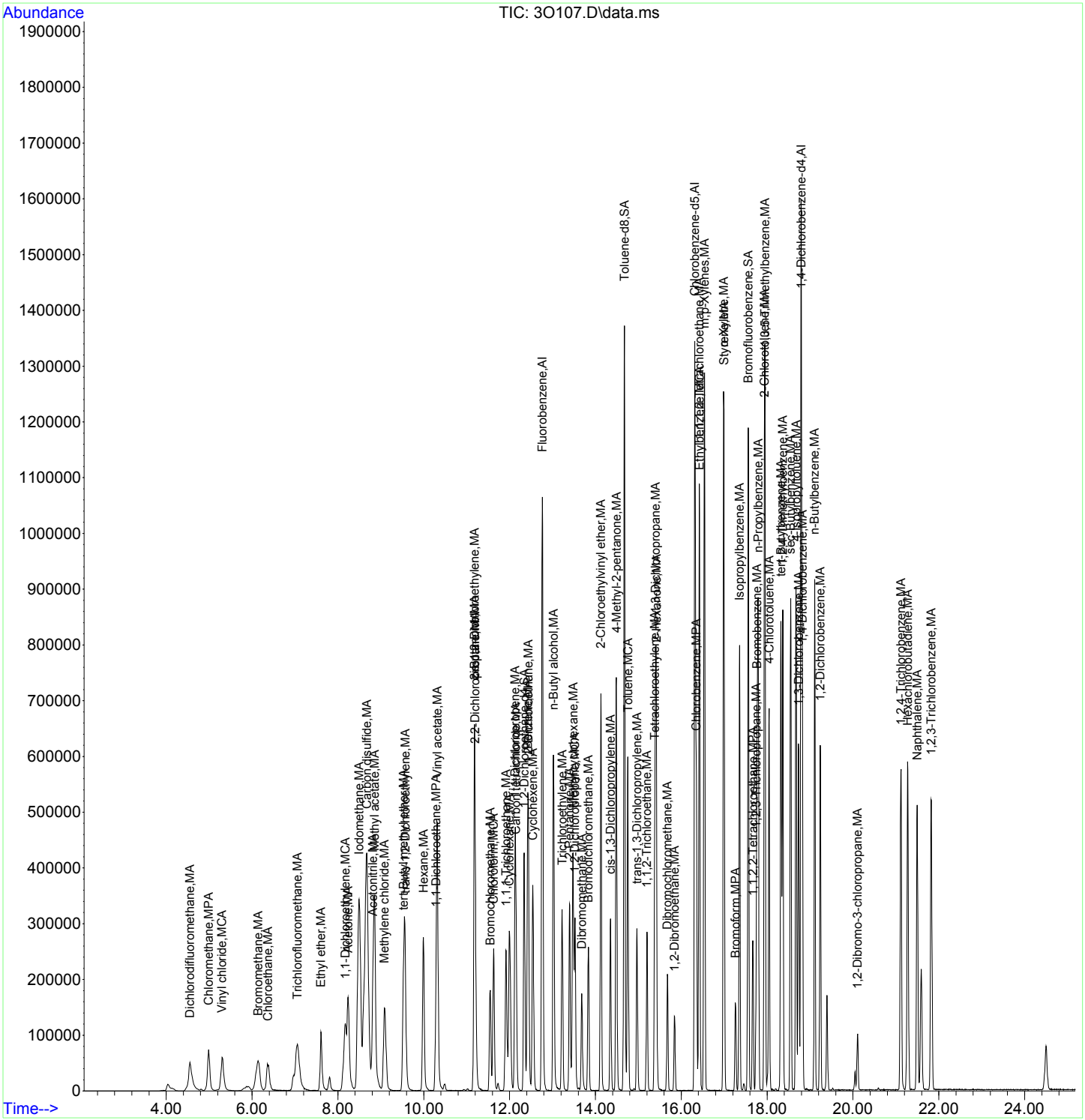
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O107.D
Acq On : 02 Jul 2018 15:30
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-06|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD020 5UL/5ML N/A MIX[A]
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 03 07:35:02 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP
07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

EH
07/03/2018

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1099085	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	502577	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	455554	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	206960	50.32	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1132901	48.39	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	447130	49.93	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	486977	51.53	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	463778	48.39	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	454439	49.36	ug/L	100
5) Bromomethane	94	6.159	6.159	0.483	320998	49.06	ug/L	100
6) Chloroethane	64	6.372	6.372	0.499	320983	50.03	ug/L	100
7) Trichlorofluoromethane	101	7.061	7.061	0.553	691990	49.21	ug/L	100
8) Ethyl ether	59	7.610	7.610	0.596	264538	52.84	ug/L	100
9) Acetone	43	8.232	8.232	0.645	878080	221.29	ug/L	100
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	605456	51.16	ug/L	100
11) Iodomethane	142	8.500	8.500	0.666	2816591	258.76	ug/L	100
12) Acetonitrile	41	8.817	8.817	0.691	976561	1130.21	ug/L	100
13) Methyl acetate	74	8.854	8.854	0.694	272849	244.33	ug/L	100
14) Carbon disulfide	76	8.665	8.665	0.679	5752435	253.73	ug/L	100
15) Methylene chloride	84	9.091	9.091	0.712	369057	51.45	ug/L	100
16) tert-Butyl methyl ether	73	9.537	9.537	0.747	930169	50.87	ug/L	100
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	498988	50.10	ug/L	100
18) Hexane	57	9.988	9.988	0.783	440720	48.35	ug/L	100
19) Vinyl acetate	43	10.317	10.317	0.808	2122115	250.01	ug/L	100
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	638728	50.42	ug/L	100
21) 2-Butanone	72	11.183	11.183	0.876	225355	235.48	ug/L	100
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	330430	49.86	ug/L	100
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	555217	50.88	ug/L	100
24) Bromochloromethane	128	11.548	11.548	0.905	153945	50.61	ug/L	100
25) Chloroform	83	11.628	11.628	0.911	639686	49.18	ug/L	100
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	596176	50.10	ug/L	100
27) Cyclohexane	56	11.999	11.999	0.940	552451	52.11	ug/L	100
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	462305	51.21	ug/L	100
29) Carbon tetrachloride	117	12.146	12.146	0.952	560041	51.06	ug/L	100
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	500061	48.76	ug/L	100
32) Benzene	78	12.426	12.426	0.974	1261124	49.81	ug/L	100
33) Cyclohexene	67	12.548	12.548	0.983	661648	51.66	ug/L	100
34) n-Butyl alcohol	56	13.024	13.024	1.021	876103	4698.78	ug/L	100
35) Trichloroethylene	95	13.225	13.225	1.036	323664	48.83	ug/L	100
36) 2-Pentanone	43	13.396	13.396	1.050	1047896	243.20	ug/L	100
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	324736	50.57	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	566621	52.40	ug/L	100
39) Dibromomethane	93	13.682	13.682	1.072	206266	50.55	ug/L	100
40) Bromodichloromethane	83	13.834	13.834	1.084	507363	53.13	ug/L	100
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	918340	258.12	ug/L	100
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	553869	54.00	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	519663	234.90	ug/L	100
46)	Toluene	91	14.755	14.755	0.904	1192189	47.17	ug/L	100
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	503564	51.14	ug/L	100
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	231763	48.94	ug/L	100
49)	2-Hexanone	58	15.413	15.413	0.945	666356	240.33	ug/L	100
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	464839	48.98	ug/L	100
51)	Tetrachloroethylene	164	15.383	15.383	0.943	255158	47.74	ug/L	100
52)	Dibromochloromethane	129	15.676	15.676	0.961	345552	52.05	ug/L	100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	277003	50.36	ug/L	100
54)	Chlorobenzene	112	16.352	16.352	1.002	799173	47.93	ug/L	100
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	338011	50.04	ug/L	100
56)	Ethylbenzene	91	16.425	16.425	1.007	1468569	50.35	ug/L	100
57)	m,p-Xylenes	106	16.541	16.541	1.014	1067789	98.97	ug/L	100
58)	o-Xylene	106	16.986	16.986	1.041	549088	50.75	ug/L	100
59)	Styrene	104	16.992	16.992	1.041	897478	52.20	ug/L	100
61)	Bromoform	173	17.261	17.261	0.919	225444	54.12	ug/L	100
62)	Isopropylbenzene	105	17.358	17.358	0.924	1553397	53.76	ug/L	100
64)	1,1,2,2-Tetrachloroethane	83	17.663	17.663	0.940	370258	48.78	ug/L	100
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	358052	47.69	ug/L	100
66)	Bromobenzene	156	17.767	17.767	0.945	358871	50.63	ug/L	100
67)	n-Propylbenzene	91	17.791	17.791	0.947	1792147	52.06	ug/L	100
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	1294241	51.93	ug/L	100
69)	2-Chlorotoluene	126	17.937	17.937	0.955	350832	51.66	ug/L	100
70)	4-Chlorotoluene	91	18.041	18.041	0.960	1148034	52.18	ug/L	100
71)	tert-Butylbenzene	134	18.321	18.321	0.975	257067	54.32	ug/L	100
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1319467	51.64	ug/L	100
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1781176	53.00	ug/L	100
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1510994	53.48	ug/L	100
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	701681	48.72	ug/L	100
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	720729	50.52	ug/L	100
77)	n-Butylbenzene	91	19.108	19.108	1.017	1496977	53.08	ug/L	100
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	693305	49.87	ug/L	100
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	82724	52.56	ug/L	100
80)	1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	609692	52.60	ug/L	100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	407813	50.98	ug/L	100
82)	Naphthalene	128	21.491	21.491	1.144	1352461	53.63	ug/L	100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	588372	51.23	ug/L	100
85)	Acrolein		7.805	7.927	0.612	0m	N.D.	d	
86)	Trichlorotrifluoroethane		8.177	8.165	0.641	0m	N.D.	d	
87)	Isopropyl Alcohol		8.677	8.464	0.680	0m	N.D.	d	
88)	Allyl chloride		8.665	8.842	0.679	0m	N.D.	d	
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90)	Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d	
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92)	2-Chloro-1,3-butadiene		10.488	10.427	0.822	0m	N.D.	d	
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94)	Ethyl acetate		11.183	11.225	0.876	0m	N.D.	d	
95)	Propionitrile		11.176	11.305	0.876	0m	N.D.	d	
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97)	Tetrahydrofuran		11.640	11.597	0.912	0m	N.D.	d	
98)	Isobutyl alcohol		12.146	12.176	0.952	0m	N.D.	d	
99)	Methyl tert-amyl ether		12.542	12.500	0.983	0m	N.D.	d	
100)	Methyl methacrylate		13.560	13.560	1.063	0m	N.D.	d	
101)	1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d	
102)	2-Nitropropane		13.999	14.103	1.097	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

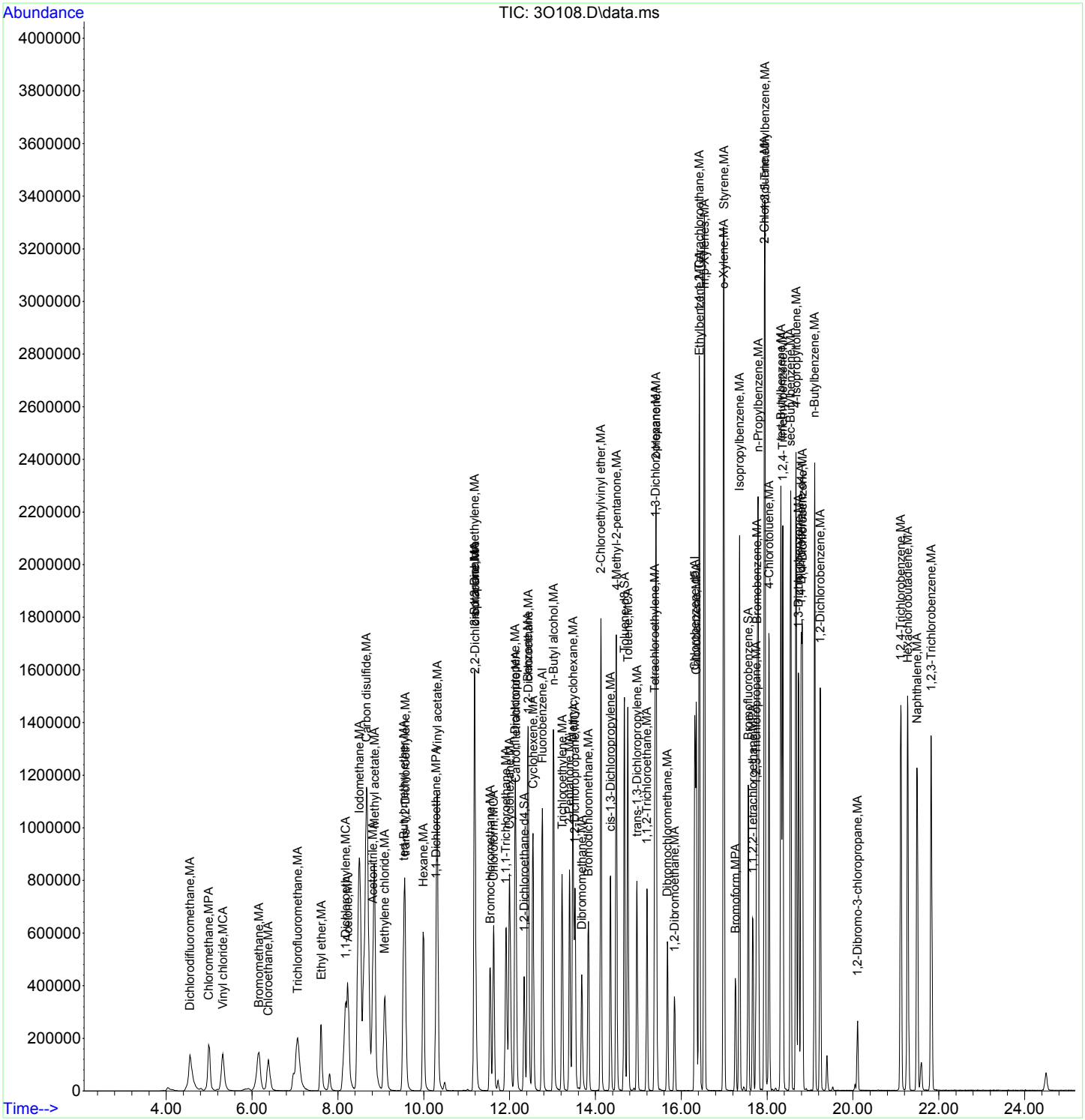
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.913	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O108.D
Acq On : 02 Jul 2018 16:01
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-07|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[A]
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 03 07:35:04 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

EH 07/03/2018

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1130873	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	490217	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	477085	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	205506	48.56	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1167837	51.13	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	469320	50.04	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	804630	82.75	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	775695	78.67	ug/L	99
4) Vinyl chloride	62	5.319	5.319	0.417	752045	79.39	ug/L	99
5) Bromomethane	94	6.159	6.159	0.483	536923	79.75	ug/L	100
6) Chloroethane	64	6.385	6.372	0.500	550318	83.37	ug/L	99
7) Trichlorofluoromethane	101	7.055	7.061	0.553	1124996	77.75	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	430338	83.55	ug/L	99
9) Acetone	43	8.232	8.232	0.645	1510954	370.08	ug/L	97
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	1013006	83.19	ug/L	99
11) Iodomethane	142	8.500	8.500	0.666	4560995	407.24	ug/L	99
12) Acetonitrile	41	8.817	8.817	0.691	1772856	1994.11	ug/L	100
13) Methyl acetate	74	8.854	8.854	0.694	456239	397.07	ug/L	98
14) Carbon disulfide	76	8.671	8.665	0.679	9300009	398.68	ug/L	99
15) Methylene chloride	84	9.091	9.091	0.712	585311	79.95	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	1554296	82.61	ug/L	100
17) trans-1,2-Dichloroethy...	61	9.561	9.567	0.749	791348	77.21	ug/L	99
18) Hexane	57	9.994	9.988	0.783	790546	84.29	ug/L	99
19) Vinyl acetate	43	10.317	10.317	0.808	3705654	424.30	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	1012379	77.66	ug/L	100
21) 2-Butanone	72	11.176	11.183	0.876	392738	398.84	ug/L	94
22) cis-1,2-Dichloroethylene	96	11.189	11.183	0.877	548784	80.48	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	897689	79.95	ug/L	98
24) Bromochloromethane	128	11.542	11.548	0.904	251711	80.43	ug/L	98
25) Chloroform	83	11.627	11.628	0.911	1036576	77.45	ug/L	99
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	978472	79.92	ug/L	99
27) Cyclohexane	56	11.999	11.999	0.940	922827	84.60	ug/L	98
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	758923	81.71	ug/L	98
29) Carbon tetrachloride	117	12.146	12.146	0.952	913417	80.94	ug/L	100
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	811239	76.88	ug/L	100
32) Benzene	78	12.426	12.426	0.974	2135288	81.97	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	1097019	83.25	ug/L	100
34) n-Butyl alcohol	56	13.024	13.024	1.021	1623255	8388.14	ug/L	98
35) Trichloroethylene	95	13.225	13.225	1.036	559218	81.99	ug/L	99
36) 2-Pentanone	43	13.402	13.396	1.050	1914951	431.93	ug/L	100
37) 1,2-Dichloropropane	63	13.523	13.524	1.060	545970	82.63	ug/L	99
38) Methylcyclohexane	83	13.475	13.475	1.056	922284	82.89	ug/L	99
39) Dibromomethane	93	13.682	13.682	1.072	341459	81.33	ug/L	98
40) Bromodichloromethane	83	13.834	13.834	1.084	803810	81.81	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	1479859	404.26	ug/L	100
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	874232	82.84	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	922537	427.53	ug/L	96
46) Toluene	91	14.755	14.755	0.904	1989895	80.71	ug/L	99
47) trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	839463	87.40	ug/L	98
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	370576	80.23	ug/L	98
49) 2-Hexanone	58	15.419	15.413	0.945	1094127	404.57	ug/L	98
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	743823	80.36	ug/L	99
51) Tetrachloroethylene	164	15.383	15.383	0.943	422296	81.01	ug/L	99
52) Dibromochloromethane	129	15.675	15.676	0.961	564286	87.14	ug/L	99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	449602	83.79	ug/L	100
54) Chlorobenzene	112	16.352	16.352	1.002	1346354	82.78	ug/L	99
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	553508	84.01	ug/L	100
56) Ethylbenzene	91	16.419	16.425	1.006	2385504	83.85	ug/L	100
57) m,p-Xylenes	106	16.541	16.541	1.014	1737773	165.12	ug/L	96
58) o-Xylene	106	16.986	16.986	1.041	903565	85.62	ug/L	97
59) Styrene	104	16.992	16.992	1.041	1450655	86.51	ug/L	100
61) Bromoform	173	17.261	17.261	0.919	391476	89.74	ug/L	100
62) Isopropylbenzene	105	17.358	17.358	0.924	2529118	83.57	ug/L	100
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	643035	80.90	ug/L	100
65) 1,2,3-Trichloropropane	75	17.754	17.748	0.945	616832	78.45	ug/L	96
66) Bromobenzene	156	17.767	17.767	0.945	598870	80.68	ug/L	100
67) n-Propylbenzene	91	17.791	17.791	0.947	2951674	81.87	ug/L	98
68) 1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	2108809	80.79	ug/L	98
69) 2-Chlorotoluene	126	17.937	17.937	0.955	582303	81.87	ug/L	97
70) 4-Chlorotoluene	91	18.047	18.041	0.960	1842317	79.96	ug/L	99
71) tert-Butylbenzene	134	18.321	18.321	0.975	426914	86.13	ug/L	98
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	2218733	82.92	ug/L	98
73) sec-Butylbenzene	105	18.553	18.547	0.987	2875074	81.68	ug/L	99
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	2443401	82.59	ug/L	100
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	1186535	78.67	ug/L	100
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	1146039	76.71	ug/L	99
77) n-Butylbenzene	91	19.108	19.108	1.017	2354854	79.73	ug/L	100
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	1138907	78.22	ug/L	100
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	152506	92.52	ug/L	98
80) 1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	1017834	83.84	ug/L	100
81) Hexachlorobutadiene	225	21.272	21.278	1.132	665768	79.46	ug/L	99
82) Naphthalene	128	21.497	21.491	1.144	2359537	89.35	ug/L	100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	991594	82.44	ug/L	99
85) Acrolein		7.811	7.927	0.612	0m	N.D.	d	
86) Trichlorotrifluoroethane		8.140	8.165	0.638	0m	N.D.	d	
87) Isopropyl Alcohol		8.677	8.464	0.680	0m	N.D.	d	
88) Allyl chloride		8.671	8.842	0.679	0m	N.D.	d	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.		
90) Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d	
91) Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d	
92) 2-Chloro-1,3-butadiene		10.481	10.427	0.821	0m	N.D.	d	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate		11.176	11.225	0.876	0m	N.D.	d	
95) Propionitrile		11.176	11.305	0.876	0m	N.D.	d	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.		
97) Tetrahydrofuran		11.627	11.597	0.911	0m	N.D.	d	
98) Isobutyl alcohol		12.170	12.176	0.954	0m	N.D.	d	
99) Methyl tert-amyl ether		12.499	12.500	0.979	0m	N.D.	d	
100) Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d	
101) 1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d	
102) 2-Nitropropane		13.938	14.103	1.092	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

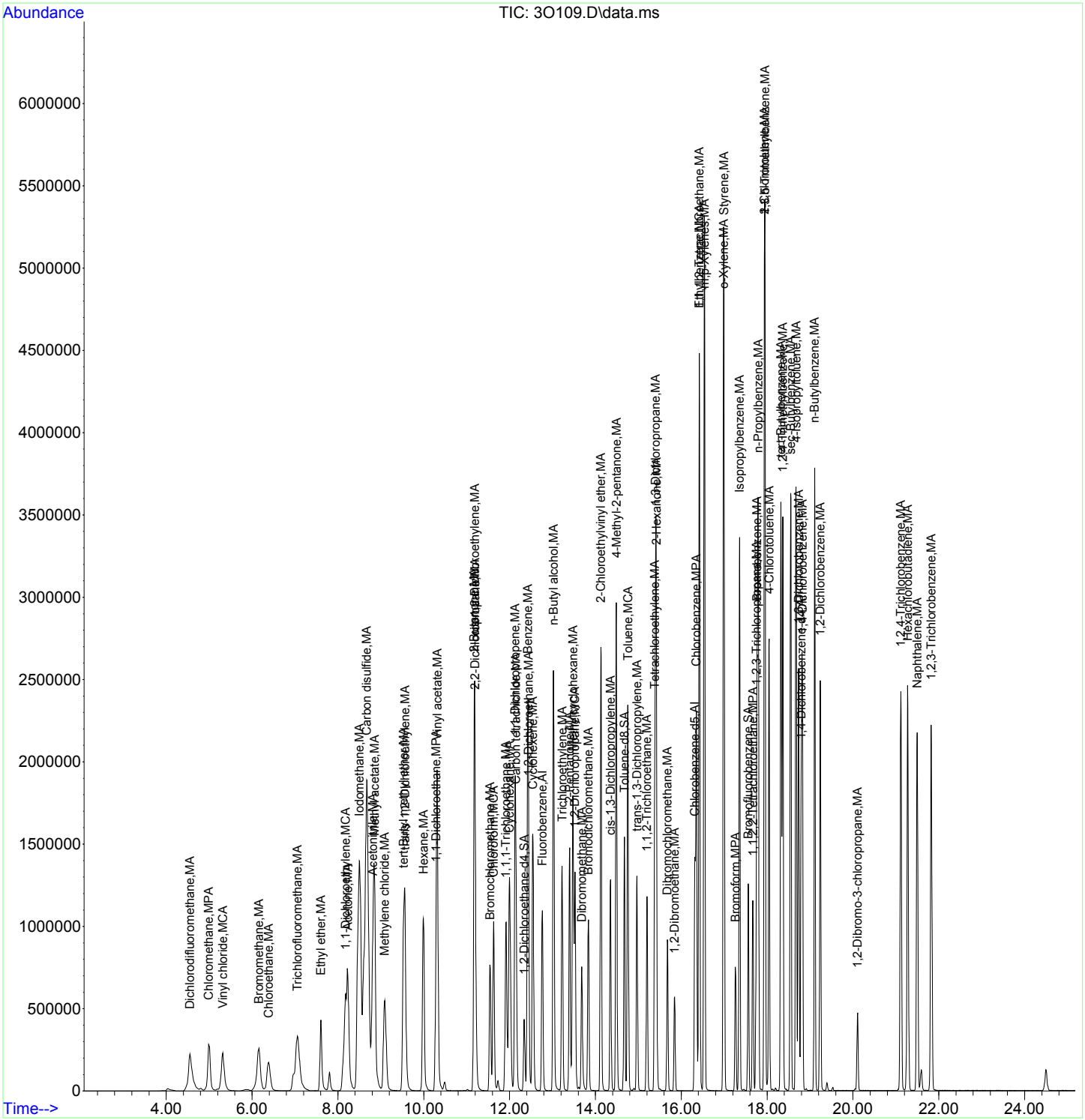
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.865	14.987	0.911	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.553	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.394	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.913	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O109.D
Acq On : 02 Jul 2018 16:32
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-08|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD080 4UL/5ML N/A MIX[A]
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 03 07:35:06 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

EH 07/03/2018

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.768	12.761	1.000	1318550	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	564982	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	539271	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	0m	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	239010	48.44	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1364279	51.83	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	517654	48.83	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	1047942	92.44	ug/L	100
3) Chloromethane	50	5.009	4.990	0.392	1049299	91.27	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	1037019	93.90	ug/L	99
5) Bromomethane	94	6.159	6.159	0.482	756198	96.34	ug/L	100
6) Chloroethane	64	6.385	6.372	0.500	765844	99.51	ug/L	98
7) Trichlorofluoromethane	101	7.055	7.061	0.553	1502106	89.04	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	642900	107.05	ug/L	99 A
9) Acetone	43	8.238	8.232	0.645	2079371	436.81	ug/L	96
10) 1,1-Dichloroethylene	61	8.183	8.177	0.641	1350926	95.15	ug/L	97
11) Iodomethane	142	8.500	8.500	0.666	6283466	481.19	ug/L	97
12) Acetonitrile	41	8.817	8.817	0.691	2458186	2371.41	ug/L	100
13) Methyl acetate	74	8.854	8.854	0.693	651952	486.64	ug/L	95
14) Carbon disulfide	76	8.671	8.665	0.679	12458687	458.07	ug/L	99
15) Methylene chloride	84	9.092	9.091	0.712	842937	99.03	ug/L	97
16) tert-Butyl methyl ether	73	9.537	9.537	0.747	2278999	103.88	ug/L	100 A
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.749	1105646	92.53	ug/L	98
18) Hexane	57	9.988	9.988	0.782	1117884	102.23	ug/L	95 A
19) Vinyl acetate	43	10.317	10.317	0.808	5357520	526.12	ug/L	98 A
20) 1,1-Dichloroethane	63	10.287	10.286	0.806	1408473	92.67	ug/L	100
21) 2-Butanone	72	11.177	11.183	0.875	556662	484.85	ug/L	92
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	766692	96.43	ug/L	96
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	1204795	92.03	ug/L	95
24) Bromochloromethane	128	11.548	11.548	0.905	365039	100.04	ug/L	95 A
25) Chloroform	83	11.628	11.628	0.911	1437252	92.11	ug/L	99
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	1304961	91.42	ug/L	99
27) Cyclohexane	56	12.000	11.999	0.940	1241524	97.61	ug/L	97
28) 1,1-Dichloropropene	75	12.128	12.127	0.950	1021063	94.29	ug/L	96
29) Carbon tetrachloride	117	12.146	12.146	0.951	1209605	91.93	ug/L	100
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	1095248	89.02	ug/L	98
32) Benzene	78	12.426	12.426	0.973	2865025	94.33	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.982	1513625	98.52	ug/L	99
34) n-Butyl alcohol	56	13.024	13.024	1.020	2208442	9772.50	ug/L	96
35) Trichloroethylene	95	13.225	13.225	1.036	747118	93.95	ug/L	99
36) 2-Pentanone	43	13.396	13.396	1.049	2653510	513.33	ug/L	99 A
37) 1,2-Dichloropropane	63	13.524	13.524	1.059	747043	96.97	ug/L	99
38) Methylcyclohexane	83	13.475	13.475	1.055	1262261	97.30	ug/L	98
39) Dibromomethane	93	13.682	13.682	1.072	472451	96.52	ug/L	98
40) Bromodichloromethane	83	13.835	13.834	1.084	1109734	96.87	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.106	2148271	503.32	ug/L	99 A
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.124	1246274	101.29	ug/L	97 A

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	1255440	504.82	ug/L	93	A
46)	Toluene	91	14.755	14.755	0.904	2776095	97.70	ug/L	98	
47)	trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	1160657	104.86	ug/L	98	A
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	534274	100.36	ug/L	98	A
49)	2-Hexanone	58	15.420	15.413	0.945	1513050	485.43	ug/L	95	
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	1021836	95.78	ug/L	97	
51)	Tetrachloroethylene	164	15.383	15.383	0.943	571831	95.17	ug/L	99	
52)	Dibromochloromethane	129	15.682	15.676	0.961	799053	107.07	ug/L	100	A
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	647002	104.63	ug/L	100	A
54)	Chlorobenzene	112	16.352	16.352	1.002	1838607	98.09	ug/L	98	
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	749733	98.73	ug/L	99	
56)	Ethylbenzene	91	16.426	16.425	1.007	3104419	94.68	ug/L	99	
57)	m,p-Xylenes	106	16.535	16.541	1.013	2402062	198.04	ug/L	93	
58)	o-Xylene	106	16.986	16.986	1.041	1233688	101.43	ug/L	94	A
59)	Styrene	104	16.993	16.992	1.041	2004771	103.73	ug/L	99	A
61)	Bromoform	173	17.261	17.261	0.919	553366	112.22	ug/L	99	A
62)	Isopropylbenzene	105	17.358	17.358	0.924	3265620	95.47	ug/L	98	
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	895389	99.66	ug/L	99	
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	875187	98.47	ug/L	93	
66)	Bromobenzene	156	17.767	17.767	0.945	822745	98.06	ug/L	99	
67)	n-Propylbenzene	91	17.791	17.791	0.947	3858141	94.67	ug/L	97	
68)	1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	2807659	95.16	ug/L	97	
69)	2-Chlorotoluene	126	17.937	17.937	0.955	782532	97.33	ug/L	94	
70)	4-Chlorotoluene	91	18.047	18.041	0.960	2536824	97.41	ug/L	99	
71)	tert-Butylbenzene	134	18.322	18.321	0.975	563144	100.52	ug/L	97	A
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	2799469	92.56	ug/L	97	
73)	sec-Butylbenzene	105	18.547	18.547	0.987	3759983	94.51	ug/L	99	
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	3291633	98.43	ug/L	99	
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	1560516	91.53	ug/L	100	
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	1575884	93.32	ug/L	99	
77)	n-Butylbenzene	91	19.108	19.108	1.017	3219500	96.44	ug/L	98	
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	1662916	101.04	ug/L	100	A
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	210940	113.22	ug/L	97	A
80)	1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	1361077	99.19	ug/L	100	
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	882557	93.19	ug/L	100	
82)	Naphthalene	128	21.498	21.491	1.144	3153182	105.63	ug/L	100	A
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	1323160	97.32	ug/L	99	
85)	Acrolein		7.799	7.927	0.611	0m	N.D.	d		
86)	Trichlorotrifluoroethane		8.159	8.165	0.639	0m	N.D.	d		
87)	Isopropyl Alcohol		8.677	8.464	0.680	0m	N.D.	d		
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90)	Acrylonitrile		9.531	9.531	0.746	0m	N.D.	d		
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d		
92)	2-Chloro-1,3-butadiene		10.482	10.427	0.821	0m	N.D.	d		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94)	Ethyl acetate		11.177	11.225	0.875	0m	N.D.	d		
95)	Propionitrile		11.183	11.305	0.876	0m	N.D.	d		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97)	Tetrahydrofuran		11.628	11.597	0.911	0m	N.D.	d		
98)	Isobutyl alcohol		12.176	12.176	0.954	0m	N.D.	d		
99)	Methyl tert-amyl ether		12.548	12.500	0.983	0m	N.D.	d		
100)	Methyl methacrylate		13.475	13.560	1.055	0m	N.D.	d		
101)	1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d		
102)	2-Nitropropane		14.036	14.103	1.099	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

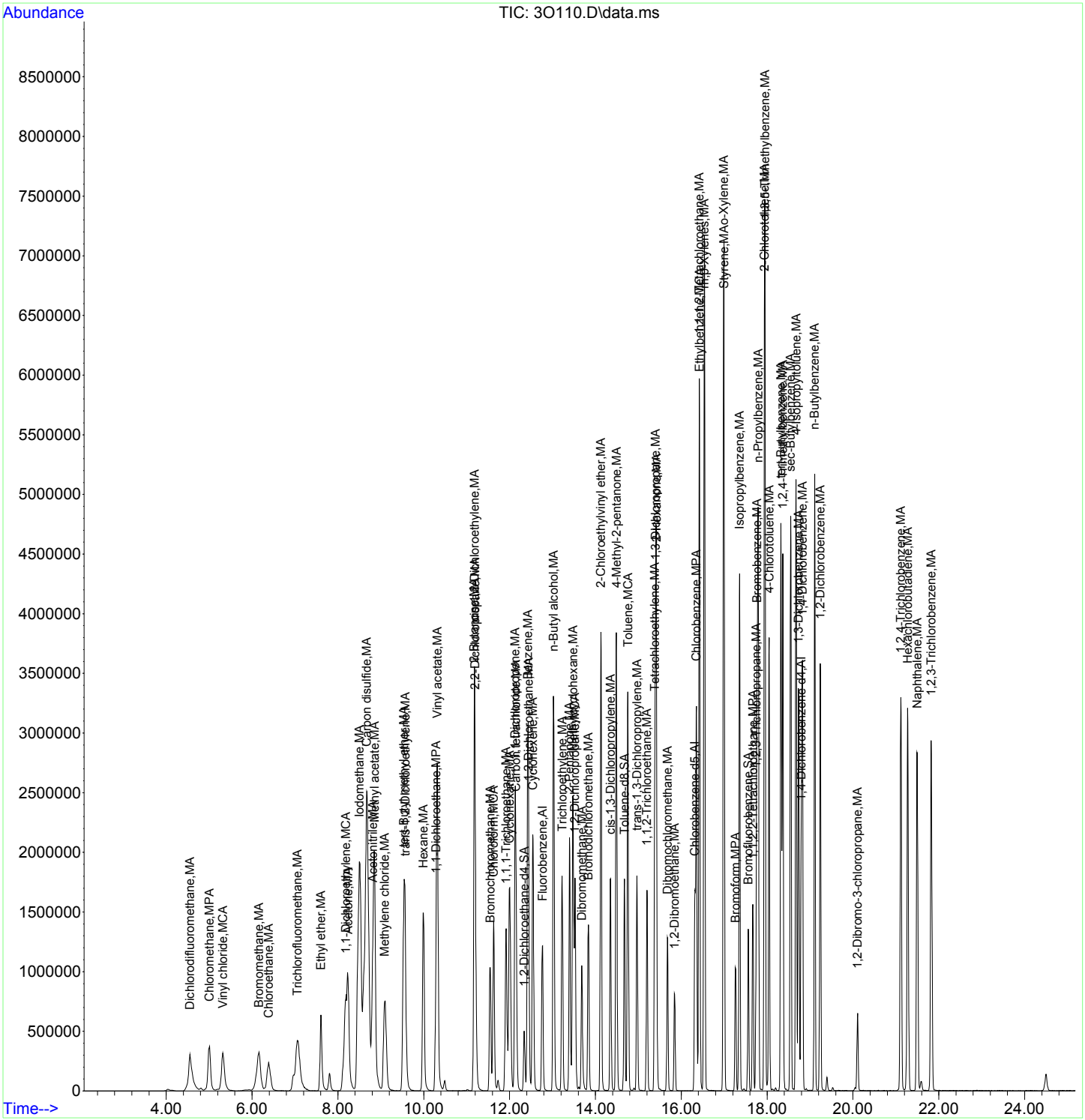
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.865	14.987	0.911	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.907	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O110.D
Acq On : 02 Jul 2018 17:03
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-09|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[A]
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 03 07:35:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454474

Instrument ID: VOA3.I **Injection Date:** 02-JUL-18 18:05

Data File: 070218V3\3O112.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180702-10 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.17803		.01		-4.84768	30		Averaged
S	Toluene-d8	2.3294	2.31751		.01		-0.51043	30		Averaged
S	Bromofluorobenzene	0.9829	0.95075		.01		-3.27093	30		Averaged
	Dichlorodifluoromethane	0.4299	0.41546		.01		-3.35892	30		Averaged
	Chloromethane	0.436	0.41241		.1		-5.41055	30		Averaged
	Vinyl chloride	0.4188	0.38872		.01		-7.18243	30		Averaged
	Bromomethane	0.2977	0.28162		.01		-5.40141	30		Averaged
	Chloroethane	0.2918	0.28233		.01		-3.24537	30		Averaged
	Trichlorofluoromethane	0.6397	0.55791		.01		-12.78568	30		Averaged
	1,1-Dichloroethylene	0.5384	0.51272		.01		-4.76969	30		Averaged
	Acetone	0.1805	0.13261		.01		-26.53186	30		Averaged
	Carbon disulfide	1.0314	1.02938		.01		-0.19585	30		Averaged
	Methyl acetate	0.0508	0.04907		.01		-3.40551	30		Averaged
	Methylene chloride	50	48.39	50			-3.22	30		Linear
	tert-Butyl methyl ether	0.8319	0.82304		.01		-1.06503	30		Averaged
	trans-1,2-Dichloroethylene	0.4531	0.40549		.01		-10.50761	30		Averaged
	1,1-Dichloroethane	0.5764	0.52286		.1		-9.28869	30		Averaged
	2-Butanone	0.0435	0.03698		.01		-14.98851	30		Averaged
	cis-1,2-Dichloroethylene	0.3015	0.28948		.01		-3.98673	30		Averaged
	Bromochloromethane	0.1384	0.13388		.01		-3.2659	30		Averaged
	Chloroform	0.5917	0.5291		.01		-10.57969	30		Averaged
	1,1,1-Trichloroethane	0.5413	0.4831		.01		-10.75189	30		Averaged
	Cyclohexane	0.4823	0.44402		.01		-7.93697	30		Averaged
	Carbon tetrachloride	0.4989	0.44043		.01		-11.71978	30		Averaged
	Benzene	1.1517	1.06822		.01		-7.24842	30		Averaged
	1,2-Dichloroethane	0.4666	0.41478		.01		-11.10587	30		Averaged
	Trichloroethylene	0.3016	0.27047		.01		-10.32162	30		Averaged
	Methylcyclohexane	0.4919	0.43881		.01		-10.79284	30		Averaged
	1,2-Dichloropropane	0.2921	0.265		.01		-9.27764	30		Averaged
	Bromodichloromethane	0.4344	0.40412		.01		-6.97053	30		Averaged
	cis-1,3-Dichloropropylene	0.4666	0.47352		.01		1.48307	30		Averaged
	4-Methyl-2-pentanone	0.2201	0.2142		.01		-2.6806	30		Averaged
	Toluene	2.5146	2.36773		.01		-5.84069	30		Averaged
	trans-1,3-Dichloropropylene	0.9796	1.03124		.01		5.27154	30		Averaged
	1,1,2-Trichloroethane	0.4711	0.47202		.01		0.19529	30		Averaged
	Tetrachloroethylene	0.5317	0.46762		.01		-12.05191	30		Averaged
	2-Hexanone	0.2758	0.23854		.01		-13.50979	30		Averaged

Continuing Calibration Summary

Instrument ID: VOA3.I **Injection Date:** 02-JUL-18 18:05

Data File: 070218V3\3O112.D **Init. Cal. Date(s)** 02-JUL-18 13:56 02-JUL-18 22:15

Lab Sample ID W3VM180702-10 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Dibromochloromethane	0.6605	0.68573		.01		3.81983	30		Averaged
1,2-Dibromoethane	0.5473	0.56851		.01		3.87539	30		Averaged
Chlorobenzene	1.6589	1.58479		.3		-4.46742	30		Averaged
Ethylbenzene	2.9017	2.7868		.01		-3.95975	30		Averaged
m,p-Xylenes	1.0734	1.00554		.01		-6.32197	30		Averaged
o-Xylene	1.0764	1.08072		.01		0.40134	30		Averaged
Styrene	1.7104	1.77471		.01		3.75994	30		Averaged
Bromoform	0.4572	0.46544		.1		1.80227	30		Averaged
Isopropylbenzene	3.1716	2.97598		.01		-6.16786	30		Averaged
1,1,2,2-Tetrachloroethane	0.833	0.79074		.3		-5.07323	30		Averaged
1,3-Dichlorobenzene	1.5807	1.4659		.01		-7.26261	30		Averaged
1,4-Dichlorobenzene	1.5657	1.47848		.01		-5.57067	30		Averaged
1,2-Dichlorobenzene	1.5259	1.45207		.01		-4.83846	30		Averaged
1,2-Dibromo-3-chloropropane	0.1727	0.17588		.01		1.84134	30		Averaged
1,2,4-Trichlorobenzene	1.2723	1.26005		.01		-0.96282	30		Averaged
1,2,3-Trichlorobenzene	1.2606	1.21801		.01		-3.37855	30		Averaged

Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

EH 07/03/2018

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1346732	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	569354	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	552843	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1349624	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	578810	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	553411	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	239762	47.57	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1319485	49.74	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	525615	48.37	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	559515	48.32	ug/L	100
3) Chloromethane	50	4.990	4.990	0.391	555411	47.30	ug/L	99
4) Vinyl chloride	62	5.319	5.319	0.417	523499	46.41	ug/L	99
5) Bromomethane	94	6.104	6.159	0.478	379273	47.31	ug/L	99
6) Chloroethane	64	6.366	6.372	0.499	380220	48.37	ug/L	99
7) Trichlorofluoromethane	101	7.049	7.061	0.552	751351	43.60	ug/L	99
8) Ethyl ether	59	7.604	7.610	0.596	331183	53.99	ug/L	99
9) Acetone	43	8.238	8.232	0.646	892931	183.65	ug/L	96
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	690491	47.62	ug/L	97
11) Iodomethane	142	8.506	8.500	0.667	3342626	250.62	ug/L	96
12) Acetonitrile	41	8.823	8.817	0.691	1144790	1081.27	ug/L	99
13) Methyl acetate	74	8.848	8.854	0.693	330423	241.48	ug/L	95
14) Carbon disulfide	76	8.665	8.665	0.679	6931486	249.52	ug/L	100
15) Methylene chloride	84	9.097	9.091	0.713	425931	48.39	ug/L	98
16) tert-Butyl methyl ether	73	9.530	9.537	0.747	1108414	49.47	ug/L	99
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	546083	44.74	ug/L	97
18) Hexane	57	9.994	9.988	0.783	416856	37.32	ug/L	96
19) Vinyl acetate	43	10.317	10.317	0.808	2715137	261.05	ug/L	99
20) 1,1-Dichloroethane	63	10.286	10.286	0.806	704153	45.36	ug/L	100
21) 2-Butanone	72	11.182	11.183	0.876	249029	212.36	ug/L	95
22) cis-1,2-Dichloroethylene	96	11.182	11.183	0.876	389846	48.01	ug/L	96
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	599560	44.84	ug/L	97
24) Bromochloromethane	128	11.548	11.548	0.905	180303	48.38	ug/L	98
25) Chloroform	83	11.627	11.628	0.911	712552	44.71	ug/L	100
26) 1,1,1-Trichloroethane	97	11.920	11.914	0.934	650603	44.62	ug/L	99
27) Cyclohexane	56	11.999	11.999	0.940	597972	46.03	ug/L	99
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	531808	48.08	ug/L	97
29) Carbon tetrachloride	117	12.146	12.146	0.952	593137	44.14	ug/L	100
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	558593	44.45	ug/L	99
32) Benzene	78	12.426	12.426	0.974	1438602	46.37	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	653754	41.66	ug/L	99
34) n-Butyl alcohol	56	13.024	13.024	1.021	1030520	4514.28	ug/L	98
35) Trichloroethylene	95	13.225	13.225	1.036	364248	44.85	ug/L	98
36) 2-Pentanone	43	13.395	13.396	1.050	1072515	203.14	ug/L	99
37) 1,2-Dichloropropane	63	13.523	13.524	1.060	356878	45.35	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	590964	44.60	ug/L	98
39) Dibromomethane	93	13.682	13.682	1.072	225226	45.05	ug/L	97
40) Bromodichloromethane	83	13.834	13.834	1.084	544239	46.51	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	945554	216.90	ug/L	100
42) cis-1,3-Dichloropropylene	75	14.346	14.353	1.124	637705	50.74	ug/L	97

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	609791	243.32	ug/L	96
46) Toluene	91	14.755	14.755	0.904	1348074	47.08	ug/L	99
47) trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	587142	52.64	ug/L	97
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	268745	50.09	ug/L	99
49) 2-Hexanone	58	15.413	15.413	0.945	679061	216.19	ug/L	97
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	506641	47.13	ug/L	95
51) Tetrachloroethylene	164	15.383	15.383	0.943	266239	43.97	ug/L	99
52) Dibromochloromethane	129	15.675	15.676	0.961	390421	51.91	ug/L	99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	323686	51.94	ug/L	99
54) Chlorobenzene	112	16.352	16.352	1.002	902308	47.77	ug/L	99
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	370207	48.38	ug/L	99
56) Ethylbenzene	91	16.419	16.425	1.006	1586673	48.02	ug/L	99
57) m,p-Xylenes	106	16.535	16.541	1.013	1145018	93.68	ug/L	99
58) o-Xylene	106	16.986	16.986	1.041	615310	50.20	ug/L	98
59) Styrene	104	16.992	16.992	1.041	1010436	51.88	ug/L	98
61) Bromoform	173	17.261	17.261	0.919	257318	50.90	ug/L	99
62) Isopropylbenzene	105	17.358	17.358	0.924	1645251	46.92	ug/L	100
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	437157	47.46	ug/L	99
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	416542	45.72	ug/L	97
66) Bromobenzene	156	17.767	17.767	0.945	409828	47.65	ug/L	99
67) n-Propylbenzene	91	17.791	17.791	0.947	1890813	45.26	ug/L	99
68) 1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	1327863	43.90	ug/L	99
69) 2-Chlorotoluene	126	17.937	17.937	0.955	359404	43.60	ug/L	96
70) 4-Chlorotoluene	91	18.047	18.041	0.960	1221059	45.73	ug/L	98
71) tert-Butylbenzene	134	18.321	18.321	0.975	277766	48.36	ug/L	97
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1427205	46.03	ug/L	99
73) sec-Butylbenzene	105	18.547	18.547	0.987	1901271	46.61	ug/L	100
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1610208	46.97	ug/L	99
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	810415	46.37	ug/L	100
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	817366	47.21	ug/L	100
77) n-Butylbenzene	91	19.108	19.108	1.017	1545962	45.17	ug/L	100
78) 1,2-Dichlorobenzene	146	19.242	19.236	1.024	802764	47.58	ug/L	99
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	97232	50.91	ug/L	98
80) 1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	696608	49.52	ug/L	100
81) Hexachlorobutadiene	225	21.278	21.278	1.132	449813	46.33	ug/L	100
82) Naphthalene	128	21.497	21.491	1.144	1577882	51.56	ug/L	100
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	673368	48.31	ug/L	99
85) Acrolein		7.805	7.927	0.612	0m	N.D.	d	
86) Trichlorotrifluoroethane		8.177	8.165	0.641	0m	N.D.	d	
87) Isopropyl Alcohol		8.598	8.464	0.674	0m	N.D.	d	
88) Allyl chloride		8.665	8.842	0.679	0m	N.D.	d	
89) tert-Butyl Alcohol		9.219	9.220	0.722	0m	N.D.	d	
90) Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d	
91) Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d	
92) 2-Chloro-1,3-butadiene		10.426	10.427	0.817	0m	N.D.	d	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.		
94) Ethyl acetate		11.182	11.225	0.876	0m	N.D.	d	
95) Propionitrile		11.189	11.305	0.877	0m	N.D.	d	
96) Methacrylonitrile		11.512	11.512	0.902	0m	N.D.	d	
97) Tetrahydrofuran		11.621	11.597	0.911	0m	N.D.	d	
98) Isobutyl alcohol		12.146	12.176	0.952	0m	N.D.	d	
99) Methyl tert-amyl ether		12.554	12.500	0.984	0m	N.D.	d	
100) Methyl methacrylate		13.481	13.560	1.056	0m	N.D.	d	
101) 1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d	
102) 2-Nitropropane		14.017	14.103	1.098	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

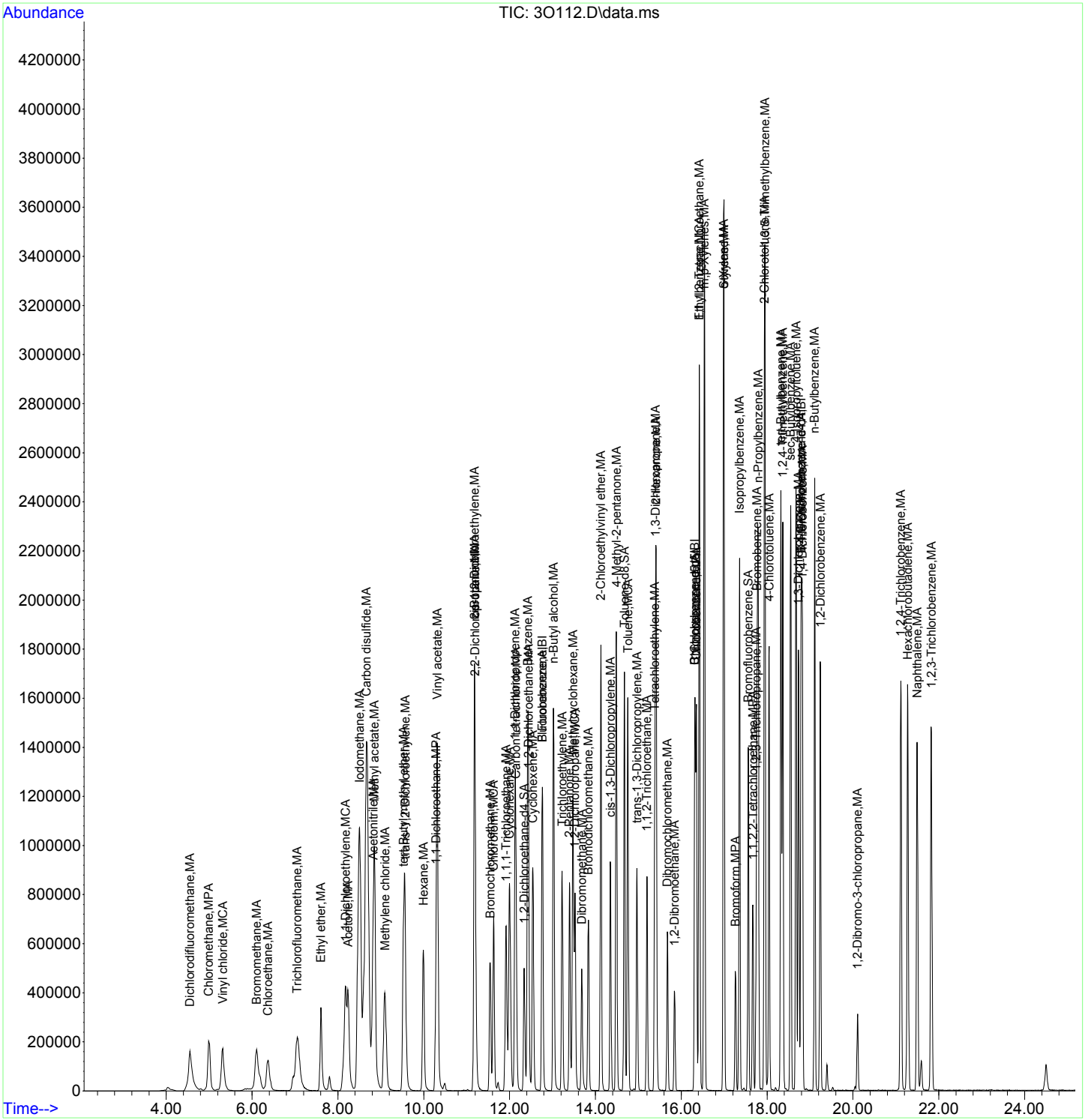
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		14.987	14.987	0.919	0m	N.D.	d
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.724	17.718	0.943	0m	N.D.	d
110) Pentachloroethane		18.388	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.943	18.943	1.008	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O112.D
Acq On : 02 Jul 2018 18:05
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-10|ICV|1|VOA|1|VOA8260CL|
Misc : ICV50 5UL/5ML N/A MIX[A]
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 03 07:36:56 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1416890	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	599478	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	537861	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		6.050	6.159	0.474	0m	N.D.	d	
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.250	8.232	0.646	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		8.506	8.500	0.667	0m	N.D.	d	
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.866	8.854	0.695	0m	N.D.	d	
14) Carbon disulfide		8.604	8.665	0.674	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		9.579	9.567	0.751	0m	N.D.	d	
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.293	10.286	0.807	0m	N.D.	d	
21) 2-Butanone		11.189	11.183	0.877	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		11.189	11.183	0.877	0m	N.D.	d	
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.134	12.127	0.951	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.	d	
32) Benzene		12.426	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.219	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		
39) Dibromomethane		13.688	13.682	1.073	0m	N.D.	d	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.353	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone		14.481	14.487	0.888	0m	N.D.	d		
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d		
47)	trans-1,3-Dichloroprop...		14.981	14.968	0.918	0m	N.D.	d		
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.			
49)	2-Hexanone		15.432	15.413	0.946	0m	N.D.	d		
50)	1,3-Dichloropropane		15.407	15.401	0.944	0m	N.D.	d		
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d		
52)	Dibromochloromethane		15.676	15.676	0.961	0m	N.D.	d		
53)	1,2-Dibromoethane		15.853	15.840	0.972	0m	N.D.	d		
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d		
55)	1,1,1,2-Tetrachloroethane		16.413	16.419	1.006	0m	N.D.	d		
56)	Ethylbenzene		16.413	16.425	1.006	0m	N.D.	d		
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d		
58)	o-Xylene		16.986	16.986	1.041	0m	N.D.	d		
59)	Styrene		16.993	16.992	1.041	0m	N.D.	d		
61)	Bromoform		0.000	17.261	0.000	0	N.D.			
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d		
64)	1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.			
65)	1,2,3-Trichloropropane		17.724	17.748	0.943	0m	N.D.	d		
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d		
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d		
68)	1,3,5-Trimethylbenzene		17.956	17.949	0.956	0m	N.D.	d		
69)	2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d		
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d		
71)	tert-Butylbenzene		18.328	18.321	0.975	0m	N.D.	d		
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d		
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d		
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d		
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d		
76)	1,4-Dichlorobenzene		18.821	18.821	1.002	0m	N.D.	d		
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d		
78)	1,2-Dichlorobenzene		19.236	19.236	1.024	0m	N.D.	d		
79)	1,2-Dibromo-3-chloropr...		20.108	20.108	1.070	0m	N.D.	d		
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d		
81)	Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d		
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d		
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d		
85)	Acrolein	56	7.946	7.927	0.623	4853	3.46	ug/L		82
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	47034	4.68	ug/L		98
87)	Isopropyl Alcohol	45	8.476	8.464	0.664	25044	40.47	ug/L		91
88)	Allyl chloride	76	8.854	8.842	0.694	19581	4.30	ug/L	#	83
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	37207	36.57	ug/L		88
90)	Acrylonitrile	53	9.543	9.531	0.748	11667	4.39	ug/L		95
91)	Isopropyl ether	45	10.323	10.317	0.809	21670	0.88	ug/L		79
92)	2-Chloro-1,3-butadiene	53	10.433	10.427	0.818	10137	0.85	ug/L		95
93)	Ethyl tert-butyl ether	59	10.896	10.890	0.854	20863	0.84	ug/L		98
94)	Ethyl acetate	43	11.225	11.225	0.880	33719	4.81	ug/L		97
95)	Propionitrile	54	11.317	11.305	0.887	4839	4.54	ug/L		82
96)	Methacrylonitrile	67	11.518	11.512	0.903	11934	4.07	ug/L		96
97)	Tetrahydrofuran	42	11.616	11.597	0.910	11951	5.14	ug/L		91
98)	Isobutyl alcohol	43	12.170	12.176	0.954	13822	37.91	ug/L		98
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	19316	0.85	ug/L		94
100)	Methyl methacrylate	69	13.566	13.560	1.063	17229	3.79	ug/L		99
101)	1,4-Dioxane	88	13.658	13.652	1.070	3894	42.85	ug/L		88
102)	2-Nitropropane	43	14.103	14.103	1.105	7038	6.03	ug/L		85

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

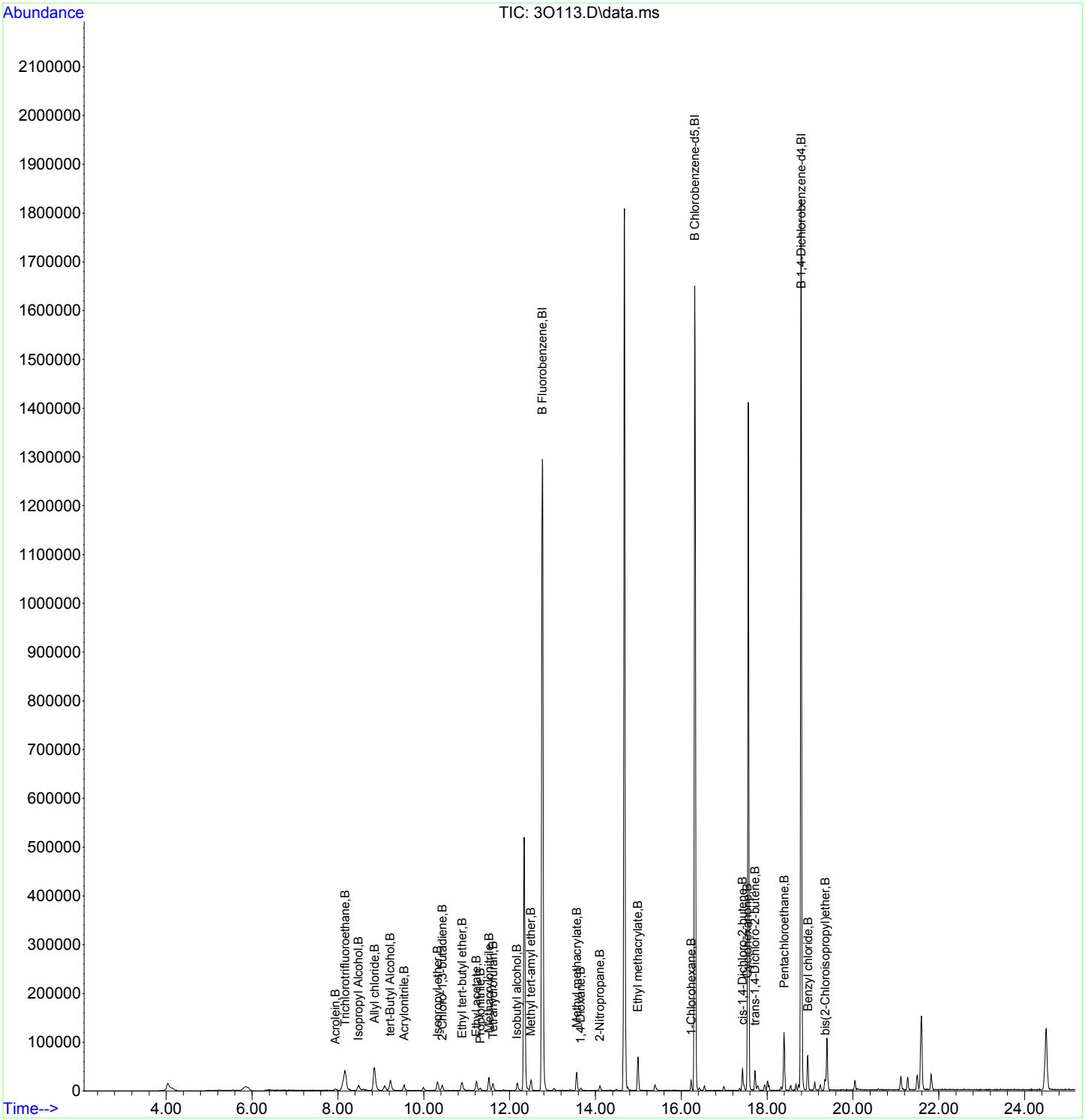
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	34068	4.03	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	7418	0.86	ug/L	97
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	11015	4.08	ug/L	81
108) Cyclohexanone	55	17.535	17.535	0.933	5945	26.22	ug/L	82
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	9418	3.87	ug/L	96
110) Pentachloroethane	167	18.395	18.395	0.979	24249	4.43	ug/L	84
111) Benzyl chloride	91	18.949	18.943	1.008	58434	4.17	ug/L	98
112) bis(2-Chloroisopropyl)...	45	19.352	19.346	1.030	19091	4.69	ug/L	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O113.D
Acq On : 02 Jul 2018 18:36
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-11|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD005 5UL/5ML N/A MIX[B]
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 03 07:35:14 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1355117	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	576180	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	524817	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		6.050	6.159	0.474	0m	N.D.	d	
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.238	8.232	0.646	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.592	8.665	0.673	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.616	11.628	0.910	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.439	12.438	0.975	0m	N.D.	d	
32) Benzene		12.420	12.426	0.973	0m	N.D.	d	
33) Cyclohexene		12.475	12.548	0.978	0m	N.D.	d	
34) n-Butyl alcohol		13.030	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone		13.408	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.353	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.749	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		15.420	15.413	0.945	0m	N.D.	d	
50)	1,3-Dichloropropane		15.395	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.840	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.352	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56)	Ethylbenzene		16.420	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.986	16.986	1.041	0m	N.D.	d	
59)	Styrene		16.993	16.992	1.041	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.352	17.358	0.923	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.		
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.767	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.797	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.944	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.389	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.120	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.821	21.821	1.161	0m	N.D.	d	
85)	Acrolein	56	7.933	7.927	0.622	13120	9.78	ug/L	99
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	92858	9.67	ug/L	98
87)	Isopropyl Alcohol	45	8.470	8.464	0.664	55975	94.57	ug/L	90
88)	Allyl chloride	76	8.836	8.842	0.692	41877	9.61	ug/L	97
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	92653	95.22	ug/L	95
90)	Acrylonitrile	53	9.537	9.531	0.747	24318	9.56	ug/L	98
91)	Isopropyl ether	45	10.323	10.317	0.809	43399	1.84	ug/L	94
92)	2-Chloro-1,3-butadiene	53	10.433	10.427	0.818	19434	1.71	ug/L	100
93)	Ethyl tert-butyl ether	59	10.884	10.890	0.853	43125	1.82	ug/L	98
94)	Ethyl acetate	43	11.225	11.225	0.880	66133	9.87	ug/L	100
95)	Propionitrile	54	11.305	11.305	0.886	9900	9.72	ug/L	95
96)	Methacrylonitrile	67	11.512	11.512	0.902	28081	10.02	ug/L	99
97)	Tetrahydrofuran	42	11.609	11.597	0.910	23121	10.40	ug/L	98
98)	Isobutyl alcohol	43	12.183	12.176	0.955	32107	92.07	ug/L	96
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	39612	1.82	ug/L	94
100)	Methyl methacrylate	69	13.560	13.560	1.063	39210	9.01	ug/L	97
101)	1,4-Dioxane	88	13.652	13.652	1.070	7947	91.43	ug/L	92
102)	2-Nitropropane	43	14.103	14.103	1.105	15931	9.73	ug/L	92

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

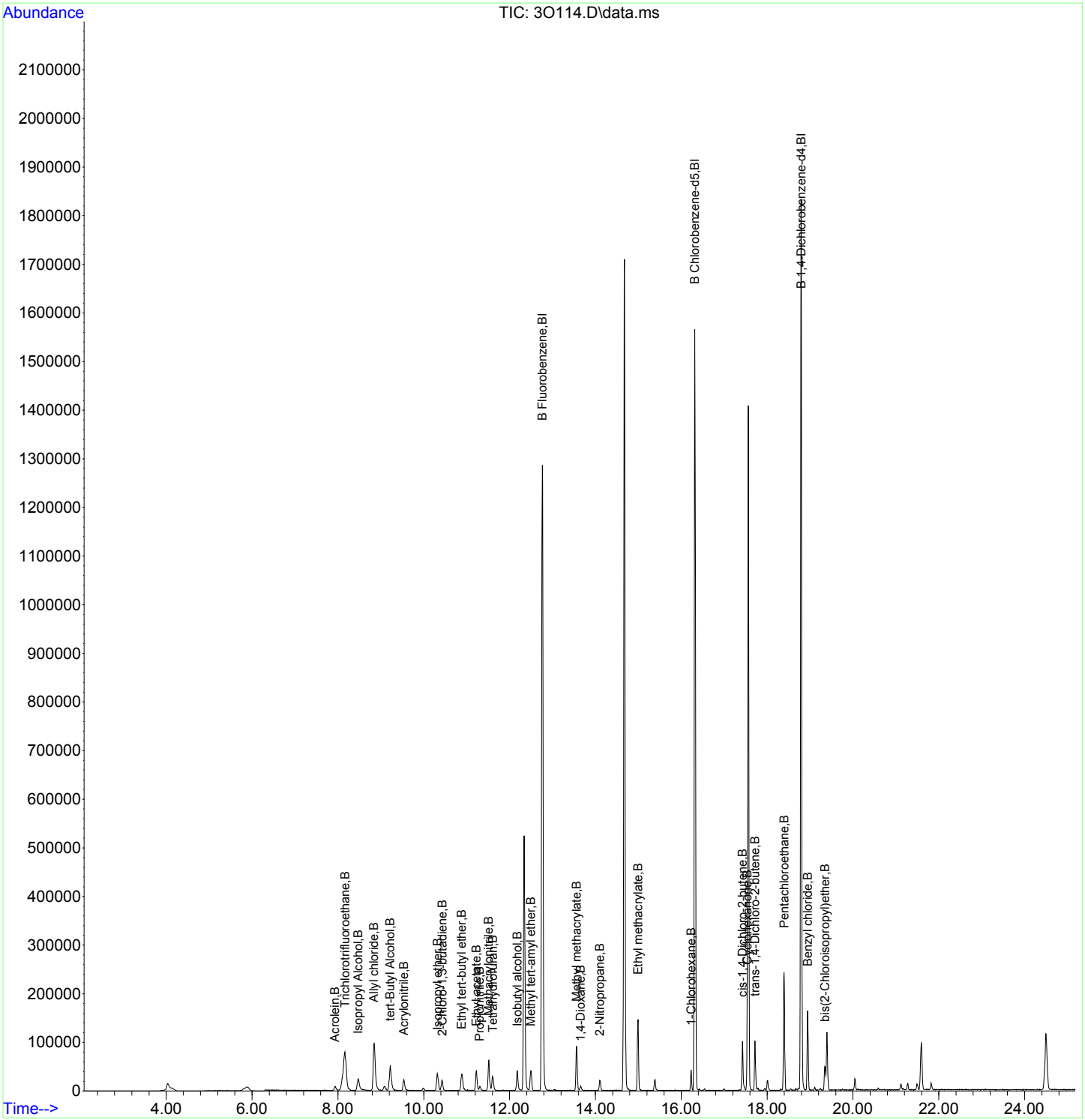
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.993	14.987	0.919	75463	9.30	ug/L	99
106) 1-Chlorohexane	91	16.231	16.231	0.864	14104	1.67	ug/L	99
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	23228	8.81	ug/L	87
108) Cyclohexanone	55	17.535	17.535	0.933	11152	50.41	ug/L	95
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	22963	9.68	ug/L	91
110) Pentachloroethane	167	18.395	18.395	0.979	49502	9.27	ug/L	86
111) Benzyl chloride	91	18.943	18.943	1.008	122825	8.99	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	37987	9.56	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O114.D
Acq On : 02 Jul 2018 19:07
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-12|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD010 5UL/5ML N/A MIX[B]
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 03 07:35:16 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

EH 07/03/2018

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1303275	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	567054	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	506747	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.559	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		5.922	6.159	0.464	0m	N.D.	d	
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.470	8.232	0.664	0m	N.D.	d	
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.842	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.836	8.854	0.692	0m	N.D.	d	
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.085	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.323	10.317	0.809	0m	N.D.	d	
20) 1,1-Dichloroethane		10.415	10.286	0.816	0m	N.D.	d	
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.457	12.438	0.976	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.506	12.548	0.980	0m	N.D.	d	
34) n-Butyl alcohol		13.048	13.024	1.022	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.408	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.566	13.475	1.063	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46) Toluene		14.749	14.755	0.904	0m	N.D.	d	
47) trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.		
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51) Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.		
54) Chlorobenzene		16.358	16.352	1.003	0m	N.D.	d	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56) Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57) m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d	
58) o-Xylene		16.993	16.986	1.041	0m	N.D.	d	
59) Styrene		17.005	16.992	1.042	0m	N.D.	d	
61) Bromoform		0.000	17.261	0.000	0	N.D.		
62) Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64) 1,1,2,2-Tetrachloroethane		17.535	17.663	0.933	0m	N.D.	d	
65) 1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66) Bromobenzene		17.773	17.767	0.946	0m	N.D.	d	
67) n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68) 1,3,5-Trimethylbenzene		17.944	17.949	0.955	0m	N.D.	d	
69) 2-Chlorotoluene		17.931	17.937	0.954	0m	N.D.	d	
70) 4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71) tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72) 1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73) sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74) 4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75) 1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76) 1,4-Dichlorobenzene		18.821	18.821	1.002	0m	N.D.	d	
77) n-Butylbenzene		19.114	19.108	1.017	0m	N.D.	d	
78) 1,2-Dichlorobenzene		19.248	19.236	1.024	0m	N.D.	d	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80) 1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81) Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82) Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83) 1,2,3-Trichlorobenzene		21.821	21.821	1.161	0m	N.D.	d	
85) Acrolein	56	7.939	7.927	0.622	29689	23.01	ug/L	99
86) Trichlorotrifluoroethane	101	8.165	8.165	0.640	234123	25.34	ug/L	98
87) Isopropyl Alcohol	45	8.470	8.464	0.664	133287	234.15	ug/L	93
88) Allyl chloride	76	8.848	8.842	0.693	104491	24.93	ug/L	96
89) tert-Butyl Alcohol	59	9.226	9.220	0.723	225214	240.67	ug/L	95
90) Acrylonitrile	53	9.537	9.531	0.747	61521	25.15	ug/L	99
91) Isopropyl ether	45	10.317	10.317	0.808	111455	4.91	ug/L	97
92) 2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	51858	4.75	ug/L	100
93) Ethyl tert-butyl ether	59	10.890	10.890	0.853	111209	4.87	ug/L	99
94) Ethyl acetate	43	11.225	11.225	0.880	161808	25.10	ug/L	98
95) Propionitrile	54	11.305	11.305	0.886	23842	24.34	ug/L	97
96) Methacrylonitrile	67	11.512	11.512	0.902	68215	25.30	ug/L	98
97) Tetrahydrofuran	42	11.603	11.597	0.909	50136	23.44	ug/L	97
98) Isobutyl alcohol	43	12.176	12.176	0.954	79333	236.55	ug/L	95
99) Methyl tert-amyl ether	73	12.493	12.500	0.979	104716	4.99	ug/L	96
100) Methyl methacrylate	69	13.560	13.560	1.063	105893	25.30	ug/L	99
101) 1,4-Dioxane	88	13.658	13.652	1.070	20238	242.09	ug/L	97
102) 2-Nitropropane	43	14.109	14.103	1.106	44101	21.76	ug/L	95

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

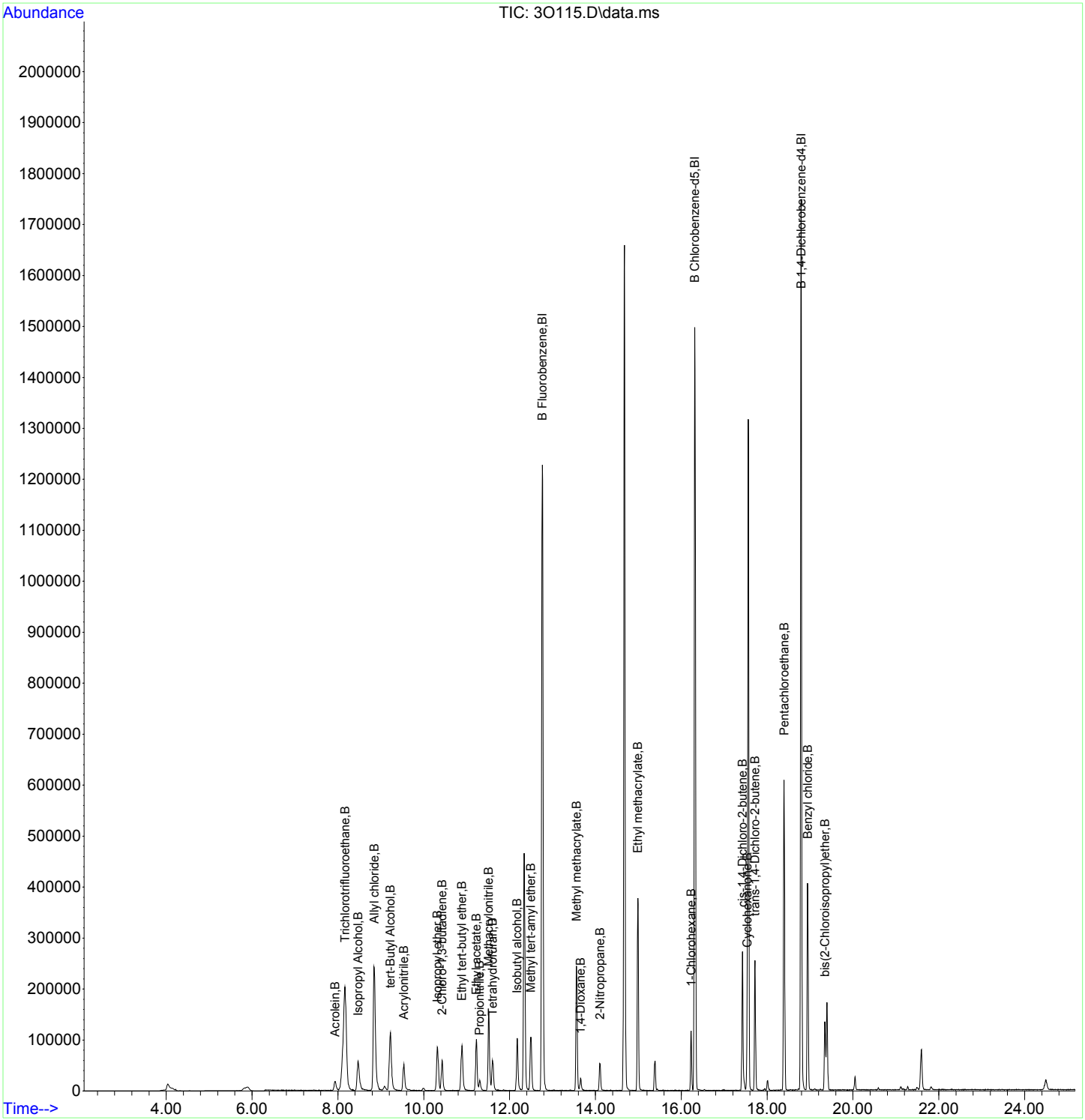
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	203830	25.52	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	40161	4.93	ug/L	99
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	62803	24.68	ug/L	89
108) Cyclohexanone	55	17.535	17.535	0.933	24247	113.52	ug/L	95
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	58751	25.66	ug/L	93
110) Pentachloroethane	167	18.395	18.395	0.979	127815	24.78	ug/L	94
111) Benzyl chloride	91	18.943	18.943	1.008	323925	24.55	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	92573	24.12	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O115.D
Acq On : 02 Jul 2018 19:38
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-13|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD025 5UL/5ML N/A MIX[B]
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 03 07:35:18 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1244994	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	534413	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	494797	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.171	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.171	8.177	0.640	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.854	8.665	0.694	0m	N.D.	d	
15) Methylene chloride		9.098	9.091	0.713	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.323	10.317	0.809	0m	N.D.	d	
20) 1,1-Dichloroethane		10.433	10.286	0.818	0m	N.D.	d	
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.634	11.628	0.912	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.176	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.	d	
32) Benzene		12.420	12.426	0.973	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.420	13.396	1.052	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.548	13.475	1.062	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		15.438	15.413	0.946	0m	N.D.	d	
50)	1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.840	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56)	Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		0.000	16.986	0.000	0	N.D.		
59)	Styrene		16.999	16.992	1.042	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.535	17.663	0.933	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.956	17.949	0.956	0m	N.D.	d	
69)	2-Chlorotoluene		17.944	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.822	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.126	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.933	7.927	0.622	65018	52.76	ug/L	98
86)	Trichlorotrifluoroethane	101	8.171	8.165	0.640	444321	50.34	ug/L	99
87)	Isopropyl Alcohol	45	8.470	8.464	0.664	280970	516.70	ug/L	94
88)	Allyl chloride	76	8.854	8.842	0.694	210576	52.59	ug/L	98
89)	tert-Butyl Alcohol	59	9.226	9.220	0.723	481446	538.57	ug/L	97
90)	Acrylonitrile	53	9.531	9.531	0.747	122265	52.33	ug/L	100
91)	Isopropyl ether	45	10.323	10.317	0.809	218967	10.09	ug/L	99
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	102714	9.85	ug/L	98
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	216576	9.93	ug/L	99
94)	Ethyl acetate	43	11.225	11.225	0.880	328290	53.31	ug/L	99
95)	Propionitrile	54	11.305	11.305	0.886	48291	51.61	ug/L	98
96)	Methacrylonitrile	67	11.512	11.512	0.902	131401	51.01	ug/L	98
97)	Tetrahydrofuran	42	11.603	11.597	0.909	104508	51.16	ug/L	99
98)	Isobutyl alcohol	43	12.176	12.176	0.954	167830	523.84	ug/L	97
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	201961	10.08	ug/L	98
100)	Methyl methacrylate	69	13.560	13.560	1.063	211765	52.96	ug/L	99
101)	1,4-Dioxane	88	13.652	13.652	1.070	41491	519.55	ug/L	99
102)	2-Nitropropane	43	14.103	14.103	1.105	97872	46.16	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

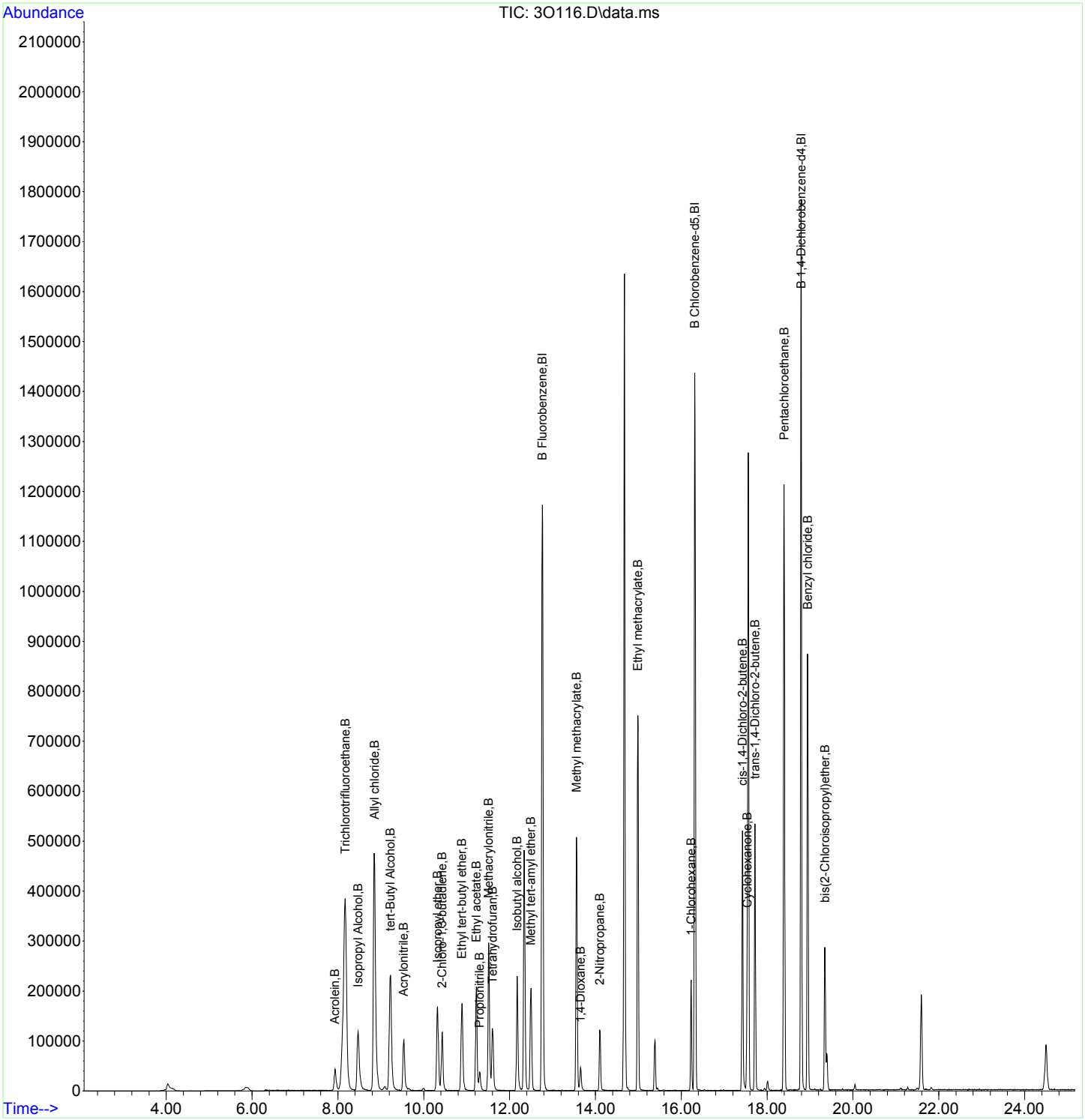
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	409209	54.36	ug/L	99
106) 1-Chlorohexane	91	16.231	16.231	0.864	73351	9.21	ug/L	96
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	122599	49.34	ug/L	94
108) Cyclohexanone	55	17.535	17.535	0.933	52075	249.69	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	119568	53.48	ug/L	95
110) Pentachloroethane	167	18.395	18.395	0.979	259026	51.44	ug/L	96
111) Benzyl chloride	91	18.943	18.943	1.008	706817	54.85	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	184647	49.27	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O116.D
Acq On : 02 Jul 2018 20:10
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-14|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD050 5UL/5ML N/A MIX[B]
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 03 07:35:20 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1181618	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	520186	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	464461	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.559	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone		8.165	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.159	8.177	0.639	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.842	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.085	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.421	10.286	0.817	0m	N.D.	d	
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.621	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.176	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.438	12.438	0.975	0m	N.D.	d	
32) Benzene		12.420	12.426	0.973	0m	N.D.	d	
33) Cyclohexene		12.487	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.560	13.475	1.063	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46) Toluene		14.755	14.755	0.904	0m	N.D.	d	
47) trans-1,3-Dichloroprop...		14.981	14.968	0.918	0m	N.D.	d	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.		
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.		
51) Tetrachloroethylene		15.389	15.383	0.943	0m	N.D.	d	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53) 1,2-Dibromoethane		15.840	15.840	0.971	0m	N.D.	d	
54) Chlorobenzene		16.358	16.352	1.003	0m	N.D.	d	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.		
56) Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57) m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d	
58) o-Xylene		0.000	16.986	0.000	0	N.D.		
59) Styrene		16.992	16.992	1.041	0m	N.D.	d	
61) Bromoform		0.000	17.261	0.000	0	N.D.		
62) Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64) 1,1,2,2-Tetrachloroethane		17.535	17.663	0.933	0m	N.D.	d	
65) 1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66) Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67) n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68) 1,3,5-Trimethylbenzene		17.943	17.949	0.955	0m	N.D.	d	
69) 2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70) 4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71) tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72) 1,2,4-Trimethylbenzene		18.358	18.364	0.977	0m	N.D.	d	
73) sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74) 4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75) 1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d	
76) 1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77) n-Butylbenzene		19.102	19.108	1.017	0m	N.D.	d	
78) 1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80) 1,2,4-Trichlorobenzene		21.107	21.113	1.123	0m	N.D.	d	
81) Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82) Naphthalene		21.492	21.491	1.144	0m	N.D.	d	
83) 1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85) Acrolein	56	7.927	7.927	0.621	130917	111.93	ug/L	98
86) Trichlorotrifluoroethane	101	8.159	8.165	0.639	871617	104.06	ug/L	99
87) Isopropyl Alcohol	45	8.470	8.464	0.664	572082	1108.48	ug/L	97
88) Allyl chloride	76	8.848	8.842	0.693	405104	106.60	ug/L	98
89) tert-Butyl Alcohol	59	9.220	9.220	0.722	959250	1130.62	ug/L	98
90) Acrylonitrile	53	9.530	9.531	0.747	228710	103.13	ug/L	100
91) Isopropyl ether	45	10.323	10.317	0.809	443743	21.55	ug/L	99
92) 2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	208446	21.05	ug/L	99
93) Ethyl tert-butyl ether	59	10.890	10.890	0.853	460718	22.25	ug/L	100
94) Ethyl acetate	43	11.219	11.225	0.879	650737	111.34	ug/L	99
95) Propionitrile	54	11.305	11.305	0.886	95534	107.57	ug/L	100
96) Methacrylonitrile	67	11.512	11.512	0.902	265455	108.58	ug/L	96
97) Tetrahydrofuran	42	11.597	11.597	0.909	206720	106.62	ug/L	98
98) Isobutyl alcohol	43	12.176	12.176	0.954	347693	1143.45	ug/L	98
99) Methyl tert-amyl ether	73	12.499	12.500	0.979	401919	21.14	ug/L	98
100) Methyl methacrylate	69	13.560	13.560	1.063	428530	112.93	ug/L	99
101) 1,4-Dioxane	88	13.658	13.652	1.070	81018	1068.93	ug/L	97
102) 2-Nitropropane	43	14.103	14.103	1.105	207529	99.01	ug/L	97

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

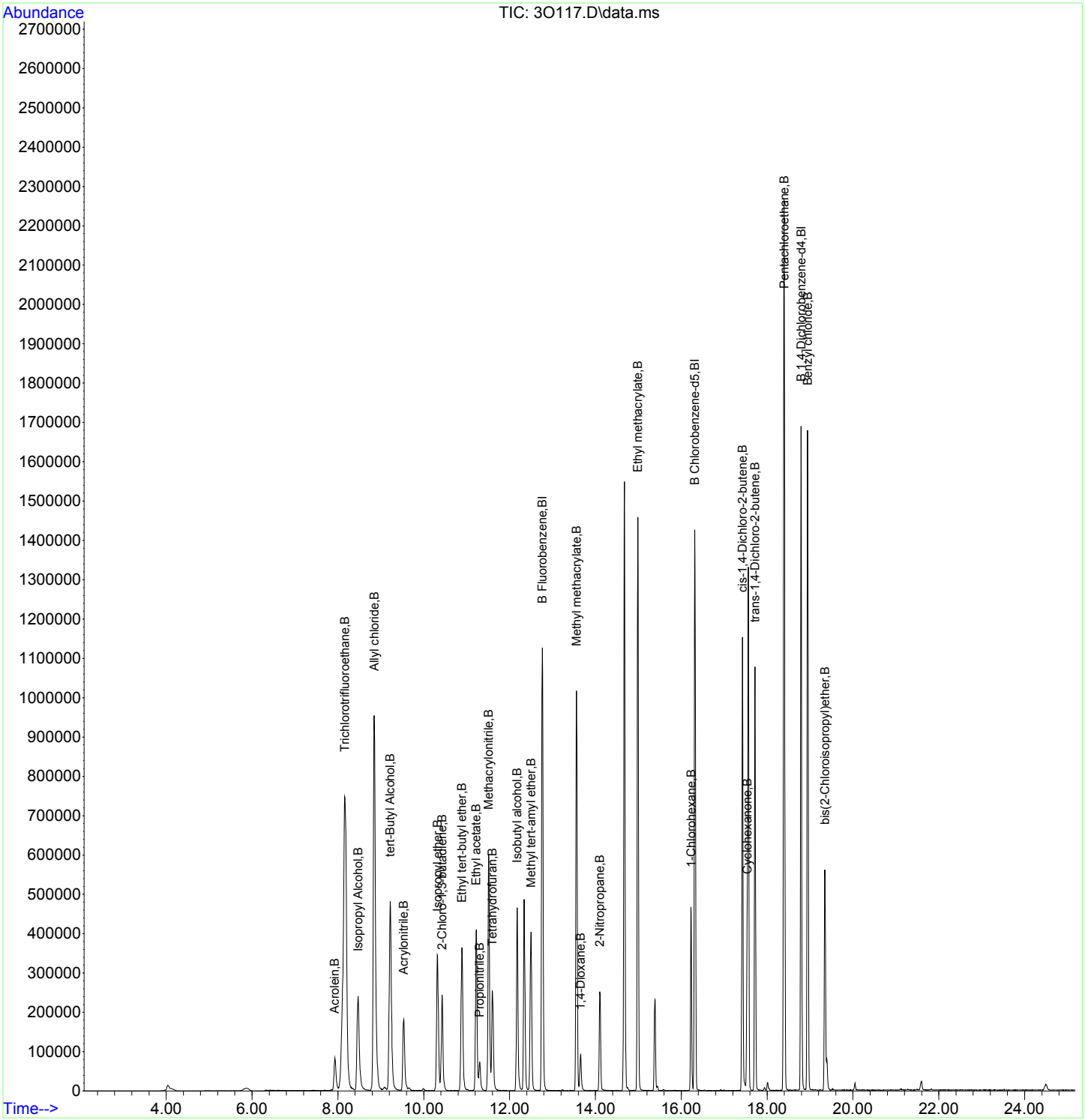
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	784311	107.03	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	159505	21.34	ug/L	98
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	256003	109.76	ug/L	98
108) Cyclohexanone	55	17.535	17.535	0.933	105780	540.32	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	236847	112.85	ug/L	96
110) Pentachloroethane	167	18.395	18.395	0.979	493847	104.47	ug/L	97
111) Benzyl chloride	91	18.943	18.943	1.008	1354205	111.96	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	373536	106.18	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O117.D
Acq On : 02 Jul 2018 20:41
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-15|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD100 5UL/5ML N/A MIX[B]
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 03 07:35:22 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1165552	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	497910	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	444888	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.062	7.061	0.553	0m	N.D.	d	
8) Ethyl ether		7.616	7.610	0.597	0m	N.D.	d	
9) Acetone		8.171	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.147	8.177	0.638	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.842	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.848	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.842	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.427	10.286	0.817	0m	N.D.	d	
21) 2-Butanone		11.225	11.183	0.880	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.170	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.445	12.438	0.975	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.030	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.377	13.396	1.048	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.554	13.475	1.062	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.341	14.353	1.124	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46)	Toluene		14.749	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.975	14.968	0.918	0m	N.D.	d	
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.		
50)	1,3-Dichloropropane		15.401	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.407	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57)	m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d	
58)	o-Xylene		0.000	16.986	0.000	0	N.D.		
59)	Styrene		17.005	16.992	1.042	0m	N.D.	d	
61)	Bromoform		0.000	17.261	0.000	0	N.D.		
62)	Isopropylbenzene		17.352	17.358	0.923	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		0.000	17.767	0.000	0	N.D.		
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.944	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.358	18.364	0.977	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.828	18.821	1.002	0m	N.D.	d	
77)	n-Butylbenzene		19.102	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.266	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85)	Acrolein	56	7.927	7.927	0.621	316835	274.61	ug/L	100
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	2122450	256.88	ug/L	100
87)	Isopropyl Alcohol	45	8.464	8.464	0.663	1319379	2591.71	ug/L	100
88)	Allyl chloride	76	8.842	8.842	0.693	981056	261.71	ug/L	100
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	2139466	2556.44	ug/L	100
90)	Acrylonitrile	53	9.531	9.531	0.747	552591	252.62	ug/L	100
91)	Isopropyl ether	45	10.317	10.317	0.808	1035585	50.98	ug/L	100
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	537865	55.08	ug/L	100
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	1074103	52.58	ug/L	100
94)	Ethyl acetate	43	11.225	11.225	0.880	1430664	248.15	ug/L	100
95)	Propionitrile	54	11.305	11.305	0.886	219417	250.47	ug/L	100
96)	Methacrylonitrile	67	11.512	11.512	0.902	603157	250.11	ug/L	100
97)	Tetrahydrofuran	42	11.597	11.597	0.909	453467	237.11	ug/L	100
98)	Isobutyl alcohol	43	12.176	12.176	0.954	773809	2579.88	ug/L	100
99)	Methyl tert-amyl ether	73	12.500	12.500	0.979	971635	51.81	ug/L	100
100)	Methyl methacrylate	69	13.560	13.560	1.063	974858	260.44	ug/L	100
101)	1,4-Dioxane	88	13.652	13.652	1.070	183402	2453.11	ug/L	100
102)	2-Nitropropane	43	14.103	14.103	1.105	524270	248.38	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

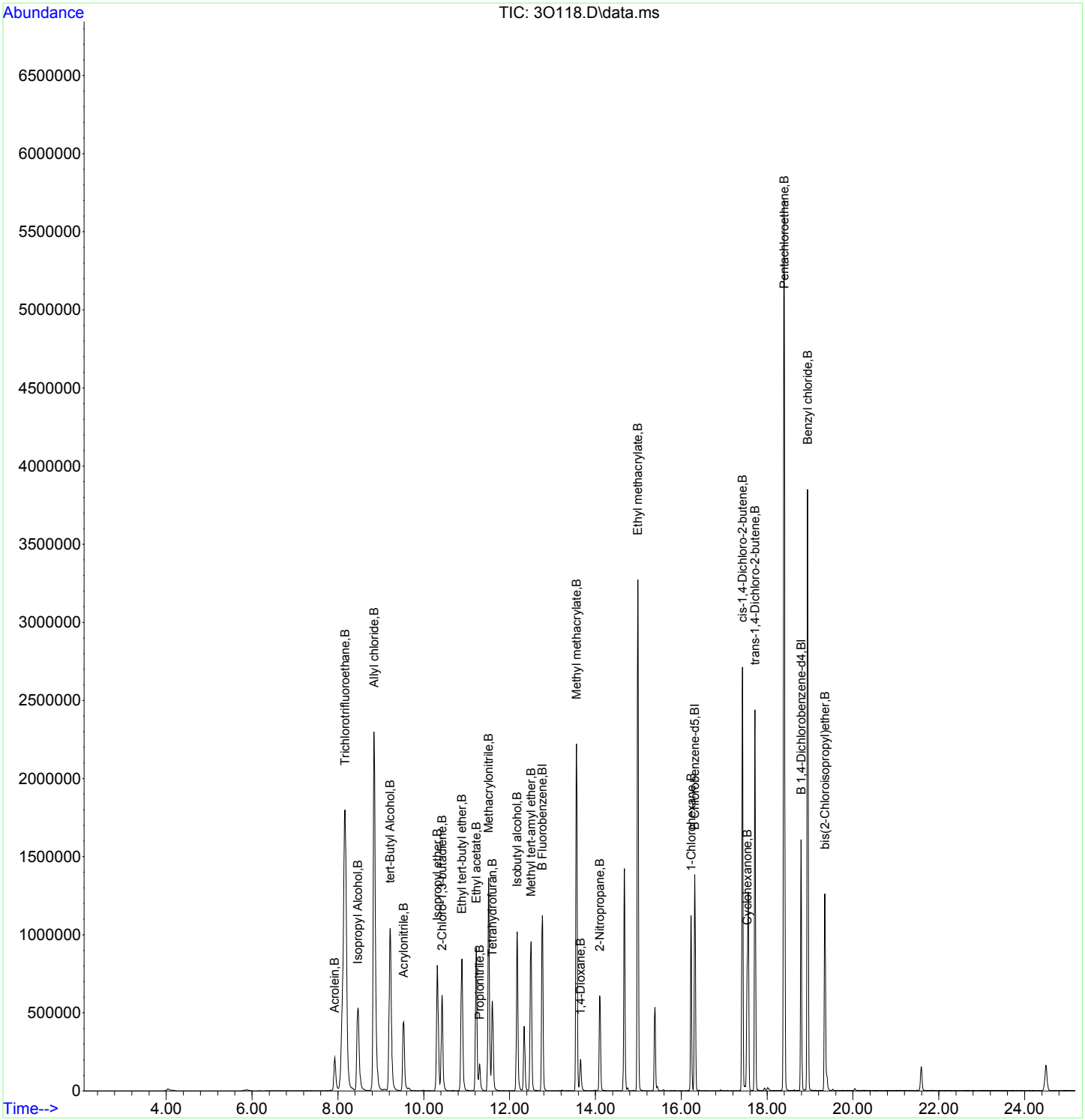
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	1774047	252.94	ug/L	100
106) 1-Chlorohexane	91	16.231	16.231	0.864	397969	55.59	ug/L	100
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	634806	284.15	ug/L	100
108) Cyclohexanone	55	17.535	17.535	0.933	233663	1246.05	ug/L	100
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	526181	261.74	ug/L	100
110) Pentachloroethane	167	18.395	18.395	0.979	1274137	281.40	ug/L	100
111) Benzyl chloride	91	18.943	18.943	1.008	3100265	267.59	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	845266	250.84	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O118.D
Acq On : 02 Jul 2018 21:12
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-16|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD250 5UL/5ML N/A MIX[B]
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 03 07:35:24 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.761	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1150837	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	535888	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	474921	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.559	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.037	7.061	0.551	0m	N.D.	d	
8) Ethyl ether		7.604	7.610	0.596	0m	N.D.	d	
9) Acetone		8.171	8.232	0.640	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.079	8.177	0.633	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.854	8.854	0.694	0m	N.D.	d	
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.085	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		10.000	9.988	0.784	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.433	10.286	0.818	0m	N.D.	d	
21) 2-Butanone		11.231	11.183	0.880	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		12.170	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.463	12.438	0.977	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.219	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.420	13.396	1.052	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.560	13.475	1.063	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.		
46) Toluene		14.755	14.755	0.904	0m	N.D.	d	
47) trans-1,3-Dichloroprop...		14.981	14.968	0.918	0m	N.D.	d	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.		
50) 1,3-Dichloropropane		15.450	15.401	0.947	0m	N.D.	d	
51) Tetrachloroethylene		15.389	15.383	0.943	0m	N.D.	d	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53) 1,2-Dibromoethane		15.852	15.840	0.972	0m	N.D.	d	
54) Chlorobenzene		16.364	16.352	1.003	0m	N.D.	d	
55) 1,1,1,2-Tetrachloroethane		16.419	16.419	1.006	0m	N.D.	d	
56) Ethylbenzene		16.419	16.425	1.006	0m	N.D.	d	
57) m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58) o-Xylene		16.998	16.986	1.042	0m	N.D.	d	
59) Styrene		16.998	16.992	1.042	0m	N.D.	d	
61) Bromoform		0.000	17.261	0.000	0	N.D.		
62) Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64) 1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65) 1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66) Bromobenzene		17.773	17.767	0.946	0m	N.D.	d	
67) n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68) 1,3,5-Trimethylbenzene		17.949	17.949	0.955	0m	N.D.	d	
69) 2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70) 4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71) tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d	
72) 1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73) sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74) 4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75) 1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76) 1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77) n-Butylbenzene		19.248	19.108	1.024	0m	N.D.	d	
78) 1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80) 1,2,4-Trichlorobenzene		21.113	21.113	1.124	0m	N.D.	d	
81) Hexachlorobutadiene		21.272	21.278	1.132	0m	N.D.	d	
82) Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83) 1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85) Acrolein	56	7.933	7.927	0.622	366125	321.39	ug/L	98
86) Trichlorotrifluoroethane	101	8.165	8.165	0.640	2508600	307.49	ug/L	100
87) Isopropyl Alcohol	45	8.464	8.464	0.663	1717285	3416.46	ug/L	99
88) Allyl chloride	76	8.848	8.842	0.693	1138579	307.61	ug/L	98
89) tert-Butyl Alcohol	59	9.219	9.220	0.722	2796561	3384.32	ug/L	100
90) Acrylonitrile	53	9.536	9.531	0.747	686300	317.76	ug/L	99
91) Isopropyl ether	45	10.317	10.317	0.808	1305708	65.10	ug/L	100
92) 2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	639835	66.36	ug/L	100
93) Ethyl tert-butyl ether	59	10.890	10.890	0.853	1263995	62.67	ug/L	99
94) Ethyl acetate	43	11.219	11.225	0.879	1703240	299.21	ug/L	100
95) Propionitrile	54	11.298	11.305	0.885	275457	318.46	ug/L	99
96) Methacrylonitrile	67	11.518	11.512	0.903	770417	323.56	ug/L	99
97) Tetrahydrofuran	42	11.603	11.597	0.909	581472	307.93	ug/L	99
98) Isobutyl alcohol	43	12.176	12.176	0.954	1009397	3408.36	ug/L	100
99) Methyl tert-amyl ether	73	12.493	12.500	0.979	1207756	65.22	ug/L	100
100) Methyl methacrylate	69	13.560	13.560	1.063	1254247	339.36	ug/L	99
101) 1,4-Dioxane	88	13.652	13.652	1.070	260775	3532.62	ug/L	100
102) 2-Nitropropane	43	14.103	14.103	1.105	666527	318.86	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

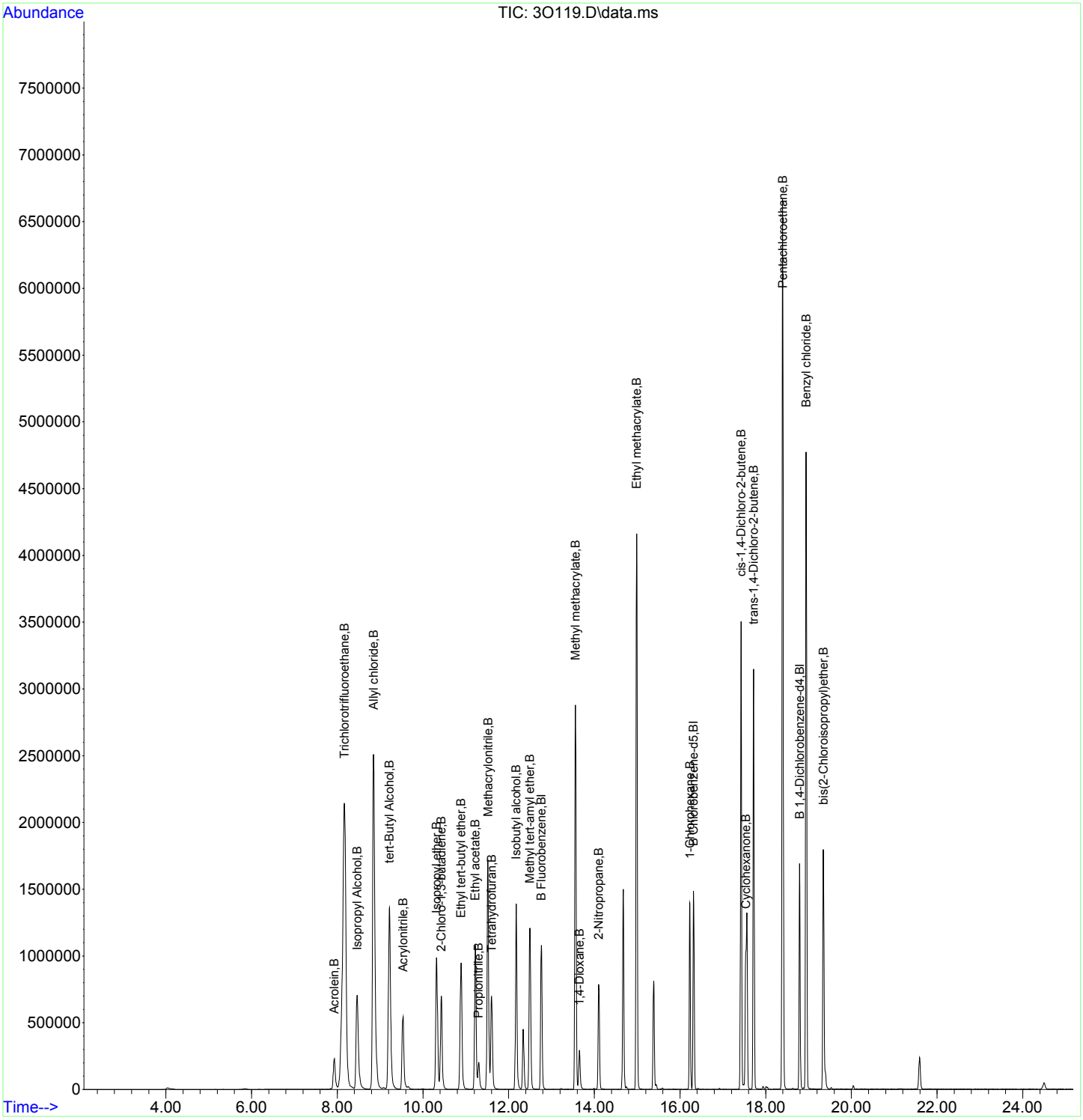
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	2392701	316.96	ug/L	99
106) 1-Chlorohexane	91	16.230	16.231	0.864	503353	65.87	ug/L	99
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	787116	330.04	ug/L	99
108) Cyclohexanone	55	17.535	17.535	0.933	307926	1538.23	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	687269	320.25	ug/L	99
110) Pentachloroethane	167	18.395	18.395	0.979	1471146	304.36	ug/L	99
111) Benzyl chloride	91	18.943	18.943	1.008	3919423	316.90	ug/L	99
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1197154	332.80	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O119.D
Acq On : 02 Jul 2018 21:44
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-17|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD300 3UL/5ML N/A MIX[B]
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 03 07:35:26 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

GH 07/03/2018

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	0m	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	0m	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	0m	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1167503	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	501134	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	476050	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	0d	0.00	ug/L	
45) Toluene-d8	98	14.676	14.676	0.899	0d	0.00	ug/L	
63) Bromofluorobenzene	95	17.560	17.559	0.934	0d	0.00	ug/L	
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.390	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.056	7.061	0.553	0m	N.D.	d	
8) Ethyl ether		7.616	7.610	0.597	0m	N.D.	d	
9) Acetone		8.159	8.232	0.639	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.165	8.177	0.640	0m	N.D.	d	
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.854	8.854	0.694	0m	N.D.	d	
14) Carbon disulfide		8.848	8.665	0.693	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		9.525	9.537	0.746	0m	N.D.	d	
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.299	10.286	0.807	0m	N.D.	d	
21) 2-Butanone		11.201	11.183	0.878	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		11.183	11.195	0.876	0m	N.D.	d	
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.640	11.628	0.912	0m	N.D.	d	
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		12.000	11.999	0.940	0m	N.D.	d	
28) 1,1-Dichloropropene		12.183	12.127	0.955	0m	N.D.	d	
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane		12.439	12.438	0.975	0m	N.D.	d	
32) Benzene		12.432	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.493	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.024	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.219	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.414	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		13.554	13.475	1.062	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.		
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.359	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.			
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d		
47)	trans-1,3-Dichloroprop...		14.987	14.968	0.919	0m	N.D.	d		
48)	1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.			
49)	2-Hexanone		0.000	15.413	0.000	0	N.D.			
50)	1,3-Dichloropropane		15.401	15.401	0.944	0m	N.D.	d		
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d		
52)	Dibromochloromethane		0.000	15.676	0.000	0	N.D.			
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d		
54)	Chlorobenzene		16.359	16.352	1.003	0m	N.D.	d		
55)	1,1,1,2-Tetrachloroethane		16.407	16.419	1.006	0m	N.D.	d		
56)	Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d		
57)	m,p-Xylenes		16.535	16.541	1.013	0m	N.D.	d		
58)	o-Xylene		16.993	16.986	1.041	0m	N.D.	d		
59)	Styrene		16.993	16.992	1.041	0m	N.D.	d		
61)	Bromoform		0.000	17.261	0.000	0	N.D.			
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d		
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d		
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d		
66)	Bromobenzene		0.000	17.767	0.000	0	N.D.			
67)	n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d		
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d		
69)	2-Chlorotoluene		17.938	17.937	0.955	0m	N.D.	d		
70)	4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d		
71)	tert-Butylbenzene		18.395	18.321	0.979	0m	N.D.	d		
72)	1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d		
73)	sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d		
74)	4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d		
75)	1,3-Dichlorobenzene		18.730	18.730	0.997	0m	N.D.	d		
76)	1,4-Dichlorobenzene		18.822	18.821	1.002	0m	N.D.	d		
77)	n-Butylbenzene		19.242	19.108	1.024	0m	N.D.	d		
78)	1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d		
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.			
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d		
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d		
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d		
83)	1,2,3-Trichlorobenzene		21.833	21.821	1.162	0m	N.D.	d		
85)	Acrolein	56	7.927	7.927	0.621	615522	532.60	ug/L	98	A
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.640	4068873	491.63	ug/L	99	
87)	Isopropyl Alcohol	45	8.464	8.464	0.663	2526439	4954.49	ug/L	98	
88)	Allyl chloride	76	8.848	8.842	0.693	1863809	496.36	ug/L	95	
89)	tert-Butyl Alcohol	59	9.220	9.220	0.722	4171378	4976.03	ug/L	99	
90)	Acrylonitrile	53	9.531	9.531	0.747	1109423	506.33	ug/L	99	A
91)	Isopropyl ether	45	10.323	10.317	0.809	2096868	103.06	ug/L	99	A
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	1071746	109.56	ug/L	100	A
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	2203931	107.71	ug/L	100	A
94)	Ethyl acetate	43	11.219	11.225	0.879	2534137	438.82	ug/L	100	
95)	Propionitrile	54	11.305	11.305	0.886	427430	487.11	ug/L	99	
96)	Methacrylonitrile	67	11.512	11.512	0.902	1192455	493.66	ug/L	100	
97)	Tetrahydrofuran	42	11.603	11.597	0.909	890862	465.03	ug/L	100	
98)	Isobutyl alcohol	43	12.176	12.176	0.954	1525863	5078.73	ug/L	99	A
99)	Methyl tert-amyl ether	73	12.493	12.500	0.979	1987054	105.77	ug/L	99	A
100)	Methyl methacrylate	69	13.560	13.560	1.063	1815207	484.13	ug/L	99	
101)	1,4-Dioxane	88	13.652	13.652	1.070	372061	4968.22	ug/L	99	
102)	2-Nitropropane	43	14.103	14.103	1.105	1043063	490.06	ug/L	98	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

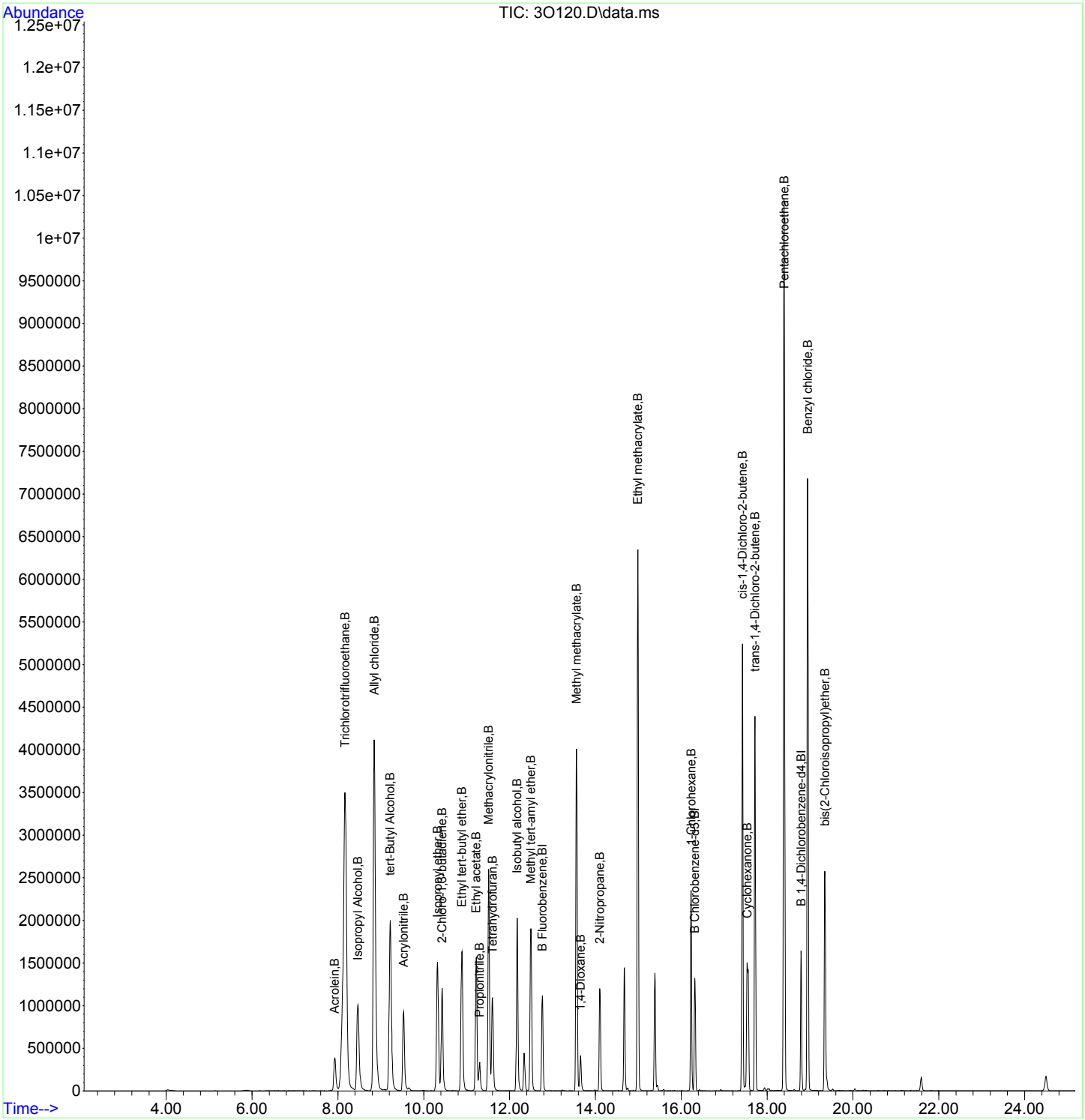
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
104) Ethyl methacrylate	69	14.987	14.987	0.919	3589200	508.44	ug/L	98	A
106) 1-Chlorohexane	91	16.231	16.231	0.864	861557	112.47	ug/L	99	A
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	1188924	497.34	ug/L	98	
108) Cyclohexanone	55	17.535	17.535	0.933	468032	2332.48	ug/L	98	
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	987353	458.99	ug/L	97	
110) Pentachloroethane	167	18.395	18.395	0.979	2379681	491.16	ug/L	98	
111) Benzyl chloride	91	18.943	18.943	1.008	5837448	470.87	ug/L	97	
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1771335	491.25	ug/L	97	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O120.D
Acq On : 02 Jul 2018 22:15
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-18|ICAL|1|VOA|1|VOA8260CL|
Misc : VSTD500 5UL/5ML N/A MIX[B]
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 03 07:35:28 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454474

Instrument ID: VOA3.I **Injection Date:** 02-JUL-18 23:17

Data File: 070218V3\3O122.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180702-19 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.18254		.01		-2.4372	30		Averaged
S	Toluene-d8	2.3294	2.35214		.01		0.97622	30		Averaged
S	Bromofluorobenzene	0.9829	0.92642		.01		-5.74626	30		Averaged
	Trichlorotrifluoroethane	0.3544	0.32549		.01		-8.15745	30		Averaged
	1,4-Dioxane	0.0032	0.00313		.01		-2.1875	30		Averaged

Quantitation Report
GEL Laboratories, LLC

JP 07/03/2018

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

EH 07/03/2018

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.768	12.761	1.000	1219498	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	510525	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	500370	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.768	12.762	1.000	1221311	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	518737	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	500730	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	222610	48.78	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1200828	50.49	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	463551	47.13	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.972	4.990	0.389	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.019	7.061	0.550	0m	N.D.	d	
8) Ethyl ether		7.610	7.610	0.596	0m	N.D.	d	
9) Acetone		8.153	8.232	0.639	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.165	8.177	0.639	0m	N.D.	d	
11) Iodomethane		8.482	8.500	0.664	0m	N.D.	d	
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.836	8.854	0.692	0m	N.D.	d	
14) Carbon disulfide		8.665	8.665	0.679	0m	N.D.	d	
15) Methylene chloride		9.092	9.091	0.712	0m	N.D.	d	
16) tert-Butyl methyl ether		9.537	9.537	0.747	0m	N.D.	d	
17) trans-1,2-Dichloroethy...		9.561	9.567	0.749	0m	N.D.	d	
18) Hexane		9.994	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.317	10.317	0.808	0m	N.D.	d	
20) 1,1-Dichloroethane		10.286	10.286	0.806	0m	N.D.	d	
21) 2-Butanone		11.213	11.183	0.878	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		11.201	11.183	0.877	0m	N.D.	d	
23) 2,2-Dichloropropane		11.195	11.195	0.877	0m	N.D.	d	
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.628	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		11.914	11.914	0.933	0m	N.D.	d	
27) Cyclohexane		12.006	11.999	0.940	0m	N.D.	d	
28) 1,1-Dichloropropene		12.128	12.127	0.950	0m	N.D.	d	
29) Carbon tetrachloride		12.152	12.146	0.952	0m	N.D.	d	
31) 1,2-Dichloroethane		12.451	12.438	0.975	0m	N.D.	d	
32) Benzene		12.426	12.426	0.973	0m	N.D.	d	
33) Cyclohexene		12.481	12.548	0.978	0m	N.D.	d	
34) n-Butyl alcohol		13.036	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.225	13.225	1.036	0m	N.D.	d	
36) 2-Pentanone		13.402	13.396	1.050	0m	N.D.	d	
37) 1,2-Dichloropropane		13.524	13.524	1.059	0m	N.D.	d	
38) Methylcyclohexane		13.475	13.475	1.055	0m	N.D.	d	
39) Dibromomethane		13.688	13.682	1.072	0m	N.D.	d	
40) Bromodichloromethane		13.835	13.834	1.084	0m	N.D.	d	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.		
42) cis-1,3-Dichloropropylene		14.353	14.353	1.124	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44)	4-Methyl-2-pentanone		14.487	14.487	0.888	0m	N.D.	d	
46)	Toluene		14.755	14.755	0.904	0m	N.D.	d	
47)	trans-1,3-Dichloroprop...		14.968	14.968	0.917	0m	N.D.	d	
48)	1,1,2-Trichloroethane		15.200	15.200	0.932	0m	N.D.	d	
49)	2-Hexanone		15.426	15.413	0.945	0m	N.D.	d	
50)	1,3-Dichloropropane		15.407	15.401	0.944	0m	N.D.	d	
51)	Tetrachloroethylene		15.383	15.383	0.943	0m	N.D.	d	
52)	Dibromochloromethane		15.676	15.676	0.961	0m	N.D.	d	
53)	1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54)	Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55)	1,1,1,2-Tetrachloroethane		16.419	16.419	1.006	0m	N.D.	d	
56)	Ethylbenzene		16.426	16.425	1.007	0m	N.D.	d	
57)	m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58)	o-Xylene		16.992	16.986	1.041	0m	N.D.	d	
59)	Styrene		16.999	16.992	1.042	0m	N.D.	d	
61)	Bromoform		17.255	17.261	0.918	0m	N.D.	d	
62)	Isopropylbenzene		17.358	17.358	0.924	0m	N.D.	d	
64)	1,1,2,2-Tetrachloroethane		17.718	17.663	0.943	0m	N.D.	d	
65)	1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66)	Bromobenzene		17.761	17.767	0.945	0m	N.D.	d	
67)	n-Propylbenzene		17.785	17.791	0.946	0m	N.D.	d	
68)	1,3,5-Trimethylbenzene		17.950	17.949	0.955	0m	N.D.	d	
69)	2-Chlorotoluene		17.937	17.937	0.955	0m	N.D.	d	
70)	4-Chlorotoluene		18.041	18.041	0.960	0m	N.D.	d	
71)	tert-Butylbenzene		18.315	18.321	0.975	0m	N.D.	d	
72)	1,2,4-Trimethylbenzene		18.370	18.364	0.978	0m	N.D.	d	
73)	sec-Butylbenzene		18.547	18.547	0.987	0m	N.D.	d	
74)	4-Isopropyltoluene		18.675	18.675	0.994	0m	N.D.	d	
75)	1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76)	1,4-Dichlorobenzene		18.815	18.821	1.001	0m	N.D.	d	
77)	n-Butylbenzene		19.114	19.108	1.017	0m	N.D.	d	
78)	1,2-Dichlorobenzene		19.236	19.236	1.024	0m	N.D.	d	
79)	1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.		
80)	1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81)	Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82)	Naphthalene		21.492	21.491	1.144	0m	N.D.	d	
83)	1,2,3-Trichlorobenzene		21.821	21.821	1.161	0m	N.D.	d	
85)	Acrolein	56	7.927	7.927	0.621	322388	266.67	ug/L	99
86)	Trichlorotrifluoroethane	101	8.165	8.165	0.639	1987614	229.58	ug/L	99
87)	Isopropyl Alcohol	45	8.470	8.464	0.663	1292470	2422.94	ug/L	100
88)	Allyl chloride	76	8.848	8.842	0.693	937065	238.56	ug/L	99
89)	tert-Butyl Alcohol	59	9.226	9.220	0.723	2210405	2520.62	ug/L	100
90)	Acrylonitrile	53	9.531	9.531	0.746	556664	242.86	ug/L	100
91)	Isopropyl ether	45	10.317	10.317	0.808	1031420	48.46	ug/L	99
92)	2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	537626	52.54	ug/L	98
93)	Ethyl tert-butyl ether	59	10.890	10.890	0.853	1039375	48.56	ug/L	100
94)	Ethyl acetate	43	11.219	11.225	0.879	1573920	260.54	ug/L	100
95)	Propionitrile	54	11.305	11.305	0.885	218158	237.67	ug/L	99
96)	Methacrylonitrile	67	11.512	11.512	0.902	593380	234.83	ug/L	99
97)	Tetrahydrofuran	42	11.603	11.597	0.909	475381	237.22	ug/L	99
98)	Isobutyl alcohol	43	12.176	12.176	0.954	814842	2592.65	ug/L	99
99)	Methyl tert-amyl ether	73	12.499	12.500	0.979	962933	49.00	ug/L	100
100)	Methyl methacrylate	69	13.554	13.560	1.062	966559	246.43	ug/L	99
101)	1,4-Dioxane	88	13.652	13.652	1.069	190958	2437.57	ug/L	98
102)	2-Nitropropane	43	14.103	14.103	1.105	535628	242.26	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

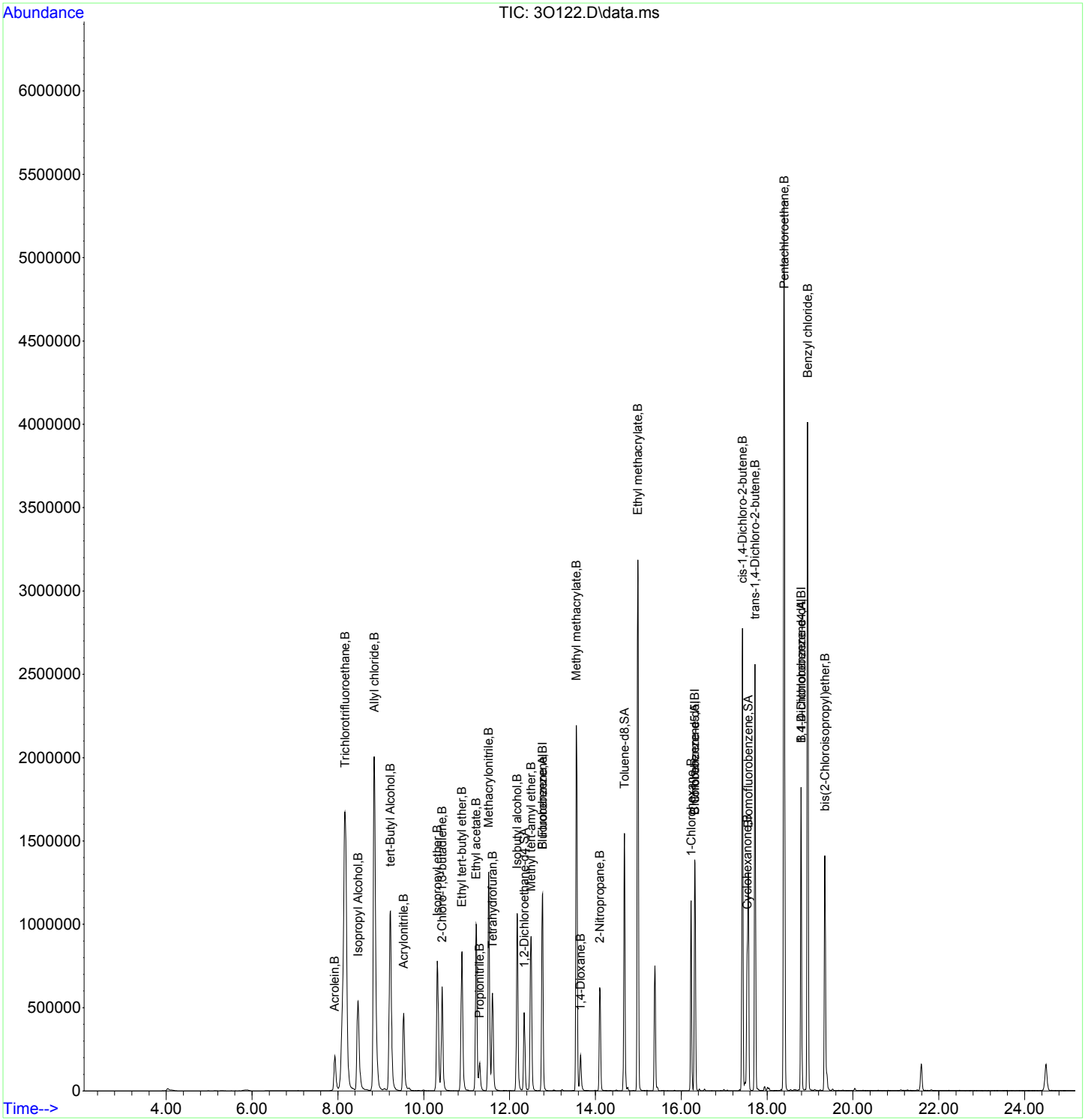
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	1839976	251.80	ug/L	100
106) 1-Chlorohexane	91	16.230	16.231	0.864	400050	49.65	ug/L	100
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	630659	250.81	ug/L	100
108) Cyclohexanone	55	17.535	17.535	0.933	244956	1160.59	ug/L	99
109) trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	558304	246.74	ug/L	100
110) Pentachloroethane	167	18.395	18.395	0.979	1171073	229.79	ug/L	100
111) Benzyl chloride	91	18.943	18.943	1.008	3220574	246.98	ug/L	100
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	930524	245.35	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O122.D
Acq On : 02 Jul 2018 23:17
Operator : JP1
InstName : VOA3
Sample : |W3VM180702-19|ICV|1|VOA|1|VOA8260CL|
Misc : ICV250 5UL/5ML N/A MIX[B]
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 03 07:35:32 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454474

Instrument ID: VOA3.I **Injection Date:** 18-JUL-18 10:26

Data File: 071818V3\3Q303.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180718-02 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.1879		.01		0.42758	20		Averaged
S	Toluene-d8	2.3294	2.05065		.01		-11.9666	20		Averaged
S	Bromofluorobenzene	0.9829	1.03715		.01		5.51938	20		Averaged
	Dichlorodifluoromethane	0.4299	0.43994		.01		2.33543	20		Averaged
	Chloromethane	0.436	0.44129		.1		1.2133	20		Averaged
	Vinyl chloride	0.4188	0.4278		.01		2.149	20		Averaged
	Bromomethane	0.2977	0.3032		.01		1.8475	20		Averaged
	Chloroethane	0.2918	0.2947		.01		0.99383	20		Averaged
	Trichlorofluoromethane	0.6397	0.66186		.01		3.46412	20		Averaged
	1,1-Dichloroethylene	0.5384	0.59042		.01		9.66196	20		Averaged
	Acetone	0.1805	0.18832		.01		4.33241	20		Averaged
	Carbon disulfide	1.0314	1.11844		.01		8.43901	20		Averaged
	Methyl acetate	0.0508	0.04973		.01		-2.1063	20		Averaged
	Methylene chloride	50	52.11	50			4.22	20		Linear
	tert-Butyl methyl ether	0.8319	0.87887		.01		5.64611	20		Averaged
	trans-1,2-Dichloroethylene	0.4531	0.45461		.01		0.33326	20		Averaged
	1,1-Dichloroethane	0.5764	0.58235		.1		1.03227	20		Averaged
	2-Butanone	0.0435	0.04595		.01		5.63218	20		Averaged
	cis-1,2-Dichloroethylene	0.3015	0.31169		.01		3.37977	20		Averaged
	Bromochloromethane	0.1384	0.12513		.01		-9.58815	20		Averaged
	Chloroform	0.5917	0.6142		.01		3.8026	20		Averaged
	1,1,1-Trichloroethane	0.5413	0.57145		.01		5.56992	20		Averaged
	Cyclohexane	0.4823	0.46435		.01		-3.72175	20		Averaged
	Carbon tetrachloride	0.4989	0.51991		.01		4.21126	20		Averaged
	Benzene	1.1517	1.12554		.01		-2.27142	20		Averaged
	1,2-Dichloroethane	0.4666	0.49444		.01		5.96657	20		Averaged
	Trichloroethylene	0.3016	0.31043		.01		2.92772	20		Averaged
	Methylcyclohexane	0.4919	0.47773		.01		-2.88067	20		Averaged
	1,2-Dichloropropane	0.2921	0.29234		.01		0.08216	20		Averaged
	Bromodichloromethane	0.4344	0.46505		.01		7.05571	20		Averaged
	cis-1,3-Dichloropropylene	0.4666	0.52884		.01		13.33905	20		Averaged
	4-Methyl-2-pentanone	0.2201	0.20318		.01		-7.68741	20		Averaged
	Toluene	2.5146	2.36794		.01		-5.83234	20		Averaged
	trans-1,3-Dichloropropylene	0.9796	1.06389		.01		8.60453	20		Averaged
	1,1,2-Trichloroethane	0.4711	0.44232		.01		-6.10911	20		Averaged
	Tetrachloroethylene	0.5317	0.47417		.01		-10.82001	20		Averaged
	2-Hexanone	0.2758	0.28333		.01		2.73024	20		Averaged

Continuing Calibration Summary

Instrument ID: VOA3.I **Injection Date:** 18-JUL-18 10:26

Data File: 071818V3\3Q303.D **Init. Cal. Date(s)** 02-JUL-18 13:56 02-JUL-18 22:15

Lab Sample ID W3VM180718-02 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD

Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
Dibromochloromethane	0.6605	0.63747		.01		-3.48675	20		Averaged
1,2-Dibromoethane	0.5473	0.51133		.01		-6.57226	20		Averaged
Chlorobenzene	1.6589	1.53329		.3		-7.57188	20		Averaged
Ethylbenzene	2.9017	2.81236		.01		-3.07888	20		Averaged
m,p-Xylenes	1.0734	0.95655		.01		-10.88597	20		Averaged
o-Xylene	1.0764	0.994		.01		-7.65515	20		Averaged
Styrene	1.7104	1.65118		.01		-3.46235	20		Averaged
Bromoform	0.4572	0.46514		.1		1.73666	20		Averaged
Isopropylbenzene	3.1716	3.05239		.01		-3.75867	20		Averaged
1,1,2,2-Tetrachloroethane	0.833	0.76435		.3		-8.2413	20		Averaged
1,3-Dichlorobenzene	1.5807	1.48226		.01		-6.22762	20		Averaged
1,4-Dichlorobenzene	1.5657	1.49717		.01		-4.37696	20		Averaged
1,2-Dichlorobenzene	1.5259	1.4415		.01		-5.53116	20		Averaged
1,2-Dibromo-3-chloropropane	0.1727	0.16253		.01		-5.88882	20		Averaged
1,2,4-Trichlorobenzene	1.2723	1.34513		.01		5.72428	20		Averaged
1,2,3-Trichlorobenzene	1.2606	1.27654		.01		1.26448	20		Averaged

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

EH 07/19/2018

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1205721	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	580894	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	539269	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1207340	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	589539	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	539671	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	226549	50.21	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1191213	44.02	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	559303	52.76	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	530443	51.17	ug/L	99
3) Chloromethane	50	5.009	4.990	0.393	532076	50.61	ug/L	100
4) Vinyl chloride	62	5.319	5.319	0.417	515807	51.07	ug/L	99
5) Bromomethane	94	6.105	6.159	0.478	365580	50.93	ug/L	99
6) Chloroethane	64	6.385	6.372	0.500	355331	50.49	ug/L	99
7) Trichlorofluoromethane	101	7.062	7.061	0.553	798014	51.73	ug/L	99
8) Ethyl ether	59	7.610	7.610	0.596	275361	50.14	ug/L	99
9) Acetone	43	8.232	8.232	0.645	1135313	260.81	ug/L	99
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	711878	54.83	ug/L	98
11) Iodomethane	142	8.506	8.500	0.667	2934329	245.74	ug/L	94
12) Acetonitrile	41	8.817	8.817	0.691	957390	1010.02	ug/L	99
13) Methyl acetate	74	8.854	8.854	0.694	299819	244.74	ug/L	90
14) Carbon disulfide	76	8.671	8.665	0.679	6742624	271.10	ug/L	100
15) Methylene chloride	84	9.098	9.091	0.713	409947	52.11	ug/L	98
16) tert-Butyl methyl ether	73	9.531	9.537	0.747	1059676	52.82	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	548136	50.16	ug/L	99
18) Hexane	57	9.988	9.988	0.783	442403	44.24	ug/L	98
19) Vinyl acetate	43	10.317	10.317	0.808	2307563	247.81	ug/L	99
20) 1,1-Dichloroethane	63	10.293	10.286	0.807	702155	50.52	ug/L	99
21) 2-Butanone	72	11.177	11.183	0.876	277042	263.88	ug/L	91
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	375811	51.69	ug/L	98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	690572	57.69	ug/L	97
24) Bromochloromethane	128	11.549	11.548	0.905	150867	45.22	ug/L	94
25) Chloroform	83	11.628	11.628	0.911	740548	51.90	ug/L	100
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	689008	52.78	ug/L	100
27) Cyclohexane	56	12.000	11.999	0.940	559877	48.14	ug/L	98
28) 1,1-Dichloropropene	75	12.128	12.127	0.950	520912	52.60	ug/L	99
29) Carbon tetrachloride	117	12.146	12.146	0.952	626863	52.10	ug/L	97
31) 1,2-Dichloroethane	62	12.445	12.438	0.975	596151	52.99	ug/L	99
32) Benzene	78	12.426	12.426	0.974	1357084	48.86	ug/L	100
33) Cyclohexene	67	12.542	12.548	0.983	635684	45.25	ug/L	98
34) n-Butyl alcohol	56	13.024	13.024	1.021	853995	4185.31	ug/L	100
35) Trichloroethylene	95	13.225	13.225	1.036	374293	51.47	ug/L	93
36) 2-Pentanone	43	13.396	13.396	1.050	1168058	247.11	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	352484	50.03	ug/L	99
38) Methylcyclohexane	83	13.475	13.475	1.056	576010	48.56	ug/L	99
39) Dibromomethane	93	13.682	13.682	1.072	227225	50.76	ug/L	97
40) Bromodichloromethane	83	13.835	13.834	1.084	560723	53.53	ug/L	99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	928235	237.83	ug/L	99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	637633	56.67	ug/L	100

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	590119	230.79	ug/L		99
46)	Toluene	91	14.755	14.755	0.904	1375520	47.08	ug/L		99
47)	trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	618010	54.30	ug/L		98
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	256941	46.94	ug/L		99
49)	2-Hexanone	58	15.414	15.413	0.945	822912	256.78	ug/L		99
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	542264	49.44	ug/L		97
51)	Tetrachloroethylene	164	15.383	15.383	0.943	275441	44.59	ug/L		99
52)	Dibromochloromethane	129	15.676	15.676	0.961	370302	48.26	ug/L		100
53)	1,2-Dibromoethane	107	15.840	15.840	0.971	297030	46.72	ug/L		100
54)	Chlorobenzene	112	16.352	16.352	1.002	890681	46.22	ug/L		96
55)	1,1,1,2-Tetrachloroethane	131	16.420	16.419	1.006	361806	46.34	ug/L		99
56)	Ethylbenzene	91	16.420	16.425	1.006	1633684	48.46	ug/L		96
57)	m,p-Xylenes	106	16.535	16.541	1.013	1111310	89.11	ug/L		91
58)	o-Xylene	106	16.986	16.986	1.041	577411	46.17	ug/L		91
59)	Styrene	104	16.993	16.992	1.041	959158	48.27	ug/L		94
61)	Bromoform	173	17.261	17.261	0.919	250836	50.87	ug/L		100
62)	Isopropylbenzene	105	17.358	17.358	0.924	1646059	48.12	ug/L		97
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	412188	45.88	ug/L		100
65)	1,2,3-Trichloropropane	75	17.749	17.748	0.945	435744	49.03	ug/L		100
66)	Bromobenzene	156	17.767	17.767	0.945	409336	48.79	ug/L		94
67)	n-Propylbenzene	91	17.791	17.791	0.947	2045181	50.19	ug/L		97
68)	1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1483588	50.28	ug/L		97
69)	2-Chlorotoluene	126	17.938	17.937	0.955	377769	46.99	ug/L	#	85
70)	4-Chlorotoluene	91	18.041	18.041	0.960	1358974	52.18	ug/L		95
71)	tert-Butylbenzene	134	18.322	18.321	0.975	254817	45.48	ug/L	#	86
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1504877	49.76	ug/L		97
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1871729	47.05	ug/L		98
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1596945	47.75	ug/L		97
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	799337	46.89	ug/L		98
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	807375	47.81	ug/L		98
77)	n-Butylbenzene	91	19.108	19.108	1.017	1667071	49.94	ug/L		98
78)	1,2-Dichlorobenzene	146	19.236	19.236	1.024	777358	47.23	ug/L		98
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	87647	47.04	ug/L		89
80)	1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	725389	52.86	ug/L		99
81)	Hexachlorobutadiene	225	21.272	21.278	1.132	481268	50.82	ug/L		99
82)	Naphthalene	128	21.492	21.491	1.144	1541387	51.64	ug/L		100
83)	1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	688398	50.63	ug/L		99
85)	Acrolein		7.799	7.927	0.611	0m	N.D.	d		
86)	Trichlorotrifluoroethane		8.159	8.165	0.639	0m	N.D.	d		
87)	Isopropyl Alcohol		8.665	8.464	0.679	0m	N.D.	d		
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90)	Acrylonitrile		9.518	9.531	0.746	0m	N.D.	d		
91)	Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d		
92)	2-Chloro-1,3-butadiene		10.488	10.427	0.822	0m	N.D.	d		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94)	Ethyl acetate		11.177	11.225	0.876	0m	N.D.	d		
95)	Propionitrile		11.183	11.305	0.876	0m	N.D.	d		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97)	Tetrahydrofuran		11.622	11.597	0.911	0m	N.D.	d		
98)	Isobutyl alcohol		12.335	12.176	0.967	0m	N.D.	d		
99)	Methyl tert-amyl ether		12.536	12.500	0.982	0m	N.D.	d		
100)	Methyl methacrylate		13.615	13.560	1.067	0m	N.D.	d		
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d		
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

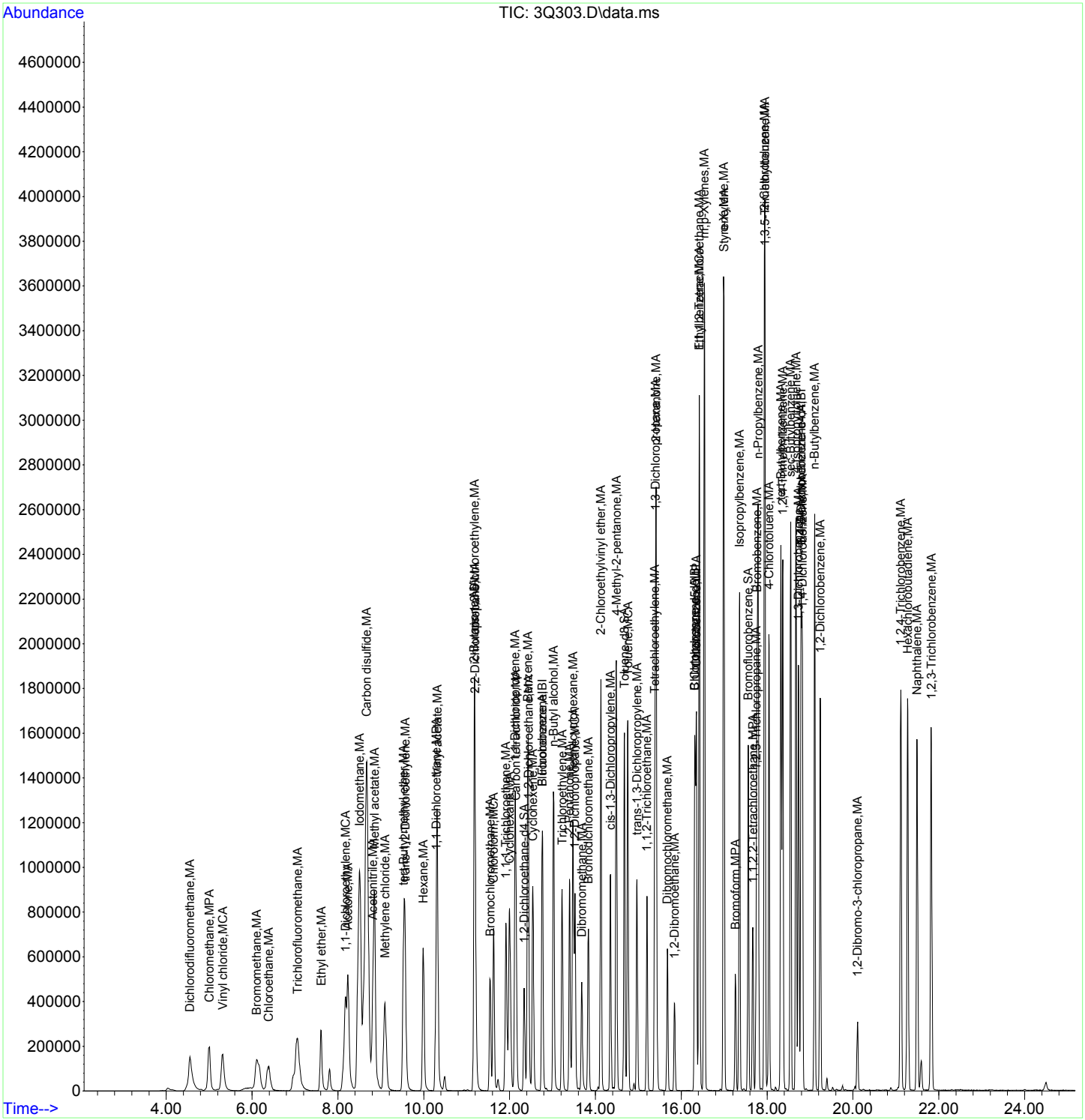
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.560	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.907	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.382	19.346	1.031	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q303.D
Acq On : 18 Jul 2018 10:26
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-02|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[A]0411-10G/0601-10H/0
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 18 11:57:19 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Continuing Calibration Summary

Client SDG: 454474

Instrument ID: VOA3.I **Injection Date:** 18-JUL-18 11:28

Data File: 071818V3\3Q305.D **Init. Cal. Date(s)** 02-JUL-18 13:56 - 02-JUL-18 22:15

Lab Sample ID W3VM180718-05 **Method:** 070218V3\VOA3-8260C-070218.M

Quant Type ISTD **Method Update:** 03-JUL-18 07:30

	Compound	AVERF / Amount	RF CCV	Nominal CCV	Min RF	RF Q	%D / %Drift	Max	Drift Q	Curve Type
S	1,2-Dichloroethane-d4	0.1871	0.18529		.01		-0.9674	20		Averaged
S	Toluene-d8	2.3294	2.16525		.01		-7.04688	20		Averaged
S	Bromofluorobenzene	0.9829	1.04602		.01		6.42181	20		Averaged
	Trichlorotrifluoroethane	0.3544	0.35304		.01		-0.38375	20		Averaged
	1,4-Dioxane	0.0032	0.00297		.01		-7.1875	20		Averaged

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

EH 07/19/2018

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
Internal Standards								Dev(Min)
1) Fluorobenzene	96	12.762	12.761	1.000	1395523	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	631984	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	555729	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1398610	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	642716	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	555687	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	258580	49.51	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1368402	46.48	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	581301	53.21	ug/L	0.00
Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		4.991	4.990	0.391	0m	N.D.	d	
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		7.086	7.061	0.555	0m	N.D.	d	
8) Ethyl ether		7.616	7.610	0.597	0m	N.D.	d	
9) Acetone		8.153	8.232	0.639	0m	N.D.	d	
10) 1,1-Dichloroethylene		8.153	8.177	0.639	0m	N.D.	d	
11) Iodomethane		8.476	8.500	0.664	0m	N.D.	d	
12) Acetonitrile		8.848	8.817	0.693	0m	N.D.	d	
13) Methyl acetate		8.842	8.854	0.693	0m	N.D.	d	
14) Carbon disulfide		8.598	8.665	0.674	0m	N.D.	d	
15) Methylene chloride		9.098	9.091	0.713	0m	N.D.	d	
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		9.561	9.567	0.749	0m	N.D.	d	
18) Hexane		9.988	9.988	0.783	0m	N.D.	d	
19) Vinyl acetate		10.323	10.317	0.809	0m	N.D.	d	
20) 1,1-Dichloroethane		10.286	10.286	0.806	0m	N.D.	d	
21) 2-Butanone		11.189	11.183	0.877	0m	N.D.	d	
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		11.195	11.195	0.877	0m	N.D.	d	
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		11.622	11.628	0.911	0m	N.D.	d	
26) 1,1,1-Trichloroethane		11.914	11.914	0.934	0m	N.D.	d	
27) Cyclohexane		11.987	11.999	0.939	0m	N.D.	d	
28) 1,1-Dichloropropene		12.176	12.127	0.954	0m	N.D.	d	
29) Carbon tetrachloride		12.134	12.146	0.951	0m	N.D.	d	
31) 1,2-Dichloroethane		12.432	12.438	0.974	0m	N.D.	d	
32) Benzene		12.426	12.426	0.974	0m	N.D.	d	
33) Cyclohexene		12.487	12.548	0.979	0m	N.D.	d	
34) n-Butyl alcohol		13.024	13.024	1.021	0m	N.D.	d	
35) Trichloroethylene		13.231	13.225	1.037	0m	N.D.	d	
36) 2-Pentanone		13.408	13.396	1.051	0m	N.D.	d	
37) 1,2-Dichloropropane		13.536	13.524	1.061	0m	N.D.	d	
38) Methylcyclohexane		13.487	13.475	1.057	0m	N.D.	d	
39) Dibromomethane		0.000	13.682	0.000	0	N.D.		
40) Bromodichloromethane		13.841	13.834	1.085	0m	N.D.	d	
41) 2-Chloroethylvinyl ether		14.139	14.127	1.108	0m	N.D.	d	
42) cis-1,3-Dichloropropylene		14.359	14.353	1.125	0m	N.D.	d	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
44) 4-Methyl-2-pentanone		14.487	14.487	0.888	0m	N.D.	d	
46) Toluene		14.755	14.755	0.904	0m	N.D.	d	
47) trans-1,3-Dichloroprop...		14.968	14.968	0.917	0m	N.D.	d	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.		
49) 2-Hexanone		15.420	15.413	0.945	0m	N.D.	d	
50) 1,3-Dichloropropane		15.407	15.401	0.944	0m	N.D.	d	
51) Tetrachloroethylene		15.389	15.383	0.943	0m	N.D.	d	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.		
53) 1,2-Dibromoethane		15.846	15.840	0.971	0m	N.D.	d	
54) Chlorobenzene		16.346	16.352	1.002	0m	N.D.	d	
55) 1,1,1,2-Tetrachloroethane		16.413	16.419	1.006	0m	N.D.	d	
56) Ethylbenzene		16.425	16.425	1.007	0m	N.D.	d	
57) m,p-Xylenes		16.541	16.541	1.014	0m	N.D.	d	
58) o-Xylene		16.980	16.986	1.041	0m	N.D.	d	
59) Styrene		16.992	16.992	1.041	0m	N.D.	d	
61) Bromoform		17.261	17.261	0.919	0m	N.D.	d	
62) Isopropylbenzene		17.364	17.358	0.924	0m	N.D.	d	
64) 1,1,2,2-Tetrachloroethane		17.712	17.663	0.943	0m	N.D.	d	
65) 1,2,3-Trichloropropane		17.718	17.748	0.943	0m	N.D.	d	
66) Bromobenzene		17.767	17.767	0.945	0m	N.D.	d	
67) n-Propylbenzene		17.791	17.791	0.947	0m	N.D.	d	
68) 1,3,5-Trimethylbenzene		17.956	17.949	0.956	0m	N.D.	d	
69) 2-Chlorotoluene		17.943	17.937	0.955	0m	N.D.	d	
70) 4-Chlorotoluene		18.047	18.041	0.960	0m	N.D.	d	
71) tert-Butylbenzene		18.321	18.321	0.975	0m	N.D.	d	
72) 1,2,4-Trimethylbenzene		18.364	18.364	0.977	0m	N.D.	d	
73) sec-Butylbenzene		18.553	18.547	0.987	0m	N.D.	d	
74) 4-Isopropyltoluene		18.669	18.675	0.994	0m	N.D.	d	
75) 1,3-Dichlorobenzene		18.736	18.730	0.997	0m	N.D.	d	
76) 1,4-Dichlorobenzene		18.821	18.821	1.002	0m	N.D.	d	
77) n-Butylbenzene		19.108	19.108	1.017	0m	N.D.	d	
78) 1,2-Dichlorobenzene		19.242	19.236	1.024	0m	N.D.	d	
79) 1,2-Dibromo-3-chloropr...		20.120	20.108	1.071	0m	N.D.	d	
80) 1,2,4-Trichlorobenzene		21.114	21.113	1.124	0m	N.D.	d	
81) Hexachlorobutadiene		21.278	21.278	1.132	0m	N.D.	d	
82) Naphthalene		21.498	21.491	1.144	0m	N.D.	d	
83) 1,2,3-Trichlorobenzene		21.827	21.821	1.162	0m	N.D.	d	
85) Acrolein	56	7.927	7.927	0.621	363530	262.58	ug/L	99
86) Trichlorotrifluoroethane	101	8.165	8.165	0.640	2468850	249.01	ug/L	96
87) Isopropyl Alcohol	45	8.464	8.464	0.663	1423342	2330.03	ug/L	99
88) Allyl chloride	76	8.848	8.842	0.693	1126805	250.50	ug/L	93
89) tert-Butyl Alcohol	59	9.220	9.220	0.722	2518437	2507.82	ug/L	99
90) Acrylonitrile	53	9.530	9.531	0.747	595885	227.02	ug/L	100
91) Isopropyl ether	45	10.323	10.317	0.809	1167022	47.88	ug/L	98
92) 2-Chloro-1,3-butadiene	53	10.427	10.427	0.817	613046	52.31	ug/L	100
93) Ethyl tert-butyl ether	59	10.890	10.890	0.853	1220494	49.79	ug/L	99
94) Ethyl acetate	43	11.219	11.225	0.879	1639230	236.95	ug/L	98
95) Propionitrile	54	11.305	11.305	0.886	244473	232.57	ug/L	99
96) Methacrylonitrile	67	11.512	11.512	0.902	722225	249.58	ug/L	94
97) Tetrahydrofuran	42	11.597	11.597	0.909	507990	221.36	ug/L	96
98) Isobutyl alcohol	43	12.176	12.176	0.954	874377	2429.40	ug/L	100
99) Methyl tert-amyl ether	73	12.493	12.500	0.979	1141709	50.73	ug/L	98
100) Methyl methacrylate	69	13.560	13.560	1.063	1174413	261.47	ug/L	94
101) 1,4-Dioxane	88	13.652	13.652	1.070	207728	2315.49	ug/L	99
102) 2-Nitropropane	43	14.103	14.103	1.105	594210	234.79	ug/L	99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

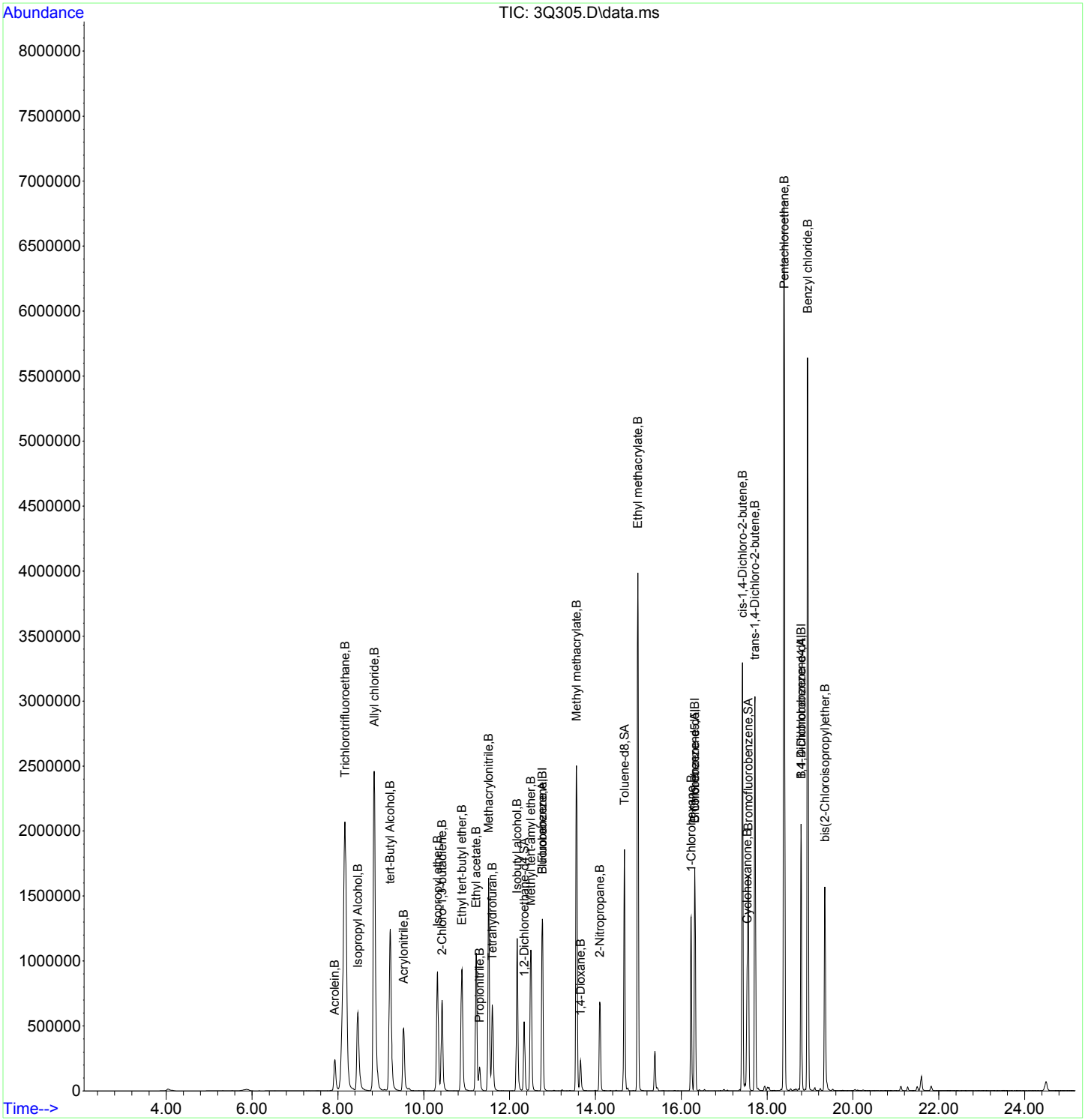
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
104) Ethyl methacrylate	69	14.987	14.987	0.919	2288234	252.74	ug/L	96
106) 1-Chlorohexane	91	16.230	16.231	0.864	494939	55.35	ug/L	98
107) cis-1,4-Dichloro-2-butene	53	17.425	17.425	0.927	750743	269.04	ug/L	95
108) Cyclohexanone	55	17.535	17.535	0.933	274015	1169.87	ug/L	100
109) trans-1,4-Dichloro-2-b...	53	17.712	17.718	0.943	674068	268.44	ug/L	95
110) Pentachloroethane	167	18.395	18.395	0.979	1509691	266.94	ug/L	100
111) Benzyl chloride	91	18.943	18.943	1.008	4660409	322.05	ug/L	98
112) bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	1029615	244.63	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q305.D
Acq On : 18 Jul 2018 11:28
Operator : JP1
InstName : VOA3
Sample : |W3VM180718-05|CCV|1|VOA|1|VOA8260CL|
Misc : CCV/LCS 5UL/5ML N/A MIX[B]0503-08D/0613-08C
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 18 11:56:58 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Quality Control Data

JP
07/03/2018

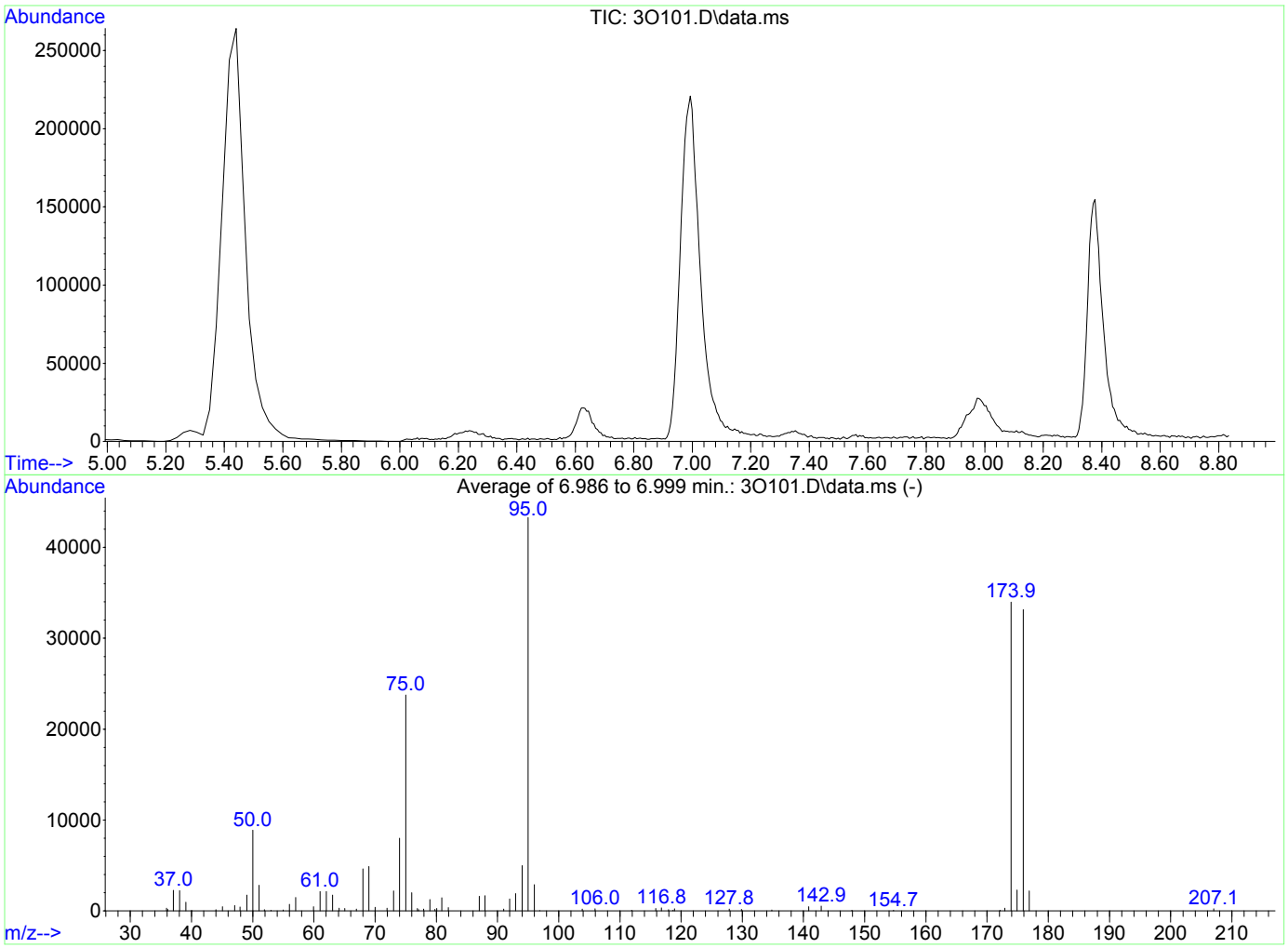
Tune Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\070218V3\
Data File : 3O101.D
Acq On : 02 Jul 2018 12:28
Operator : JP1
Sample : |IVM180702-01|BFB|1|VOA|1|VOA8260BL|
Misc : BFB 5ML n/a
ALS Vial : 1 Sample Multiplier: 1

GH
07/03/2018

Integration File:

Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Jul 03 07:30:47 2018



AutoFind: Scans 223, 224, 225; Background Corrected with Scan 206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	8870	PASS
75	95	30	60	54.9	23771	PASS
95	95	100	100	100.0	43285	PASS
96	95	5	9	6.6	2877	PASS
173	174	0.00	2	0.8	282	PASS
174	95	50	100	78.5	33971	PASS
175	174	5	9	6.7	2288	PASS
176	174	95	101	97.6	33155	PASS
177	176	5	9	6.7	2210	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Tune Report
GEL Laboratories, LLC

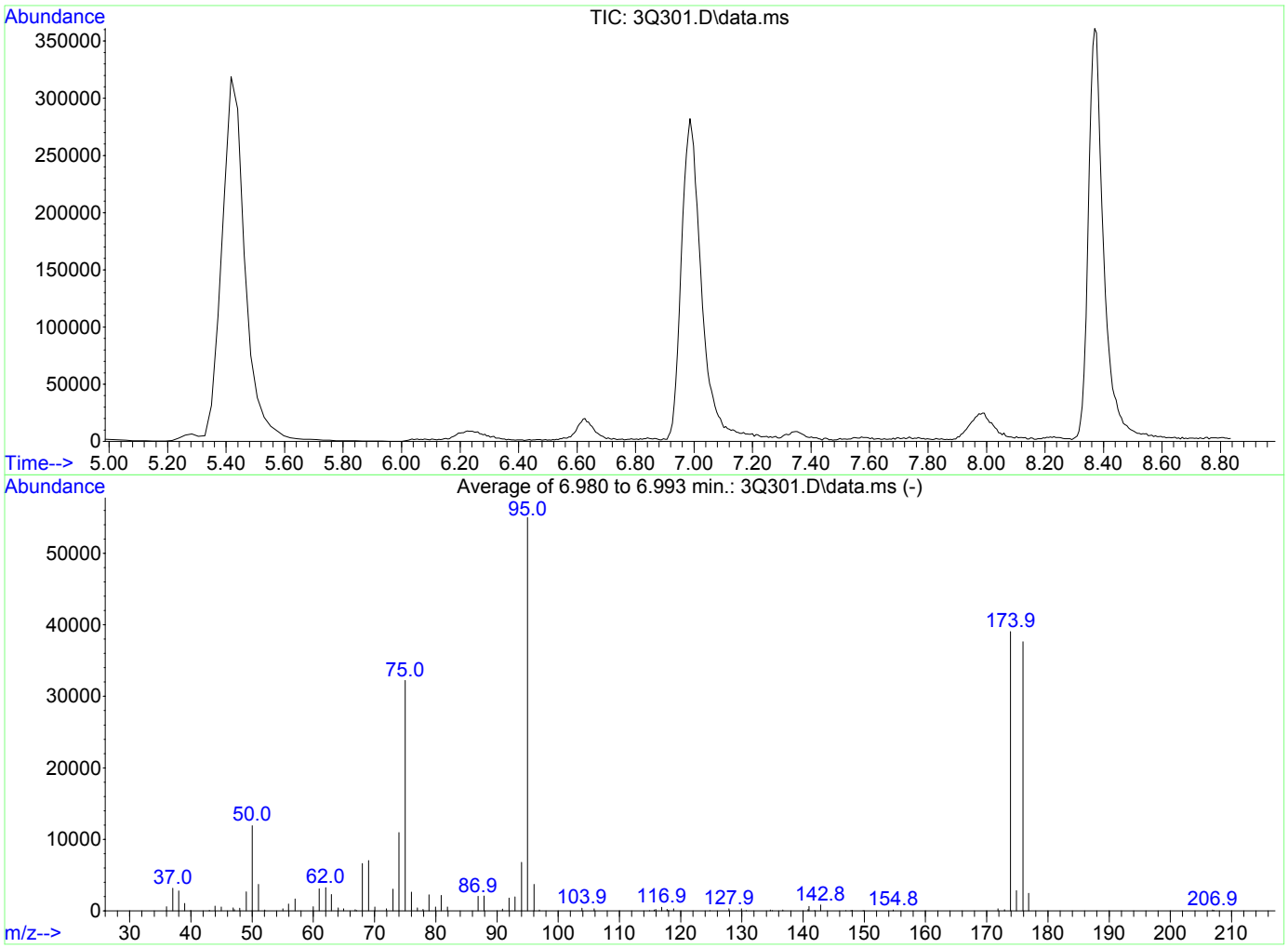
JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q301.D
Acq On : 18 Jul 2018 09:28
Operator : JP1
Sample : |IVM180702-01|BFB|1|VOA|1|VOA8260BL|
Misc : BFB 5ML n/a
ALS Vial : 1 Sample Multiplier: 1

GH 07/19/2018

Integration File:

Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Title : Volatile Organics 8260B SubList :
Last Update : Tue Jul 03 07:30:47 2018



AutoFind: Scans 222, 223, 224; Background Corrected with Scan 206

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	11916	PASS
75	95	30	60	58.6	32205	PASS
95	95	100	100	100.0	54995	PASS
96	95	5	9	6.8	3720	PASS
173	174	0.00	2	0.5	179	PASS
174	95	50	100	71.0	39035	PASS
175	174	5	9	7.2	2820	PASS
176	174	95	101	96.4	37627	PASS
177	176	5	9	6.5	2453	PASS

This report evaluates the Rel Abn% as passing only if it is greater than the Lower Limit and lower than the Upper Limit.

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070948**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 12:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q307B81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	2.00	ug/kg	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane	U	2.00	ug/kg	0.300	2.00
79-00-5	1,1,2-Trichloroethane	U	2.00	ug/kg	0.300	2.00
75-34-3	1,1-Dichloroethane	U	2.00	ug/kg	0.300	2.00
75-35-4	1,1-Dichloroethylene	U	2.00	ug/kg	0.300	2.00
87-61-6	1,2,3-Trichlorobenzene	U	2.00	ug/kg	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene	U	2.00	ug/kg	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane	U	2.00	ug/kg	0.500	2.00
106-93-4	1,2-Dibromoethane	U	2.00	ug/kg	0.300	2.00
95-50-1	1,2-Dichlorobenzene	U	2.00	ug/kg	0.300	2.00
107-06-2	1,2-Dichloroethane	U	2.00	ug/kg	0.300	2.00
78-87-5	1,2-Dichloropropane	U	2.00	ug/kg	0.300	2.00
541-73-1	1,3-Dichlorobenzene	U	2.00	ug/kg	0.300	2.00
106-46-7	1,4-Dichlorobenzene	U	2.00	ug/kg	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/kg	15.0	50.0
78-93-3	2-Butanone	U	10.0	ug/kg	3.00	10.0
591-78-6	2-Hexanone	U	10.0	ug/kg	3.00	10.0
108-10-1	4-Methyl-2-pentanone	U	10.0	ug/kg	3.00	10.0
67-64-1	Acetone	U	10.0	ug/kg	3.00	10.0
71-43-2	Benzene	U	2.00	ug/kg	0.300	2.00
74-97-5	Bromochloromethane	U	2.00	ug/kg	0.300	2.00
75-27-4	Bromodichloromethane	U	2.00	ug/kg	0.300	2.00
75-25-2	Bromoform	U	2.00	ug/kg	0.300	2.00
74-83-9	Bromomethane	U	2.00	ug/kg	0.300	2.00
75-15-0	Carbon disulfide	U	10.0	ug/kg	1.60	10.0
56-23-5	Carbon tetrachloride	U	2.00	ug/kg	0.300	2.00
108-90-7	Chlorobenzene	U	2.00	ug/kg	0.300	2.00
75-00-3	Chloroethane	U	2.00	ug/kg	0.300	2.00
67-66-3	Chloroform	U	2.00	ug/kg	0.300	2.00
74-87-3	Chloromethane	U	2.00	ug/kg	0.300	2.00
110-82-7	Cyclohexane	U	2.00	ug/kg	0.300	2.00
124-48-1	Dibromochloromethane	U	2.00	ug/kg	0.300	2.00
75-71-8	Dichlorodifluoromethane	U	2.00	ug/kg	0.300	2.00
100-41-4	Ethylbenzene	U	2.00	ug/kg	0.300	2.00
98-82-8	Isopropylbenzene	U	2.00	ug/kg	0.300	2.00
79-20-9	Methyl acetate	U	5.00	ug/kg	1.50	5.00
108-87-2	Methylcyclohexane	U	2.00	ug/kg	0.300	2.00
75-09-2	Methylene chloride	U	5.00	ug/kg	1.60	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070948**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**MB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 12:30**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q307B81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	2.00	ug/kg	0.300	2.00
127-18-4	Tetrachloroethylene	U	2.00	ug/kg	0.300	2.00
108-88-3	Toluene	U	2.00	ug/kg	0.300	2.00
79-01-6	Trichloroethylene	U	2.00	ug/kg	0.300	2.00
75-69-4	Trichlorofluoromethane	U	2.00	ug/kg	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/kg	1.60	5.00
75-01-4	Vinyl chloride	U	2.00	ug/kg	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene	U	2.00	ug/kg	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene	U	2.00	ug/kg	0.300	2.00
179601-23-1	m,p-Xylenes	U	4.00	ug/kg	0.300	4.00
95-47-6	o-Xylene	U	2.00	ug/kg	0.300	2.00
1634-04-4	tert-Butyl methyl ether	U	2.00	ug/kg	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene	U	2.00	ug/kg	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene	U	2.00	ug/kg	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

GH
07/19/2018

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.761	12.761	1.000	1226605	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	583334	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	467199	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1229018	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	591781	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	467806	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	242560	52.84	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1238009	45.55	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	511665	55.71	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	71 - 136	106%
45) Toluene-d8	50.000	85 - 116	91%
63) Bromofluorobenzene	50.000	79 - 119	111%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane	50	4.990	4.990	0.391	1239	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane		0.000	6.159	0.000	0	N.D.		
6) Chloroethane		0.000	6.372	0.000	0	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.226	8.232	0.645	158	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide	76	8.671	8.665	0.679	193	N.D.		
15) Methylene chloride	84	9.085	9.091	0.712	3011	Below Cal		92
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane		0.000	9.988	0.000	0	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone		0.000	11.183	0.000	0	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	664	N.D.		
32) Benzene	78	12.426	12.426	0.974	452	N.D.		
33) Cyclohexene	67	12.493	12.548	0.979	101	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.395	13.396	1.050	110	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.749	14.755	0.904	595	N.D.	
47) trans-1,3-Dichloroprop...	75	14.981	14.968	0.918	255	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone	58	15.419	15.413	0.945	297	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.352	16.352	1.002	596	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene	91	16.425	16.425	1.007	684	N.D.	
57) m,p-Xylenes	106	16.547	16.541	1.014	348	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene	104	16.998	16.992	1.042	414	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene	105	17.352	17.358	0.923	332	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane	75	17.767	17.748	0.945	148	N.D.	
66) Bromobenzene	156	17.773	17.767	0.946	290	N.D.	
67) n-Propylbenzene	91	17.791	17.791	0.947	1165	N.D.	
68) 1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	858	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.041	18.041	0.960	1277	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.358	18.364	0.977	934	N.D.	
73) sec-Butylbenzene	105	18.553	18.547	0.987	1056	N.D.	
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1081	N.D.	
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	1065	N.D.	
76) 1,4-Dichlorobenzene	146	18.815	18.821	1.001	1483	N.D.	
77) n-Butylbenzene	91	19.114	19.108	1.017	1780	N.D.	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	1004	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.126	21.113	1.124	2631	N.D.	
81) Hexachlorobutadiene	225	21.278	21.278	1.132	1810	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	5809	N.D.	
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	3005	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol		0.000	8.464	0.000	0	N.D.	
88) Allyl chloride	76	8.671	8.842	0.679	193	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.231	11.225	0.880	291	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.621	11.597	0.911	1481	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

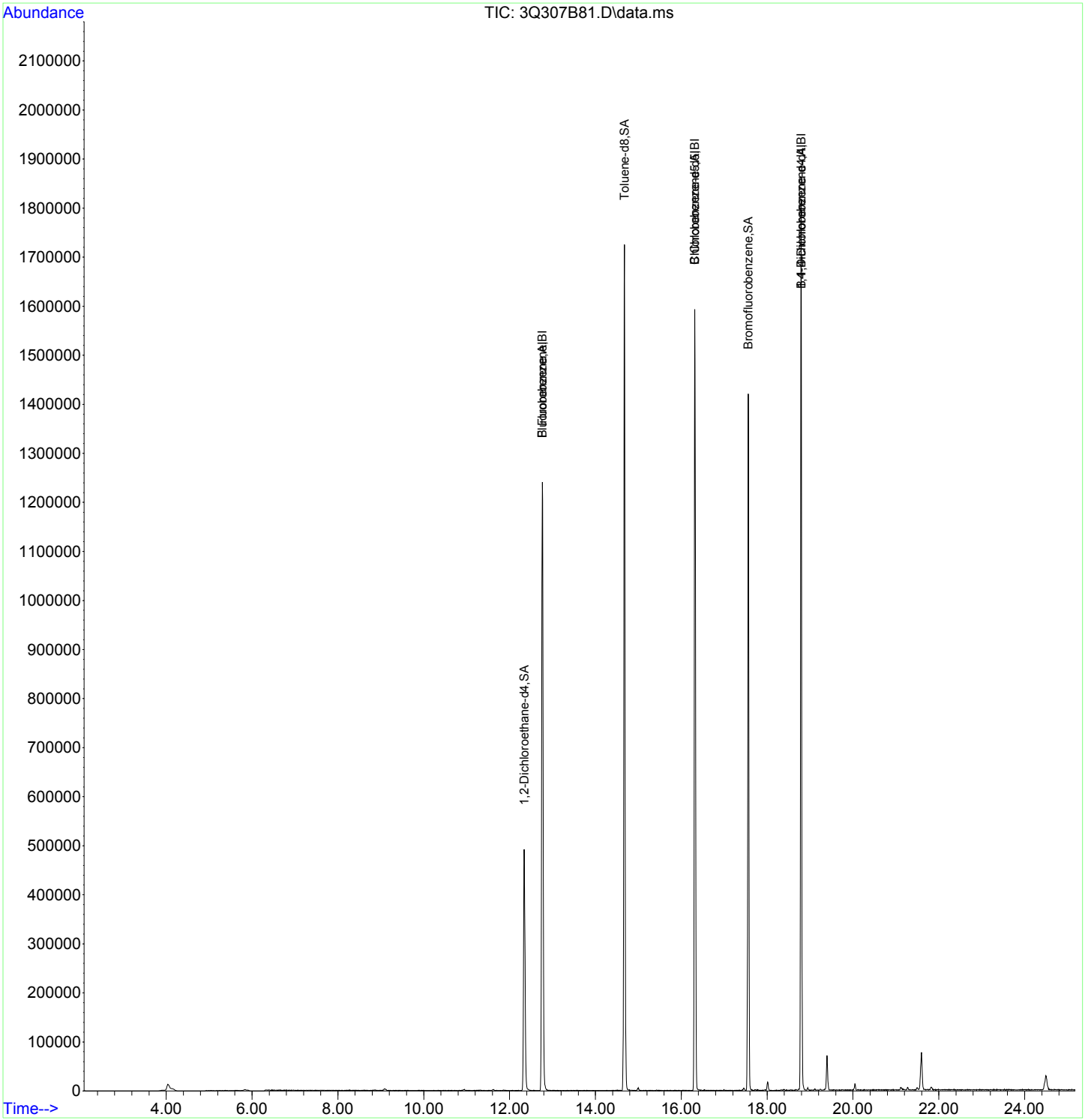
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate	69	14.981	14.987	0.918	163	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene	53	17.413	17.425	0.927	319	N.D.	
108)	Cyclohexanone	55	17.559	17.535	0.934	1775	N.D.	
109)	trans-1,4-Dichloro-2-b...	53	17.718	17.718	0.943	342	N.D.	
110)	Pentachloroethane	167	18.388	18.395	0.979	550	N.D.	
111)	Benzyl chloride	91	18.949	18.943	1.008	4286	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.346	19.346	1.030	769	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q307B81.D
Acq On : 18 Jul 2018 12:30
Operator : JP1
InstName : VOA3
Sample : |1204070948|1782981|1|VOA|1|VOA3560C_S|
Misc : BLANK 5ML N/A SOIL
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 18 13:58:11 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070949**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**HB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 14:04**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:35**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q310.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane	U	100	ug/kg	15.0	100
79-34-5	1,1,2,2-Tetrachloroethane	U	100	ug/kg	15.0	100
79-00-5	1,1,2-Trichloroethane	U	100	ug/kg	15.0	100
75-34-3	1,1-Dichloroethane	U	100	ug/kg	15.0	100
75-35-4	1,1-Dichloroethylene	U	100	ug/kg	15.0	100
87-61-6	1,2,3-Trichlorobenzene	U	100	ug/kg	15.0	100
120-82-1	1,2,4-Trichlorobenzene	U	100	ug/kg	15.0	100
96-12-8	1,2-Dibromo-3-chloropropane	U	100	ug/kg	25.0	100
106-93-4	1,2-Dibromoethane	U	100	ug/kg	15.0	100
95-50-1	1,2-Dichlorobenzene	U	100	ug/kg	15.0	100
107-06-2	1,2-Dichloroethane	U	100	ug/kg	15.0	100
78-87-5	1,2-Dichloropropane	U	100	ug/kg	15.0	100
541-73-1	1,3-Dichlorobenzene	U	100	ug/kg	15.0	100
106-46-7	1,4-Dichlorobenzene	U	100	ug/kg	15.0	100
123-91-1	1,4-Dioxane	U	2500	ug/kg	750	2500
78-93-3	2-Butanone	U	500	ug/kg	150	500
591-78-6	2-Hexanone	U	500	ug/kg	150	500
108-10-1	4-Methyl-2-pentanone	U	500	ug/kg	150	500
67-64-1	Acetone	U	500	ug/kg	150	500
71-43-2	Benzene	U	100	ug/kg	15.0	100
74-97-5	Bromochloromethane	U	100	ug/kg	15.0	100
75-27-4	Bromodichloromethane	U	100	ug/kg	15.0	100
75-25-2	Bromoform	U	100	ug/kg	15.0	100
74-83-9	Bromomethane	U	100	ug/kg	15.0	100
75-15-0	Carbon disulfide	U	500	ug/kg	80.0	500
56-23-5	Carbon tetrachloride	U	100	ug/kg	15.0	100
108-90-7	Chlorobenzene	U	100	ug/kg	15.0	100
75-00-3	Chloroethane	U	100	ug/kg	15.0	100
67-66-3	Chloroform	U	100	ug/kg	15.0	100
74-87-3	Chloromethane	U	100	ug/kg	15.0	100
110-82-7	Cyclohexane	U	100	ug/kg	15.0	100
124-48-1	Dibromochloromethane	U	100	ug/kg	15.0	100
75-71-8	Dichlorodifluoromethane	U	100	ug/kg	15.0	100
100-41-4	Ethylbenzene	U	100	ug/kg	15.0	100
98-82-8	Isopropylbenzene	U	100	ug/kg	15.0	100
79-20-9	Methyl acetate	U	250	ug/kg	75.0	250
108-87-2	Methylcyclohexane	U	100	ug/kg	15.0	100
75-09-2	Methylene chloride	U	250	ug/kg	80.0	250

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070949**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**HB for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 14:04**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:35**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q310.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene	U	100	ug/kg	15.0	100
127-18-4	Tetrachloroethylene	U	100	ug/kg	15.0	100
108-88-3	Toluene	U	100	ug/kg	15.0	100
79-01-6	Trichloroethylene	U	100	ug/kg	15.0	100
75-69-4	Trichlorofluoromethane	U	100	ug/kg	15.0	100
76-13-1	Trichlorotrifluoroethane	U	250	ug/kg	80.0	250
75-01-4	Vinyl chloride	U	100	ug/kg	15.0	100
156-59-2	cis-1,2-Dichloroethylene	U	100	ug/kg	15.0	100
10061-01-5	cis-1,3-Dichloropropylene	U	100	ug/kg	15.0	100
179601-23-1	m,p-Xylenes	U	200	ug/kg	15.0	200
95-47-6	o-Xylene	U	100	ug/kg	15.0	100
1634-04-4	tert-Butyl methyl ether	U	100	ug/kg	15.0	100
156-60-5	trans-1,2-Dichloroethylene	U	100	ug/kg	15.0	100
10061-02-6	trans-1,3-Dichloropropylene	U	100	ug/kg	15.0	100

Quantitation Report
GEL Laboratories, LLC

JP
07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

GH
07/19/2018

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1110510	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	538311	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.797	18.791	1.000	437128	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1113379	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	548108	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.797	18.791	1.000	437655	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	230996	55.58	ug/L	0.00
45) Toluene-d8	98	14.670	14.676	0.899	1052533	41.97	ug/L	0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	486277	56.59	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	111%
45) Toluene-d8	50.000	81 - 120	84%
63) Bromofluorobenzene	50.000	70 - 130	113%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane		0.000	4.552	0.000	0	N.D.		
3) Chloromethane		0.000	4.990	0.000	0	N.D.		
4) Vinyl chloride		0.000	5.319	0.000	0	N.D.		
5) Bromomethane	94	6.251	6.159	0.490	652	N.D.		
6) Chloroethane	64	6.342	6.372	0.497	223	N.D.		
7) Trichlorofluoromethane		0.000	7.061	0.000	0	N.D.		
8) Ethyl ether		0.000	7.610	0.000	0	N.D.		
9) Acetone	43	8.269	8.232	0.648	899	N.D.		
10) 1,1-Dichloroethylene		0.000	8.177	0.000	0	N.D.		
11) Iodomethane		0.000	8.500	0.000	0	N.D.		
12) Acetonitrile		0.000	8.817	0.000	0	N.D.		
13) Methyl acetate		0.000	8.854	0.000	0	N.D.		
14) Carbon disulfide		0.000	8.665	0.000	0	N.D.		
15) Methylene chloride	84	9.067	9.091	0.711	3012	Below Cal		90
16) tert-Butyl methyl ether		0.000	9.537	0.000	0	N.D.		
17) trans-1,2-Dichloroethy...		0.000	9.567	0.000	0	N.D.		
18) Hexane	57	9.969	9.988	0.781	327	N.D.		
19) Vinyl acetate		0.000	10.317	0.000	0	N.D.		
20) 1,1-Dichloroethane		0.000	10.286	0.000	0	N.D.		
21) 2-Butanone	72	11.195	11.183	0.877	1243	N.D.		
22) cis-1,2-Dichloroethylene		0.000	11.183	0.000	0	N.D.		
23) 2,2-Dichloropropane		0.000	11.195	0.000	0	N.D.		
24) Bromochloromethane		0.000	11.548	0.000	0	N.D.		
25) Chloroform		0.000	11.628	0.000	0	N.D.		
26) 1,1,1-Trichloroethane		0.000	11.914	0.000	0	N.D.		
27) Cyclohexane		0.000	11.999	0.000	0	N.D.		
28) 1,1-Dichloropropene		0.000	12.127	0.000	0	N.D.		
29) Carbon tetrachloride		0.000	12.146	0.000	0	N.D.		
31) 1,2-Dichloroethane	62	12.438	12.438	0.975	556	N.D.		
32) Benzene	78	12.420	12.426	0.973	582	N.D.		
33) Cyclohexene		0.000	12.548	0.000	0	N.D.		
34) n-Butyl alcohol		0.000	13.024	0.000	0	N.D.		
35) Trichloroethylene		0.000	13.225	0.000	0	N.D.		
36) 2-Pentanone	43	13.408	13.396	1.051	2313	N.D.		
37) 1,2-Dichloropropane		0.000	13.524	0.000	0	N.D.		
38) Methylcyclohexane		0.000	13.475	0.000	0	N.D.		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
39) Dibromomethane		0.000	13.682	0.000	0	N.D.	
40) Bromodichloromethane		0.000	13.834	0.000	0	N.D.	
41) 2-Chloroethylvinyl ether		0.000	14.127	0.000	0	N.D.	
42) cis-1,3-Dichloropropylene		0.000	14.353	0.000	0	N.D.	
44) 4-Methyl-2-pentanone		0.000	14.487	0.000	0	N.D.	
46) Toluene	91	14.761	14.755	0.905	320	N.D.	
47) trans-1,3-Dichloroprop...		0.000	14.968	0.000	0	N.D.	
48) 1,1,2-Trichloroethane		0.000	15.200	0.000	0	N.D.	
49) 2-Hexanone		0.000	15.413	0.000	0	N.D.	
50) 1,3-Dichloropropane		0.000	15.401	0.000	0	N.D.	
51) Tetrachloroethylene		0.000	15.383	0.000	0	N.D.	
52) Dibromochloromethane		0.000	15.676	0.000	0	N.D.	
53) 1,2-Dibromoethane		0.000	15.840	0.000	0	N.D.	
54) Chlorobenzene	112	16.346	16.352	1.002	159	N.D.	
55) 1,1,1,2-Tetrachloroethane		0.000	16.419	0.000	0	N.D.	
56) Ethylbenzene		0.000	16.425	0.000	0	N.D.	
57) m,p-Xylenes	106	16.541	16.541	1.014	284	N.D.	
58) o-Xylene		0.000	16.986	0.000	0	N.D.	
59) Styrene		0.000	16.992	0.000	0	N.D.	
61) Bromoform		0.000	17.261	0.000	0	N.D.	
62) Isopropylbenzene		0.000	17.358	0.000	0	N.D.	
64) 1,1,2,2-Tetrachloroethane		0.000	17.663	0.000	0	N.D.	
65) 1,2,3-Trichloropropane		0.000	17.748	0.000	0	N.D.	
66) Bromobenzene		0.000	17.767	0.000	0	N.D.	
67) n-Propylbenzene		0.000	17.791	0.000	0	N.D.	
68) 1,3,5-Trimethylbenzene		0.000	17.949	0.000	0	N.D.	
69) 2-Chlorotoluene		0.000	17.937	0.000	0	N.D.	
70) 4-Chlorotoluene	91	18.047	18.041	0.960	580	N.D.	
71) tert-Butylbenzene		0.000	18.321	0.000	0	N.D.	
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	271	N.D.	
73) sec-Butylbenzene		0.000	18.547	0.000	0	N.D.	
74) 4-Isopropyltoluene		0.000	18.675	0.000	0	N.D.	
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	465	N.D.	
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.001	865	N.D.	
77) n-Butylbenzene	91	19.114	19.108	1.017	237	N.D.	
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.023	211	N.D.	
79) 1,2-Dibromo-3-chloropr...		0.000	20.108	0.000	0	N.D.	
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	928	N.D.	
81) Hexachlorobutadiene	225	21.278	21.278	1.132	587	N.D.	
82) Naphthalene	128	21.498	21.491	1.144	3694	N.D.	
83) 1,2,3-Trichlorobenzene	180	21.815	21.821	1.161	1379	N.D.	
85) Acrolein		0.000	7.927	0.000	0	N.D.	
86) Trichlorotrifluoroethane		0.000	8.165	0.000	0	N.D.	
87) Isopropyl Alcohol	45	8.677	8.464	0.680	668	N.D.	
88) Allyl chloride		0.000	8.842	0.000	0	N.D.	
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.	
90) Acrylonitrile		0.000	9.531	0.000	0	N.D.	
91) Isopropyl ether		0.000	10.317	0.000	0	N.D.	
92) 2-Chloro-1,3-butadiene		0.000	10.427	0.000	0	N.D.	
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.	
94) Ethyl acetate	43	11.195	11.225	0.877	6682	N.D.	
95) Propionitrile		0.000	11.305	0.000	0	N.D.	
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.	
97) Tetrahydrofuran	42	11.603	11.597	0.909	1796	N.D.	
98) Isobutyl alcohol		0.000	12.176	0.000	0	N.D.	

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

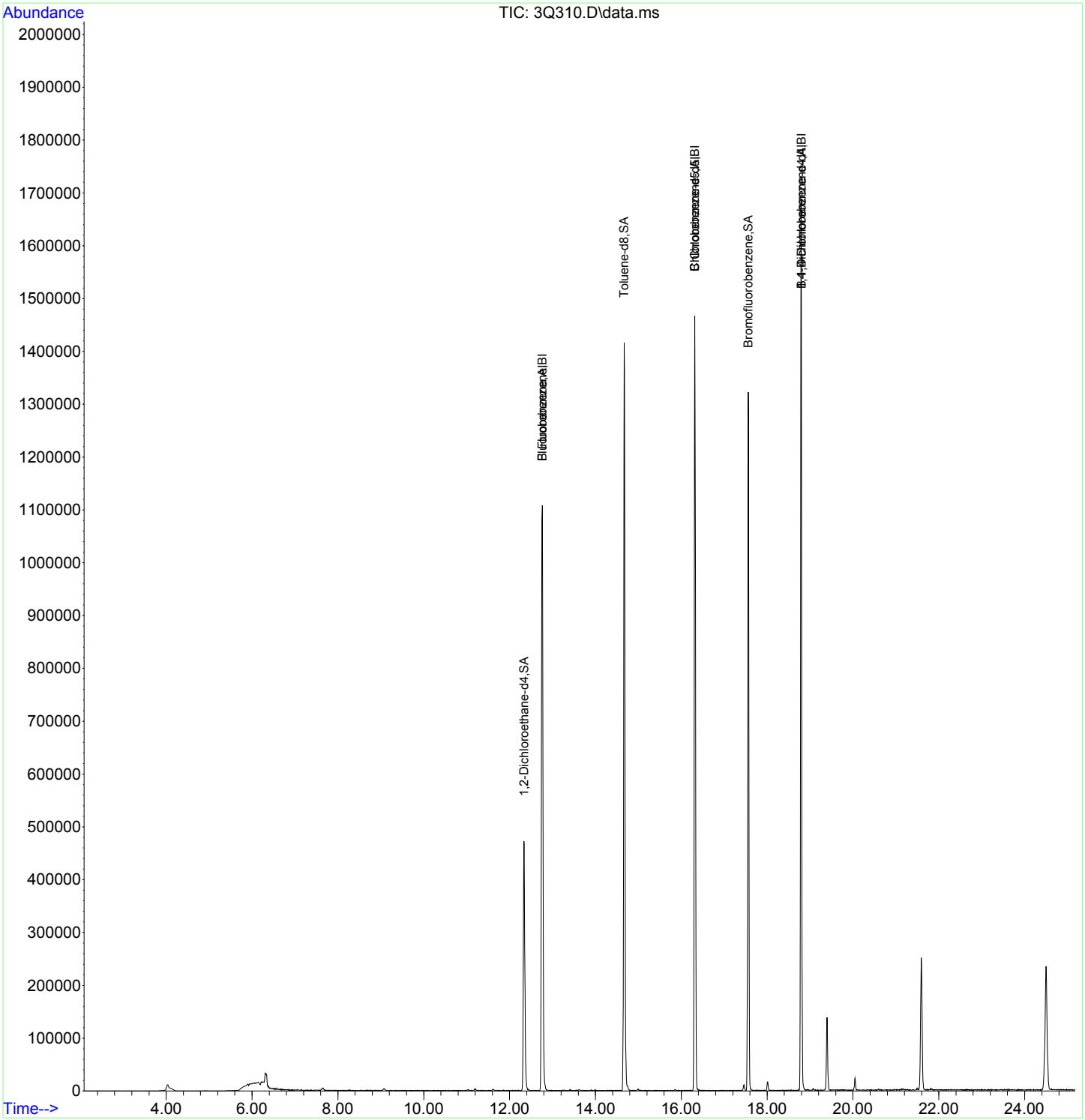
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		0.000	12.500	0.000	0	N.D.	
100)	Methyl methacrylate		0.000	13.560	0.000	0	N.D.	
101)	1,4-Dioxane		0.000	13.652	0.000	0	N.D.	
102)	2-Nitropropane		0.000	14.103	0.000	0	N.D.	
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone	55	17.566	17.535	0.934	1331	N.D.	
109)	trans-1,4-Dichloro-2-b...		0.000	17.718	0.000	0	N.D.	
110)	Pentachloroethane		0.000	18.395	0.000	0	N.D.	
111)	Benzyl chloride	91	18.949	18.943	1.008	860	N.D.	
112)	bis(2-Chloroisopropyl)...	45	19.394	19.346	1.032	5870	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q310.D
Acq On : 18 Jul 2018 14:04
Operator : JP1
InstName : VOA3
Sample : |1204070949|1782981|50|VOA|1|VOA3560C_S|
Misc : GEL 100UL N/A SOIL HB
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 18 15:04:49 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070950**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 10:57**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q304L81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane		51.0	ug/kg	0.300	2.00
79-34-5	1,1,2,2-Tetrachloroethane		46.5	ug/kg	0.300	2.00
79-00-5	1,1,2-Trichloroethane		45.1	ug/kg	0.300	2.00
75-34-3	1,1-Dichloroethane		49.4	ug/kg	0.300	2.00
75-35-4	1,1-Dichloroethylene		53.2	ug/kg	0.300	2.00
87-61-6	1,2,3-Trichlorobenzene		49.5	ug/kg	0.300	2.00
120-82-1	1,2,4-Trichlorobenzene		50.9	ug/kg	0.300	2.00
96-12-8	1,2-Dibromo-3-chloropropane		47.7	ug/kg	0.500	2.00
106-93-4	1,2-Dibromoethane		46.2	ug/kg	0.300	2.00
95-50-1	1,2-Dichlorobenzene		45.6	ug/kg	0.300	2.00
107-06-2	1,2-Dichloroethane		50.8	ug/kg	0.300	2.00
78-87-5	1,2-Dichloropropane		50.8	ug/kg	0.300	2.00
541-73-1	1,3-Dichlorobenzene		45.1	ug/kg	0.300	2.00
106-46-7	1,4-Dichlorobenzene		45.5	ug/kg	0.300	2.00
123-91-1	1,4-Dioxane	U	50.0	ug/kg	15.0	50.0
78-93-3	2-Butanone		264	ug/kg	3.00	10.0
591-78-6	2-Hexanone		237	ug/kg	3.00	10.0
108-10-1	4-Methyl-2-pentanone		225	ug/kg	3.00	10.0
67-64-1	Acetone		258	ug/kg	3.00	10.0
71-43-2	Benzene		48.3	ug/kg	0.300	2.00
74-97-5	Bromochloromethane		45.1	ug/kg	0.300	2.00
75-27-4	Bromodichloromethane		54.1	ug/kg	0.300	2.00
75-25-2	Bromoform		50.2	ug/kg	0.300	2.00
74-83-9	Bromomethane		50.3	ug/kg	0.300	2.00
75-15-0	Carbon disulfide		268	ug/kg	1.60	10.0
56-23-5	Carbon tetrachloride		50.3	ug/kg	0.300	2.00
108-90-7	Chlorobenzene		43.5	ug/kg	0.300	2.00
75-00-3	Chloroethane		50.5	ug/kg	0.300	2.00
67-66-3	Chloroform		51.2	ug/kg	0.300	2.00
74-87-3	Chloromethane		47.3	ug/kg	0.300	2.00
110-82-7	Cyclohexane		46.3	ug/kg	0.300	2.00
124-48-1	Dibromochloromethane		45.5	ug/kg	0.300	2.00
75-71-8	Dichlorodifluoromethane		49.4	ug/kg	0.300	2.00
100-41-4	Ethylbenzene		46.0	ug/kg	0.300	2.00
98-82-8	Isopropylbenzene		44.4	ug/kg	0.300	2.00
79-20-9	Methyl acetate		251	ug/kg	1.50	5.00
108-87-2	Methylcyclohexane		49.2	ug/kg	0.300	2.00
75-09-2	Methylene chloride		51.1	ug/kg	1.60	5.00

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**			**Matrix:**	**SOIL**
Lab Sample ID:	**1204070950**				
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**LCS for batch 1782978**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**1**
Run Date:	**07/18/2018 10:57**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 09:00**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q304L81.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene		47.8	ug/kg	0.300	2.00
127-18-4	Tetrachloroethylene		40.1	ug/kg	0.300	2.00
108-88-3	Toluene		44.7	ug/kg	0.300	2.00
79-01-6	Trichloroethylene		50.7	ug/kg	0.300	2.00
75-69-4	Trichlorofluoromethane		49.7	ug/kg	0.300	2.00
76-13-1	Trichlorotrifluoroethane	U	5.00	ug/kg	1.60	5.00
75-01-4	Vinyl chloride		51.2	ug/kg	0.300	2.00
156-59-2	cis-1,2-Dichloroethylene		51.0	ug/kg	0.300	2.00
10061-01-5	cis-1,3-Dichloropropylene		56.8	ug/kg	0.300	2.00
179601-23-1	m,p-Xylenes		86.5	ug/kg	0.300	4.00
95-47-6	o-Xylene		45.7	ug/kg	0.300	2.00
1634-04-4	tert-Butyl methyl ether		54.7	ug/kg	0.300	2.00
156-60-5	trans-1,2-Dichloroethylene		50.6	ug/kg	0.300	2.00
10061-02-6	trans-1,3-Dichloropropylene		51.8	ug/kg	0.300	2.00

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

EH 07/19/2018

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		Dev(Min)
Internal Standards									
1) Fluorobenzene	96	12.761	12.761	1.000	1265620	50.00	ug/L		0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	622409	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	567034	50.00	ug/L		0.00
84) B Fluorobenzene	96	12.761	12.762	1.000	1268205	50.00	ug/L		0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	631970	50.00	ug/L		0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	567231	50.00	ug/L		0.00
System Monitoring Compounds									Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	248447	52.46	ug/L		0.00
45) Toluene-d8	98	14.676	14.676	0.899	1273357	43.91	ug/L		0.00
63) Bromofluorobenzene	95	17.559	17.559	0.934	583790	52.37	ug/L		0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	71 - 136	105%
45) Toluene-d8	50.000	85 - 116	88%
63) Bromofluorobenzene	50.000	79 - 119	105%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		QValue
2) Dichlorodifluoromethane	85	4.552	4.552	0.357	537717	49.41	ug/L		100
3) Chloromethane	50	5.009	4.990	0.392	521555	47.26	ug/L		99
4) Vinyl chloride	62	5.319	5.319	0.417	543141	51.23	ug/L		99
5) Bromomethane	94	6.159	6.159	0.483	378725	50.27	ug/L		98
6) Chloroethane	64	6.385	6.372	0.500	373001	50.49	ug/L		100
7) Trichlorofluoromethane	101	7.061	7.061	0.553	805468	49.74	ug/L		100
8) Ethyl ether	59	7.610	7.610	0.596	291928	50.64	ug/L		98
9) Acetone	43	8.238	8.232	0.646	1178506	257.92	ug/L		100
10) 1,1-Dichloroethylene	61	8.177	8.177	0.641	724479	53.16	ug/L		99
11) Iodomethane	142	8.506	8.500	0.667	3119264	248.86	ug/L		97
12) Acetonitrile	41	8.817	8.817	0.691	982533	987.49	ug/L		100
13) Methyl acetate	74	8.854	8.854	0.694	323252	251.38	ug/L	#	88
14) Carbon disulfide	76	8.671	8.665	0.679	6986451	267.61	ug/L		100
15) Methylene chloride	84	9.098	9.091	0.713	421929	51.07	ug/L		97
16) tert-Butyl methyl ether	73	9.536	9.537	0.747	1151844	54.70	ug/L		99
17) trans-1,2-Dichloroethy...	61	9.567	9.567	0.750	579760	50.55	ug/L		99
18) Hexane	57	9.988	9.988	0.783	487908	46.48	ug/L		99
19) Vinyl acetate	43	10.317	10.317	0.808	2416715	247.25	ug/L		98
20) 1,1-Dichloroethane	63	10.292	10.286	0.807	721153	49.43	ug/L		100
21) 2-Butanone	72	11.176	11.183	0.876	291330	264.36	ug/L		93
22) cis-1,2-Dichloroethylene	96	11.182	11.183	0.876	389251	51.01	ug/L		98
23) 2,2-Dichloropropane	77	11.195	11.195	0.877	692704	55.13	ug/L		97
24) Bromochloromethane	128	11.548	11.548	0.905	157798	45.05	ug/L		97
25) Chloroform	83	11.628	11.628	0.911	766917	51.20	ug/L		98
26) 1,1,1-Trichloroethane	97	11.914	11.914	0.934	698725	50.99	ug/L		100
27) Cyclohexane	56	11.999	11.999	0.940	565600	46.33	ug/L		97
28) 1,1-Dichloropropene	75	12.127	12.127	0.950	539653	51.92	ug/L		97
29) Carbon tetrachloride	117	12.146	12.146	0.952	635070	50.28	ug/L		98
31) 1,2-Dichloroethane	62	12.444	12.438	0.975	600409	50.84	ug/L		100
32) Benzene	78	12.426	12.426	0.974	1407291	48.27	ug/L		100
33) Cyclohexene	67	12.542	12.548	0.983	663828	45.01	ug/L		97
34) n-Butyl alcohol	56	13.024	13.024	1.021	843394	3943.13	ug/L		99
35) Trichloroethylene	95	13.225	13.225	1.036	386992	50.70	ug/L		93
36) 2-Pentanone	43	13.395	13.396	1.050	1318047	265.65	ug/L		100
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	375531	50.78	ug/L		99
38) Methylcyclohexane	83	13.481	13.475	1.056	612109	49.16	ug/L		99

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
39)	Dibromomethane	93	13.682	13.682	1.072	241703	51.44	ug/L		97
40)	Bromodichloromethane	83	13.834	13.834	1.084	594418	54.06	ug/L		99
41)	2-Chloroethylvinyl ether	63	14.127	14.127	1.107	1017219	248.29	ug/L		99
42)	cis-1,3-Dichloropropylene	75	14.347	14.353	1.124	670954	56.81	ug/L		98
44)	4-Methyl-2-pentanone	58	14.487	14.487	0.888	617595	225.42	ug/L		98
46)	Toluene	91	14.755	14.755	0.904	1400264	44.73	ug/L		100
47)	trans-1,3-Dichloroprop...	75	14.968	14.968	0.917	631590	51.79	ug/L		97
48)	1,1,2-Trichloroethane	83	15.200	15.200	0.932	264403	45.08	ug/L		98
49)	2-Hexanone	58	15.413	15.413	0.945	814225	237.13	ug/L		99
50)	1,3-Dichloropropane	76	15.401	15.401	0.944	535168	45.54	ug/L		98
51)	Tetrachloroethylene	164	15.383	15.383	0.943	265696	40.14	ug/L		99
52)	Dibromochloromethane	129	15.676	15.676	0.961	373668	45.45	ug/L		99
53)	1,2-Dibromoethane	107	15.846	15.840	0.971	314871	46.22	ug/L		99
54)	Chlorobenzene	112	16.352	16.352	1.002	898173	43.50	ug/L		96
55)	1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	368033	43.99	ug/L		99
56)	Ethylbenzene	91	16.419	16.425	1.006	1662640	46.03	ug/L		97
57)	m,p-Xylenes	106	16.535	16.541	1.013	1155387	86.47	ug/L		93
58)	o-Xylene	106	16.986	16.986	1.041	612845	45.74	ug/L		94
59)	Styrene	104	16.992	16.992	1.041	1016760	47.75	ug/L		96
61)	Bromoform	173	17.261	17.261	0.919	260041	50.16	ug/L		99
62)	Isopropylbenzene	105	17.358	17.358	0.924	1596310	44.38	ug/L		97
64)	1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	438948	46.46	ug/L		99
65)	1,2,3-Trichloropropane	75	17.748	17.748	0.945	459173	49.13	ug/L		93
66)	Bromobenzene	156	17.767	17.767	0.945	409977	46.47	ug/L		94
67)	n-Propylbenzene	91	17.791	17.791	0.947	1977314	46.14	ug/L		96
68)	1,3,5-Trimethylbenzene	105	17.949	17.949	0.955	1425495	45.95	ug/L		97
69)	2-Chlorotoluene	126	17.937	17.937	0.955	366824	43.39	ug/L		88
70)	4-Chlorotoluene	91	18.047	18.041	0.960	1354842	49.48	ug/L		95
71)	tert-Butylbenzene	134	18.321	18.321	0.975	258958	43.96	ug/L	#	90
72)	1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1470172	46.23	ug/L		98
73)	sec-Butylbenzene	105	18.547	18.547	0.987	1930669	46.15	ug/L		98
74)	4-Isopropyltoluene	119	18.675	18.675	0.994	1606654	45.69	ug/L		97
75)	1,3-Dichlorobenzene	146	18.730	18.730	0.997	808062	45.08	ug/L		98
76)	1,4-Dichlorobenzene	146	18.821	18.821	1.002	807786	45.49	ug/L		98
77)	n-Butylbenzene	91	19.108	19.108	1.017	1675257	47.72	ug/L		98
78)	1,2-Dichlorobenzene	146	19.242	19.236	1.024	788905	45.59	ug/L		99
79)	1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	93359	47.66	ug/L		94
80)	1,2,4-Trichlorobenzene	180	21.113	21.113	1.124	734082	50.88	ug/L		100
81)	Hexachlorobutadiene	225	21.278	21.278	1.132	487054	48.91	ug/L		100
82)	Naphthalene	128	21.491	21.491	1.144	1582939	50.43	ug/L		100
83)	1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	707113	49.46	ug/L		99
85)	Acrolein		7.811	7.927	0.612	0m	N.D.	d		
86)	Trichlorotrifluoroethane		8.183	8.165	0.641	0m	N.D.	d		
87)	Isopropyl Alcohol		8.653	8.464	0.678	0m	N.D.	d		
88)	Allyl chloride		8.671	8.842	0.679	0m	N.D.	d		
89)	tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90)	Acrylonitrile		9.530	9.531	0.747	0m	N.D.	d		
91)	Isopropyl ether		10.311	10.317	0.808	0m	N.D.	d		
92)	2-Chloro-1,3-butadiene		10.494	10.427	0.822	0m	N.D.	d		
93)	Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94)	Ethyl acetate		11.176	11.225	0.876	0m	N.D.	d		
95)	Propionitrile		11.182	11.305	0.876	0m	N.D.	d		
96)	Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97)	Tetrahydrofuran		11.621	11.597	0.911	0m	N.D.	d		
98)	Isobutyl alcohol		12.377	12.176	0.970	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

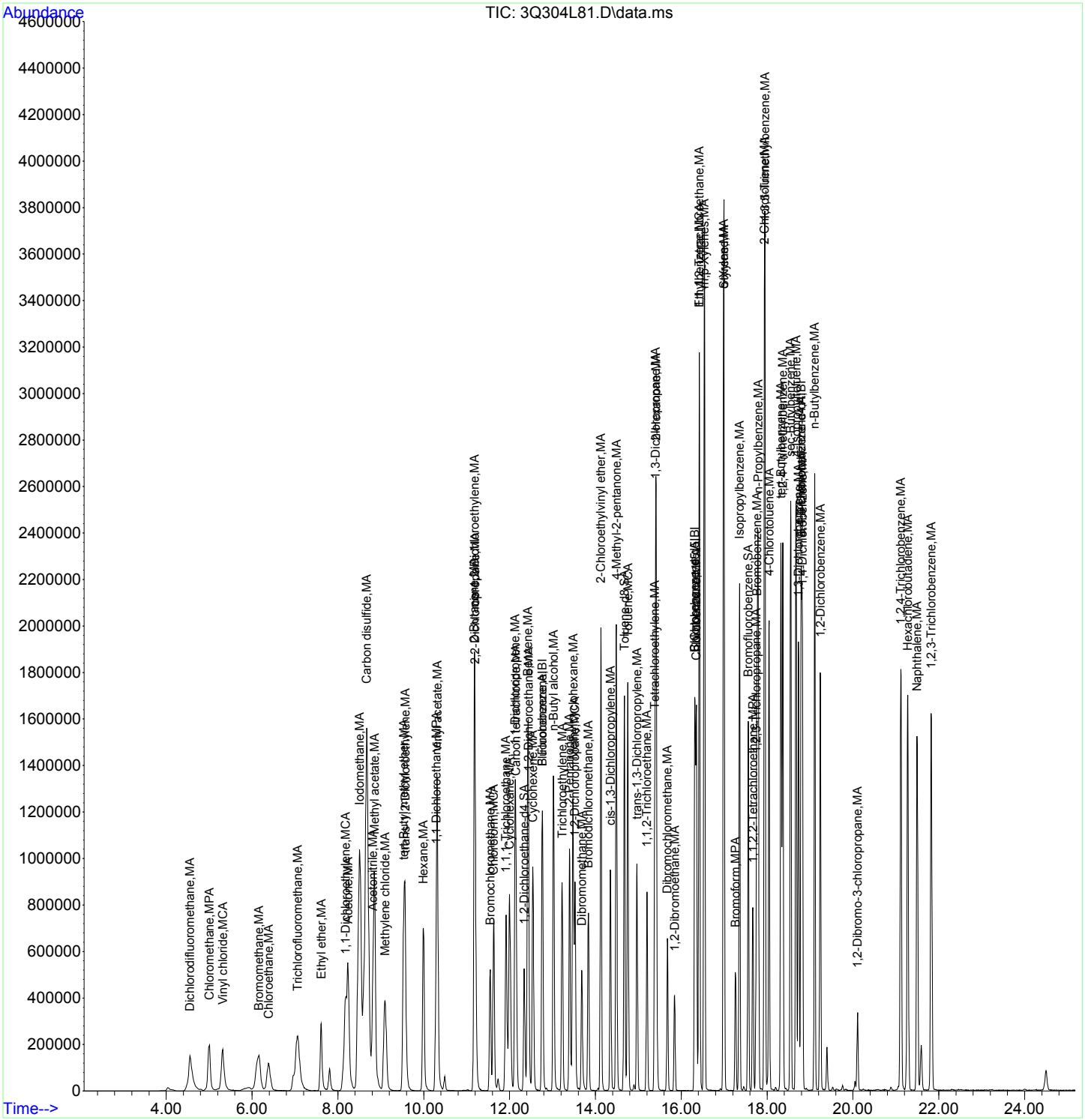
Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99) Methyl tert-amyl ether		12.542	12.500	0.983	0m	N.D.	d
100) Methyl methacrylate		13.475	13.560	1.056	0m	N.D.	d
101) 1,4-Dioxane		13.682	13.652	1.072	0m	N.D.	d
102) 2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d
104) Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106) 1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107) cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108) Cyclohexanone		17.559	17.535	0.934	0m	N.D.	d
109) trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110) Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111) Benzyl chloride		18.907	18.943	1.006	0m	N.D.	d
112) bis(2-Chloroisopropyl)...		19.394	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q304L81.D
Acq On : 18 Jul 2018 10:57
Operator : JP1
InstName : VOA3
Sample : |1204070950|1782981|1|VOA|1|VOA3560C_S|
Misc : LCS 5UL/5ML N/A SOIL MIX[A]0411-10G/0601-10H/
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 18 13:58:08 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070951**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPS**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:46**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q321.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane		2670	ug/kg	16.1	107
79-34-5	1,1,2,2-Tetrachloroethane		2460	ug/kg	16.1	107
79-00-5	1,1,2-Trichloroethane		2320	ug/kg	16.1	107
75-34-3	1,1-Dichloroethane		2500	ug/kg	16.1	107
75-35-4	1,1-Dichloroethylene		2650	ug/kg	16.1	107
87-61-6	1,2,3-Trichlorobenzene		2130	ug/kg	16.1	107
120-82-1	1,2,4-Trichlorobenzene		2080	ug/kg	16.1	107
96-12-8	1,2-Dibromo-3-chloropropane		2330	ug/kg	26.8	107
106-93-4	1,2-Dibromoethane		2350	ug/kg	16.1	107
95-50-1	1,2-Dichlorobenzene		2160	ug/kg	16.1	107
107-06-2	1,2-Dichloroethane		2790	ug/kg	16.1	107
78-87-5	1,2-Dichloropropane		2630	ug/kg	16.1	107
541-73-1	1,3-Dichlorobenzene		2060	ug/kg	16.1	107
106-46-7	1,4-Dichlorobenzene		2070	ug/kg	16.1	107
123-91-1	1,4-Dioxane	U	2680	ug/kg	803	2680
78-93-3	2-Butanone		11800	ug/kg	161	535
591-78-6	2-Hexanone		11500	ug/kg	161	535
108-10-1	4-Methyl-2-pentanone		11100	ug/kg	161	535
67-64-1	Acetone		12000	ug/kg	161	535
71-43-2	Benzene		2410	ug/kg	16.1	107
74-97-5	Bromochloromethane		2200	ug/kg	16.1	107
75-27-4	Bromodichloromethane		2780	ug/kg	16.1	107
75-25-2	Bromoform		2430	ug/kg	16.1	107
74-83-9	Bromomethane		878	ug/kg	16.1	107
75-15-0	Carbon disulfide		12600	ug/kg	85.6	535
56-23-5	Carbon tetrachloride		2650	ug/kg	16.1	107
108-90-7	Chlorobenzene		2110	ug/kg	16.1	107
75-00-3	Chloroethane		256	ug/kg	16.1	107
67-66-3	Chloroform		2650	ug/kg	16.1	107
74-87-3	Chloromethane		2410	ug/kg	16.1	107
110-82-7	Cyclohexane		2240	ug/kg	16.1	107
124-48-1	Dibromochloromethane		2300	ug/kg	16.1	107
75-71-8	Dichlorodifluoromethane		2420	ug/kg	16.1	107
100-41-4	Ethylbenzene		2220	ug/kg	16.1	107
98-82-8	Isopropylbenzene		2200	ug/kg	16.1	107
79-20-9	Methyl acetate		13400	ug/kg	80.3	268
108-87-2	Methylcyclohexane		2410	ug/kg	16.1	107
75-09-2	Methylene chloride		2500	ug/kg	85.6	268

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070951**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPS**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 19:46**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q321.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene		2280	ug/kg	16.1	107
127-18-4	Tetrachloroethylene		1970	ug/kg	16.1	107
108-88-3	Toluene		2190	ug/kg	16.1	107
79-01-6	Trichloroethylene		2590	ug/kg	16.1	107
75-69-4	Trichlorofluoromethane		2970	ug/kg	16.1	107
76-13-1	Trichlorotrifluoroethane	U	268	ug/kg	85.6	268
75-01-4	Vinyl chloride		2470	ug/kg	16.1	107
156-59-2	cis-1,2-Dichloroethylene		2440	ug/kg	16.1	107
10061-01-5	cis-1,3-Dichloropropylene		2750	ug/kg	16.1	107
179601-23-1	m,p-Xylenes		3970	ug/kg	16.1	214
95-47-6	o-Xylene		2190	ug/kg	16.1	107
1634-04-4	tert-Butyl methyl ether		2660	ug/kg	16.1	107
156-60-5	trans-1,2-Dichloroethylene		2550	ug/kg	16.1	107
10061-02-6	trans-1,3-Dichloropropylene		2620	ug/kg	16.1	107

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1069789	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	537249	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483068	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1072239	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	545890	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483267	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.335	12.341	0.967	214340	53.54	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1094234	43.72	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	498311	52.48	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	107%
45) Toluene-d8	50.000	81 - 120	87%
63) Bromofluorobenzene	50.000	70 - 130	105%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.534	4.552	0.355	415391	45.16	ug/L	100
3) Chloromethane	50	4.991	4.990	0.391	420045	45.03	ug/L	99
4) Vinyl chloride	62	5.301	5.319	0.415	412693	46.06	ug/L	99
5) Bromomethane	94	6.050	6.159	0.474	104461	16.40	ug/L	96
6) Chloroethane	64	6.251	6.372	0.490	29853	4.78	ug/L	87
7) Trichlorofluoromethane	101	6.958	7.061	0.545	759476	55.49	ug/L	100
8) Ethyl ether	59	7.604	7.610	0.596	224600	46.09	ug/L	93
9) Acetone	43	8.263	8.232	0.647	867080	224.50	ug/L	96
10) 1,1-Dichloroethylene	61	8.135	8.177	0.637	570652	49.54	ug/L	97
11) Iodomethane	142	8.476	8.500	0.664	2301812	217.26	ug/L	90
12) Acetonitrile	41	8.854	8.817	0.694	911775	1084.12	ug/L	98
13) Methyl acetate	74	8.860	8.854	0.694	272943	251.11	ug/L	96
14) Carbon disulfide	76	8.628	8.665	0.676	5175611	234.54	ug/L	100
15) Methylene chloride	84	9.079	9.091	0.711	326509	46.66	ug/L	100
16) tert-Butyl methyl ether	73	9.543	9.537	0.748	883395	49.63	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.549	9.567	0.748	461374	47.59	ug/L	96
18) Hexane	57	9.970	9.988	0.781	364299	41.06	ug/L	94
19) Vinyl acetate	43	10.317	10.317	0.808	1864957	225.73	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	575834	46.70	ug/L	99
21) 2-Butanone	72	11.195	11.183	0.877	205314	220.41	ug/L	99
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	293882	45.56	ug/L	95
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	545770	51.38	ug/L	100
24) Bromochloromethane	128	11.542	11.548	0.904	121876	41.17	ug/L	95
25) Chloroform	83	11.628	11.628	0.911	627101	49.53	ug/L	99
26) 1,1,1-Trichloroethane	97	11.908	11.914	0.933	577598	49.87	ug/L	99
27) Cyclohexane	56	11.987	11.999	0.939	431166	41.78	ug/L	97
28) 1,1-Dichloropropene	75	12.122	12.127	0.950	428397	48.76	ug/L	96
29) Carbon tetrachloride	117	12.134	12.146	0.951	528169	49.48	ug/L	97
31) 1,2-Dichloroethane	62	12.439	12.438	0.975	519831	52.07	ug/L	99
32) Benzene	78	12.420	12.426	0.973	1109266	45.01	ug/L	100
33) Cyclohexene	67	12.536	12.548	0.982	517537	41.52	ug/L	98
34) n-Butyl alcohol	56	13.042	13.024	1.022	491598	2747.45	ug/L	96
35) Trichloroethylene	95	13.219	13.225	1.036	312586	48.45	ug/L	92
36) 2-Pentanone	43	13.408	13.396	1.051	1081801	257.94	ug/L	99
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	306965	49.11	ug/L	98
38) Methylcyclohexane	83	13.475	13.475	1.056	473919	45.03	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
39) Dibromomethane	93	13.682	13.682	1.072	197046	49.62	ug/L		96
40) Bromodichloromethane	83	13.835	13.834	1.084	482836	51.95	ug/L		99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	818112	236.25	ug/L		99
42) cis-1,3-Dichloropropylene	75	14.347	14.353	1.124	512956	51.38	ug/L		98
44) 4-Methyl-2-pentanone	58	14.493	14.487	0.888	491533	207.85	ug/L		97
46) Toluene	91	14.749	14.755	0.904	1103471	40.84	ug/L		100
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	515900	49.01	ug/L		98
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	219486	43.36	ug/L		99
49) 2-Hexanone	58	15.420	15.413	0.945	634281	214.00	ug/L		95
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	450323	44.39	ug/L		95
51) Tetrachloroethylene	164	15.383	15.383	0.943	210514	36.85	ug/L		99
52) Dibromochloromethane	129	15.676	15.676	0.961	305499	43.05	ug/L		99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	258585	43.97	ug/L		100
54) Chlorobenzene	112	16.352	16.352	1.002	702438	39.41	ug/L		95
55) 1,1,1,2-Tetrachloroethane	131	16.420	16.419	1.006	300846	41.66	ug/L		98
56) Ethylbenzene	91	16.420	16.425	1.006	1290571	41.39	ug/L		96
57) m,p-Xylenes	106	16.535	16.541	1.013	855642	74.19	ug/L		88
58) o-Xylene	106	16.986	16.986	1.041	473570	40.94	ug/L		92
59) Styrene	104	16.993	16.992	1.041	782829	42.60	ug/L		92
61) Bromoform	173	17.261	17.261	0.919	200449	45.38	ug/L		100
62) Isopropylbenzene	105	17.358	17.358	0.924	1260031	41.12	ug/L		97
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	369964	45.97	ug/L		99
65) 1,2,3-Trichloropropane	75	17.749	17.748	0.945	381044	47.86	ug/L		87
66) Bromobenzene	156	17.767	17.767	0.945	316132	42.06	ug/L		92
67) n-Propylbenzene	91	17.791	17.791	0.947	1449922	39.72	ug/L		96
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1048570	39.67	ug/L		97
69) 2-Chlorotoluene	126	17.938	17.937	0.955	274287	38.08	ug/L	#	85
70) 4-Chlorotoluene	91	18.047	18.041	0.960	967849	41.49	ug/L		96
71) tert-Butylbenzene	134	18.322	18.321	0.975	186106	37.08	ug/L	#	83
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1086363	40.10	ug/L		96
73) sec-Butylbenzene	105	18.547	18.547	0.987	1380142	38.73	ug/L		98
74) 4-Isopropyltoluene	119	18.669	18.675	0.994	1120575	37.41	ug/L		96
75) 1,3-Dichlorobenzene	146	18.736	18.730	0.997	587682	38.48	ug/L		98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	585705	38.72	ug/L		99
77) n-Butylbenzene	91	19.108	19.108	1.017	1100246	36.79	ug/L		97
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	595267	40.38	ug/L		99
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	72760	43.60	ug/L		90
80) 1,2,4-Trichlorobenzene	180	21.120	21.113	1.124	476871	38.80	ug/L		99
81) Hexachlorobutadiene	225	21.278	21.278	1.132	282037	33.25	ug/L		99
82) Naphthalene	128	21.498	21.491	1.144	1086730	40.64	ug/L		100
83) 1,2,3-Trichlorobenzene	180	21.821	21.821	1.161	485743	39.88	ug/L		99
85) Acrolein		7.769	7.927	0.609	0m	N.D.	d		
86) Trichlorotrifluoroethane		8.110	8.165	0.636	0m	N.D.	d		
87) Isopropyl Alcohol		8.622	8.464	0.676	0m	N.D.	d		
88) Allyl chloride		9.025	8.842	0.707	0m	N.D.	d		
89) tert-Butyl Alcohol		0.000	9.220	0.000	0	N.D.			
90) Acrylonitrile		9.543	9.531	0.748	0m	N.D.	d		
91) Isopropyl ether		10.323	10.317	0.809	0m	N.D.	d		
92) 2-Chloro-1,3-butadiene		10.323	10.427	0.809	0m	N.D.	d		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94) Ethyl acetate		11.195	11.225	0.877	0m	N.D.	d		
95) Propionitrile		11.195	11.305	0.877	0m	N.D.	d		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97) Tetrahydrofuran		11.622	11.597	0.911	0m	N.D.	d		
98) Isobutyl alcohol		12.213	12.176	0.957	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

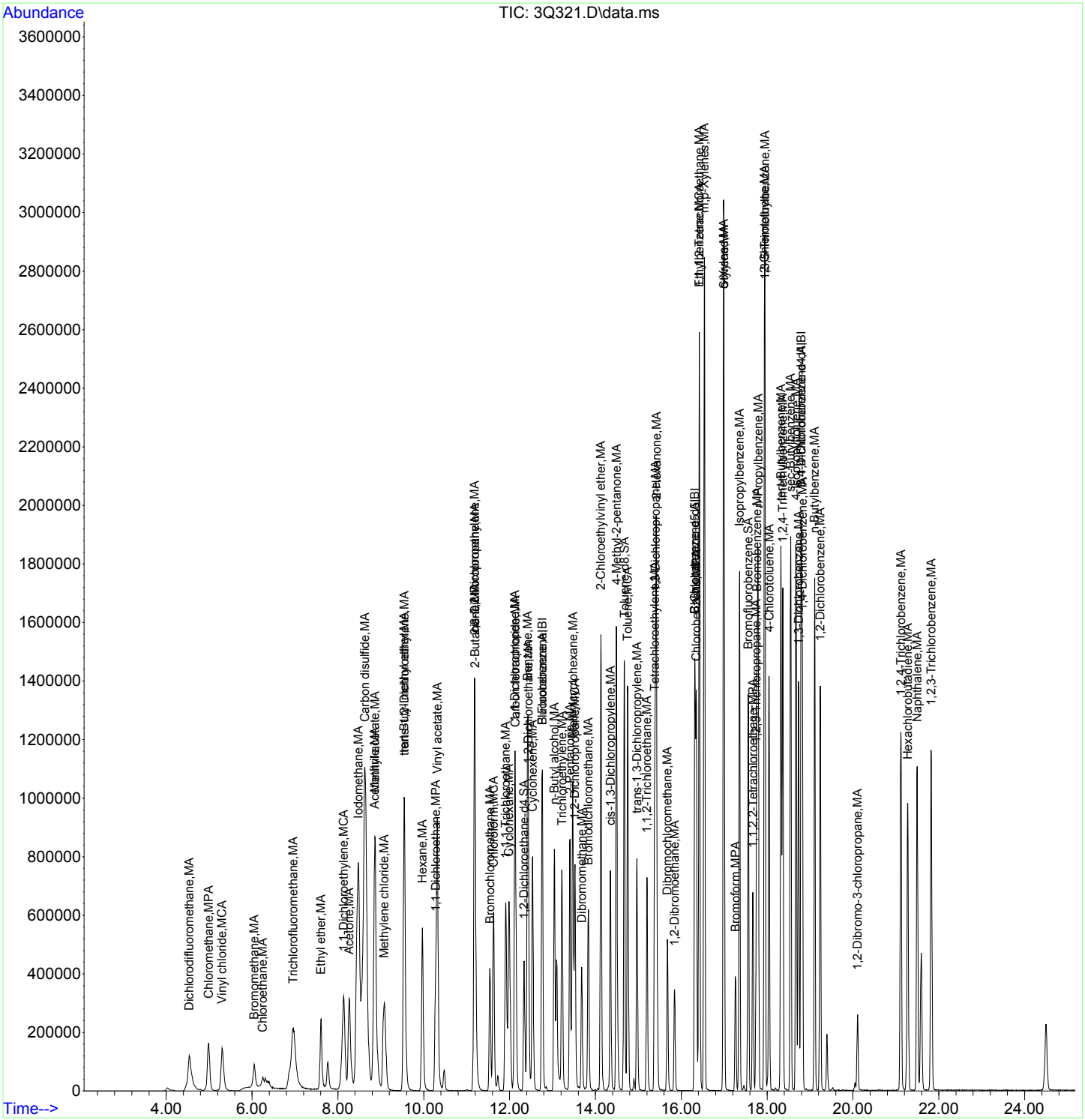
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	
99)	Methyl tert-amyl ether		12.530	12.500	0.982	0m	N.D.	d	
100)	Methyl methacrylate		13.560	13.560	1.063	0m	N.D.	d	
101)	1,4-Dioxane		13.676	13.652	1.072	0m	N.D.	d	
102)	2-Nitropropane		14.127	14.103	1.107	0m	N.D.	d	
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.		
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.		
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.		
108)	Cyclohexanone		17.560	17.535	0.934	0m	N.D.	d	
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d	
110)	Pentachloroethane		18.395	18.395	0.979	0m	N.D.	d	
111)	Benzyl chloride		18.901	18.943	1.006	0m	N.D.	d	
112)	bis(2-Chloroisopropyl)...		19.388	19.346	1.032	0m	N.D.	d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q321.D
Acq On : 18 Jul 2018 19:46
Operator : JP1
InstName : VOA3
Sample : |1204070951|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PS
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 08:40:41 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070952**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPSD**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 20:17**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q322.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
71-55-6	1,1,1-Trichloroethane		2700	ug/kg	16.1	107
79-34-5	1,1,2,2-Tetrachloroethane		2290	ug/kg	16.1	107
79-00-5	1,1,2-Trichloroethane		2360	ug/kg	16.1	107
75-34-3	1,1-Dichloroethane		2570	ug/kg	16.1	107
75-35-4	1,1-Dichloroethylene		2880	ug/kg	16.1	107
87-61-6	1,2,3-Trichlorobenzene		2310	ug/kg	16.1	107
120-82-1	1,2,4-Trichlorobenzene		2280	ug/kg	16.1	107
96-12-8	1,2-Dibromo-3-chloropropane		2290	ug/kg	26.8	107
106-93-4	1,2-Dibromoethane		2300	ug/kg	16.1	107
95-50-1	1,2-Dichlorobenzene		2260	ug/kg	16.1	107
107-06-2	1,2-Dichloroethane		2880	ug/kg	16.1	107
78-87-5	1,2-Dichloropropane		2650	ug/kg	16.1	107
541-73-1	1,3-Dichlorobenzene		2250	ug/kg	16.1	107
106-46-7	1,4-Dichlorobenzene		2260	ug/kg	16.1	107
123-91-1	1,4-Dioxane	U	2680	ug/kg	803	2680
78-93-3	2-Butanone		11800	ug/kg	161	535
591-78-6	2-Hexanone		10500	ug/kg	161	535
108-10-1	4-Methyl-2-pentanone		10900	ug/kg	161	535
67-64-1	Acetone		11300	ug/kg	161	535
71-43-2	Benzene		2470	ug/kg	16.1	107
74-97-5	Bromochloromethane		2340	ug/kg	16.1	107
75-27-4	Bromodichloromethane		2880	ug/kg	16.1	107
75-25-2	Bromoform		2470	ug/kg	16.1	107
74-83-9	Bromomethane		863	ug/kg	16.1	107
75-15-0	Carbon disulfide		13300	ug/kg	85.6	535
56-23-5	Carbon tetrachloride		2710	ug/kg	16.1	107
108-90-7	Chlorobenzene		2150	ug/kg	16.1	107
75-00-3	Chloroethane		247	ug/kg	16.1	107
67-66-3	Chloroform		2720	ug/kg	16.1	107
74-87-3	Chloromethane		2780	ug/kg	16.1	107
110-82-7	Cyclohexane		2340	ug/kg	16.1	107
124-48-1	Dibromochloromethane		2310	ug/kg	16.1	107
75-71-8	Dichlorodifluoromethane		2680	ug/kg	16.1	107
100-41-4	Ethylbenzene		2310	ug/kg	16.1	107
98-82-8	Isopropylbenzene		2270	ug/kg	16.1	107
79-20-9	Methyl acetate		13100	ug/kg	80.3	268
108-87-2	Methylcyclohexane		2350	ug/kg	16.1	107
75-09-2	Methylene chloride		2550	ug/kg	85.6	268

Volatile
Certificate of Analysis
Sample Summary

SDG Number:	**454474**	**Date Collected:**	**07/16/2018 09:40**	**Matrix:**	**Soil**
Lab Sample ID:	**1204070952**	**Date Received:**	**07/17/2018 08:55**	**%Moisture:**	**6.6**
Client Sample:	**QC for batch 1782978**	**Client:**	**URSC013**	**Project:**	**QC**
Client ID:	**CHEM Backfill/WinzingtonPSD**	**Method:**	**SW846 5035A/8260C**	**SOP Ref:**	**GL-OA-E-038**
Batch ID:	**1782981**	**Inst:**	**VOA3.I**	**Dilution:**	**50**
Run Date:	**07/18/2018 20:17**	**Analyst:**	**JP1**	**Purge Vol:**	**5 mL**
Prep Date:	**07/18/2018 12:26**	**Aliquot:**	**5 g**	**Final Volume:**	**5 mL**
Data File:	**071818V3\3Q322.D**	**Column:**	**DB-624**		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ
100-42-5	Styrene		2270	ug/kg	16.1	107
127-18-4	Tetrachloroethylene		2040	ug/kg	16.1	107
108-88-3	Toluene		2300	ug/kg	16.1	107
79-01-6	Trichloroethylene		2640	ug/kg	16.1	107
75-69-4	Trichlorofluoromethane		3000	ug/kg	16.1	107
76-13-1	Trichlorotrifluoroethane	U	268	ug/kg	85.6	268
75-01-4	Vinyl chloride		2930	ug/kg	16.1	107
156-59-2	cis-1,2-Dichloroethylene		2470	ug/kg	16.1	107
10061-01-5	cis-1,3-Dichloropropylene		2990	ug/kg	16.1	107
179601-23-1	m,p-Xylenes		4350	ug/kg	16.1	214
95-47-6	o-Xylene		2170	ug/kg	16.1	107
1634-04-4	tert-Butyl methyl ether		2600	ug/kg	16.1	107
156-60-5	trans-1,2-Dichloroethylene		2520	ug/kg	16.1	107
10061-02-6	trans-1,3-Dichloropropylene		2680	ug/kg	16.1	107

Quantitation Report
GEL Laboratories, LLC

JP 07/19/2018

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

GH 07/19/2018

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	Dev(Min)
Internal Standards								
1) Fluorobenzene	96	12.762	12.761	1.000	1056892	50.00	ug/L	0.00
43) Chlorobenzene-d5	82	16.316	16.316	1.000	546341	50.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483451	50.00	ug/L	0.00
84) B Fluorobenzene	96	12.762	12.762	1.000	1058991	50.00	ug/L	0.00
103) B Chlorobenzene-d5	82	16.316	16.316	1.000	555484	50.00	ug/L	0.00
105) B 1,4-Dichlorobenzene-d4	152	18.791	18.791	1.000	483754	50.00	ug/L	0.00
System Monitoring Compounds								Dev(Min)
30) 1,2-Dichloroethane-d4	67	12.341	12.341	0.967	215215	54.41	ug/L	0.00
45) Toluene-d8	98	14.676	14.676	0.899	1108152	43.54	ug/L	0.00
63) Bromofluorobenzene	95	17.560	17.559	0.934	497667	52.37	ug/L	0.00

Compound	Amount	Range	Recovery
30) 1,2-Dichloroethane-d4	50.000	81 - 124	109%
45) Toluene-d8	50.000	81 - 120	87%
63) Bromofluorobenzene	50.000	70 - 130	105%

Target Compounds	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units	QValue
2) Dichlorodifluoromethane	85	4.534	4.552	0.355	454785	50.05	ug/L	100
3) Chloromethane	50	4.991	4.990	0.391	478490	51.92	ug/L	100
4) Vinyl chloride	62	5.301	5.319	0.415	484908	54.78	ug/L	99
5) Bromomethane	94	6.050	6.159	0.474	101493	16.13	ug/L	98
6) Chloroethane	64	6.251	6.372	0.490	28417	4.61	ug/L	96
7) Trichlorofluoromethane	101	6.946	7.061	0.544	758067	56.06	ug/L	100
8) Ethyl ether	59	7.604	7.610	0.596	231436	48.08	ug/L	93
9) Acetone	43	8.269	8.232	0.648	804236	210.77	ug/L	96
10) 1,1-Dichloroethylene	61	8.135	8.177	0.637	611836	53.76	ug/L	99
11) Iodomethane	142	8.476	8.500	0.664	2506584	239.48	ug/L	93
12) Acetonitrile	41	8.848	8.817	0.693	897233	1079.85	ug/L	98
13) Methyl acetate	74	8.866	8.854	0.695	263739	245.60	ug/L	97
14) Carbon disulfide	76	8.628	8.665	0.676	5437860	249.43	ug/L	100
15) Methylene chloride	84	9.079	9.091	0.711	328936	47.60	ug/L	100
16) tert-Butyl methyl ether	73	9.549	9.537	0.748	853450	48.53	ug/L	98
17) trans-1,2-Dichloroethy...	61	9.549	9.567	0.748	450590	47.04	ug/L	97
18) Hexane	57	9.970	9.988	0.781	366598	41.82	ug/L	92
19) Vinyl acetate	43	10.317	10.317	0.808	1933172	236.84	ug/L	98
20) 1,1-Dichloroethane	63	10.280	10.286	0.806	585331	48.05	ug/L	99
21) 2-Butanone	72	11.201	11.183	0.878	203521	221.15	ug/L	98
22) cis-1,2-Dichloroethylene	96	11.183	11.183	0.876	293771	46.10	ug/L	95
23) 2,2-Dichloropropane	77	11.189	11.195	0.877	542938	51.74	ug/L	100
24) Bromochloromethane	128	11.542	11.548	0.904	127603	43.63	ug/L	94
25) Chloroform	83	11.628	11.628	0.911	636502	50.89	ug/L	99
26) 1,1,1-Trichloroethane	97	11.908	11.914	0.933	578254	50.54	ug/L	99
27) Cyclohexane	56	11.987	11.999	0.939	445550	43.70	ug/L	98
28) 1,1-Dichloropropene	75	12.122	12.127	0.950	437735	50.43	ug/L	98
29) Carbon tetrachloride	117	12.134	12.146	0.951	533910	50.62	ug/L	98
31) 1,2-Dichloroethane	62	12.439	12.438	0.975	530638	53.80	ug/L	99
32) Benzene	78	12.420	12.426	0.973	1121509	46.07	ug/L	100
33) Cyclohexene	67	12.536	12.548	0.982	509771	41.39	ug/L	98
34) n-Butyl alcohol	56	13.042	13.024	1.022	516572	2916.44	ug/L	97
35) Trichloroethylene	95	13.225	13.225	1.036	314868	49.40	ug/L	93
36) 2-Pentanone	43	13.408	13.396	1.051	1070682	258.41	ug/L	98
37) 1,2-Dichloropropane	63	13.524	13.524	1.060	305986	49.55	ug/L	100
38) Methylcyclohexane	83	13.475	13.475	1.056	456391	43.89	ug/L	98

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units		
39) Dibromomethane	93	13.682	13.682	1.072	196714	50.14	ug/L		95
40) Bromodichloromethane	83	13.835	13.834	1.084	493817	53.78	ug/L		99
41) 2-Chloroethylvinyl ether	63	14.127	14.127	1.107	821990	240.26	ug/L		99
42) cis-1,3-Dichloropropylene	75	14.353	14.353	1.125	551030	55.87	ug/L		97
44) 4-Methyl-2-pentanone	58	14.487	14.487	0.888	488348	203.07	ug/L		98
46) Toluene	91	14.755	14.755	0.904	1179428	42.93	ug/L		100
47) trans-1,3-Dichloroprop...	75	14.969	14.968	0.917	536377	50.11	ug/L		99
48) 1,1,2-Trichloroethane	83	15.200	15.200	0.932	226703	44.04	ug/L		99
49) 2-Hexanone	58	15.420	15.413	0.945	591950	196.40	ug/L		96
50) 1,3-Dichloropropane	76	15.401	15.401	0.944	464755	45.05	ug/L		100
51) Tetrachloroethylene	164	15.383	15.383	0.943	221918	38.20	ug/L		99
52) Dibromochloromethane	129	15.682	15.676	0.961	311567	43.17	ug/L		99
53) 1,2-Dibromoethane	107	15.840	15.840	0.971	256468	42.89	ug/L		99
54) Chlorobenzene	112	16.352	16.352	1.002	727687	40.15	ug/L		96
55) 1,1,1,2-Tetrachloroethane	131	16.419	16.419	1.006	318472	43.37	ug/L		98
56) Ethylbenzene	91	16.419	16.425	1.006	1367531	43.13	ug/L		96
57) m,p-Xylenes	106	16.535	16.541	1.013	952890	81.24	ug/L		91
58) o-Xylene	106	16.986	16.986	1.041	476082	40.48	ug/L		91
59) Styrene	104	16.993	16.992	1.041	793532	42.46	ug/L		94
61) Bromoform	173	17.261	17.261	0.919	203814	46.11	ug/L		100
62) Isopropylbenzene	105	17.358	17.358	0.924	1301346	42.44	ug/L		97
64) 1,1,2,2-Tetrachloroethane	83	17.669	17.663	0.940	344847	42.81	ug/L		100
65) 1,2,3-Trichloropropane	75	17.748	17.748	0.945	365249	45.84	ug/L		93
66) Bromobenzene	156	17.767	17.767	0.945	325912	43.33	ug/L		94
67) n-Propylbenzene	91	17.791	17.791	0.947	1551658	42.47	ug/L		97
68) 1,3,5-Trimethylbenzene	105	17.950	17.949	0.955	1152403	43.57	ug/L		97
69) 2-Chlorotoluene	126	17.937	17.937	0.955	296936	41.20	ug/L		88
70) 4-Chlorotoluene	91	18.047	18.041	0.960	1047389	44.86	ug/L		95
71) tert-Butylbenzene	134	18.322	18.321	0.975	199392	39.70	ug/L	#	84
72) 1,2,4-Trimethylbenzene	105	18.364	18.364	0.977	1176094	43.38	ug/L		97
73) sec-Butylbenzene	105	18.547	18.547	0.987	1431800	40.14	ug/L		98
74) 4-Isopropyltoluene	119	18.675	18.675	0.994	1157984	38.62	ug/L		96
75) 1,3-Dichlorobenzene	146	18.730	18.730	0.997	642470	42.04	ug/L		98
76) 1,4-Dichlorobenzene	146	18.821	18.821	1.002	638906	42.20	ug/L		98
77) n-Butylbenzene	91	19.108	19.108	1.017	1260769	42.13	ug/L		97
78) 1,2-Dichlorobenzene	146	19.236	19.236	1.024	623663	42.27	ug/L		98
79) 1,2-Dibromo-3-chloropr...	157	20.108	20.108	1.070	71334	42.71	ug/L		92
80) 1,2,4-Trichlorobenzene	180	21.114	21.113	1.124	524469	42.63	ug/L		100
81) Hexachlorobutadiene	225	21.278	21.278	1.132	333097	39.23	ug/L		100
82) Naphthalene	128	21.498	21.491	1.144	1173572	43.85	ug/L		100
83) 1,2,3-Trichlorobenzene	180	21.827	21.821	1.162	526406	43.19	ug/L		98
85) Acrolein		8.055	7.927	0.631	0m	N.D.	d		
86) Trichlorotrifluoroethane		8.122	8.165	0.636	0m	N.D.	d		
87) Isopropyl Alcohol		8.628	8.464	0.676	0m	N.D.	d		
88) Allyl chloride		9.073	8.842	0.711	0m	N.D.	d		
89) tert-Butyl Alcohol		9.025	9.220	0.707	0m	N.D.	d		
90) Acrylonitrile		9.555	9.531	0.749	0m	N.D.	d		
91) Isopropyl ether		10.317	10.317	0.808	0m	N.D.	d		
92) 2-Chloro-1,3-butadiene		10.476	10.427	0.821	0m	N.D.	d		
93) Ethyl tert-butyl ether		0.000	10.890	0.000	0	N.D.			
94) Ethyl acetate		11.195	11.225	0.877	0m	N.D.	d		
95) Propionitrile		11.189	11.305	0.877	0m	N.D.	d		
96) Methacrylonitrile		0.000	11.512	0.000	0	N.D.			
97) Tetrahydrofuran		11.634	11.597	0.912	0m	N.D.	d		
98) Isobutyl alcohol		12.231	12.176	0.958	0m	N.D.	d		

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE

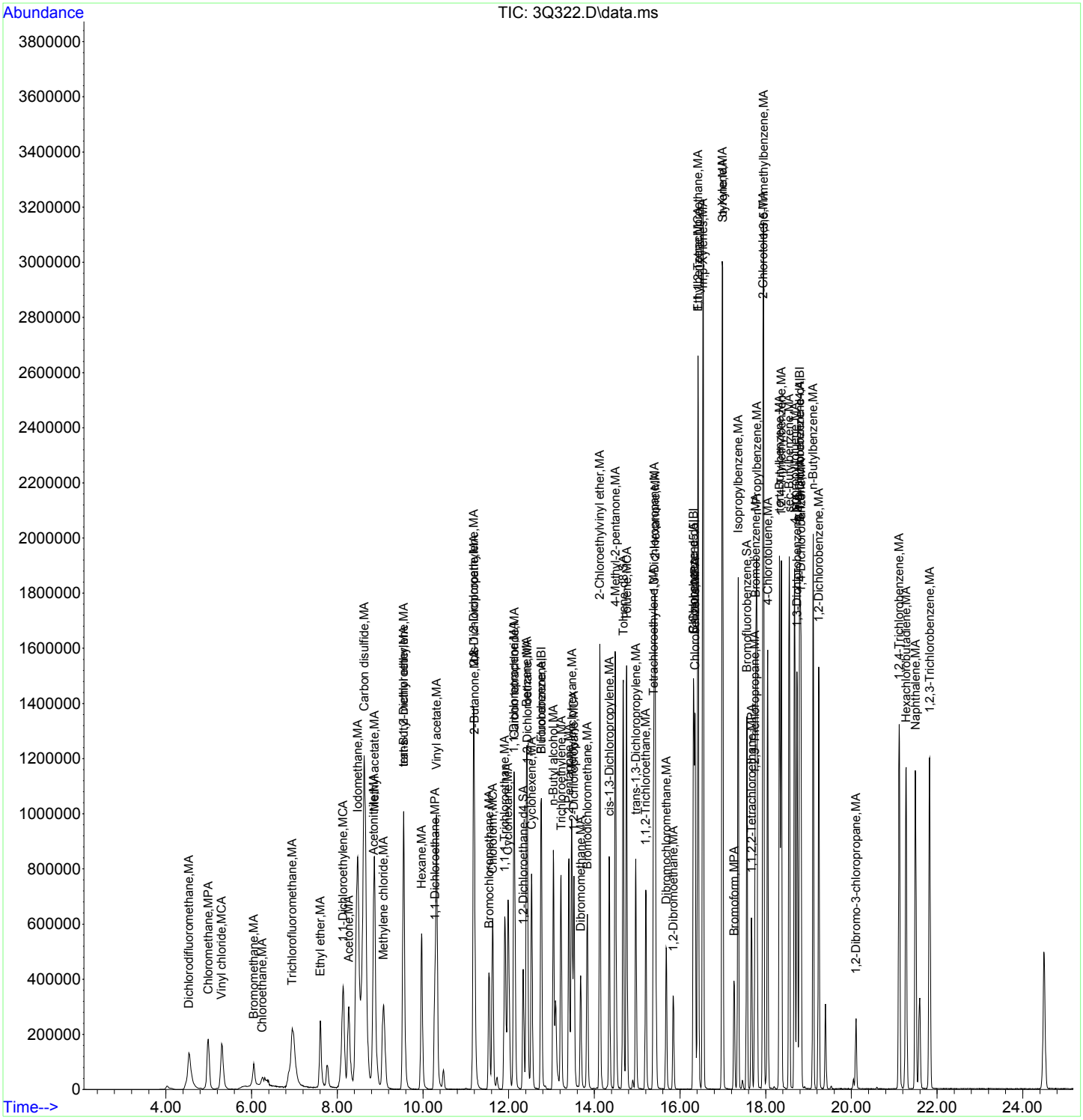
	Compound	QIon	R.T.	Exp RT	Rel RT	Response	Conc	Units
99)	Methyl tert-amyl ether		12.542	12.500	0.983	0m	N.D.	d
100)	Methyl methacrylate		13.585	13.560	1.064	0m	N.D.	d
101)	1,4-Dioxane		13.670	13.652	1.071	0m	N.D.	d
102)	2-Nitropropane		14.237	14.103	1.116	0m	N.D.	d
104)	Ethyl methacrylate		0.000	14.987	0.000	0	N.D.	
106)	1-Chlorohexane		0.000	16.231	0.000	0	N.D.	
107)	cis-1,4-Dichloro-2-butene		0.000	17.425	0.000	0	N.D.	
108)	Cyclohexanone		17.560	17.535	0.934	0m	N.D.	d
109)	trans-1,4-Dichloro-2-b...		17.791	17.718	0.947	0m	N.D.	d
110)	Pentachloroethane		18.401	18.395	0.979	0m	N.D.	d
111)	Benzyl chloride		18.919	18.943	1.007	0m	N.D.	d
112)	bis(2-Chloroisopropyl)...		19.395	19.346	1.032	0m	N.D.	d

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(A) = Over the calibration range (d) = deleted

Quantitation Report
GEL Laboratories, LLC

Data Path : C:\msdchem\1\data\071818V3\
Data File : 3Q322.D
Acq On : 18 Jul 2018 20:17
Operator : JP1
InstName : VOA3
Sample : |1204070952|1782981|50|VOA|1|VOA3560C_S|
Misc : DMAX 100UL N/A SOIL MIX[A] 454688003PSD
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 19 08:40:43 2018
Quant Method : C:\msdchem\1\data\070218V3\VOA3-8260C-070218.M
Quant Title : Volatile Organics 8260B SubList :
QLast Update : Tue Jul 03 07:30:47 2018
Response via : Initial Calibration
Integrator: RTE



Miscellaneous

Prep Logbook

Closed-System Purge-and-Trap Collection and Extraction: Volatile Organics in Soil and Waste Samples

Batch ID: **1782978**
Analyst: James Pressley
Method: SW846 5035A
Lab SOP: GL-OA-E-039 REV# 12
Instrument: OH AUS Balance

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units

Sample ID	Prep Date	Matrix	Tare Wt (g)	Final Wt (g)	Sample Wt (g)	Preservative	Final Volume (mL)	Prep Factor (mL/g)
454398001	10-JUL-2018 08:20:00	Soil	34.32	40.42	6.1	DI WATER	5	0.81967
454398003	10-JUL-2018 08:45:00	Soil	34.57	40.86	6.29	DI WATER	5	0.79491
1204070948 MB	18-JUL-2018 09:00:00	Soil			5	DI WATER	5	1
1204070950 LCS	18-JUL-2018 09:00:00	Soil			5	DI WATER	5	1
454474001	18-JUL-2018 12:20:00	Soil			5	DT961	5	1
454474002	18-JUL-2018 12:21:00	Soil			5	DT961	5	1
454474003	18-JUL-2018 12:22:00	Soil			5	DT961	5	1
454474004	18-JUL-2018 12:23:00	Soil			5	DT961	5	1
454474005	18-JUL-2018 12:24:00	Soil			5	DT961	5	1
454474006	18-JUL-2018 12:25:00	Soil			5	DT961	5	1
454688003	18-JUL-2018 12:26:00	Soil			5	DT961	5	1
1204070951 PS (454688003)	18-JUL-2018 12:26:00	Soil			5	DT961	5	1
1204070952 PSD (454688003)	18-JUL-2018 12:26:00	Soil			5	DT961	5	1
454715001	18-JUL-2018 12:27:00	Soil			5.1	DT961	5	0.98039
454715002	18-JUL-2018 12:28:00	Soil			5.2	DT961	5	0.96154
454715003	18-JUL-2018 12:29:00	Soil			5	DT961	5	1
1204070949 HB	18-JUL-2018 12:35:00	Soil			5	DT961	5	1

Reagent/Solvent Lot ID	Description	Amount

Comments:

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

JP 07/03/2018

Date: 7/2/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____ 07/03/2018

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

CI test lot # 80315C

Sequence Number: 070218V3

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV			5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS				5uL ea.	
BFB	IVM180702-01				1
SHORT			5uL ea.	5uL ea.	
SHORT LCS					

Purge Amount	
5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
2 Jul 2018 12:28	3O101.D	IVM180702-01	GEL	BFB	10ML	1	N/A	1	w	JP1	N/A	O	
2 Jul 2018 12:54	3O102.D	W3VM180702-01	VSTD0005	ICAL	5UL/5ML	1	N/A	2	w	JP1	N/A	O	MIX[A] UVM180612-01/UVM180601-01D/UVM180628-01A
2 Jul 2018 13:25	3O103.D	W3VM180702-02	VSTD001	ICAL	5UL/5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180612-02/UVM180601-02D/UVM180628-02A
2 Jul 2018 13:56	3O104.D	W3VM180702-03	VSTD002	ICAL	5UL/5ML	1	N/A	4	w	JP1	N/A	O	MIX[A] UVM180612-03/UVM180601-03D/UVM180628-03A
2 Jul 2018 14:28	3O105.D	W3VM180702-04	VSTD005	ICAL	5UL/5ML	1	N/A	5	w	JP1	N/A	O	MIX[A] UVM180612-04/UVM180601-04D/UVM180628-04A
2 Jul 2018 14:59	3O106.D	W3VM180702-05	VSTD010	ICAL	5UL/5ML	1	N/A	6	w	JP1	N/A	O	MIX[A] UVM180612-05/UVM180601-05D/UVM180628-05A
2 Jul 2018 15:30	3O107.D	W3VM180702-06	VSTD020	ICAL	5UL/5ML	1	N/A	7	w	JP1	N/A	O	MIX[A] UVM180612-06/UVM180601-06D/UVM180628-06A
2 Jul 2018 16:01	3O108.D	W3VM180702-07	VSTD050	ICAL	5UL/5ML	1	N/A	8	w	JP1	N/A	O	MIX[A] UVM180612-07(LOT AU-01265)/UVM180601-07D(LOT AU-01241)/UVM180628-07A(LOT 310314)
2 Jul 2018 16:32	3O109.D	W3VM180702-08	VSTD080	ICAL	4UL/5ML	1	N/A	9	w	JP1	N/A	O	MIX[A] UVM180612-08/UVM180601-08D/UVM180628-08A
2 Jul 2018 17:03	3O110.D	W3VM180702-09	VSTD100	ICAL	5UL/5ML	1	N/A	10	w	JP1	N/A	O	MIX[A] UVM180612-08/UVM180601-08D/UVM180628-08A
2 Jul 2018 17:34	3O111.D	120406----	GEL	BLANK	5ML	1	N/A	11	w	JP1	N/A	X	RINSE
2 Jul 2018 18:05	3O112.D	W3VM180702-10	ICV50	ICV	5UL/5ML	1	N/A	12	w	JP1	N/A	O	MIX[A] UVM180411-10E(LOT AU-01221)/UVM180601 10F(AU-01235)/UVM180312-09D(LOT 338329)/IVM180628-01
2 Jul 2018 18:36	3O113.D	W3VM180702-11	VSTD005	ICAL	5UL/5ML	1	N/A	13	w	JP1	N/A	O	MIX[B] UVM180503-01B/UVM180613-01A
2 Jul 2018 19:07	3O114.D	W3VM180702-12	VSTD010	ICAL	5UL/5ML	1	N/A	14	w	JP1	N/A	O	MIX[B] UVM180503-02B/UVM180613-02A
2 Jul 2018 19:38	3O115.D	W3VM180702-13	VSTD025	ICAL	5UL/5ML	1	N/A	15	w	JP1	N/A	O	MIX[B] UVM180503-03B/UVM180613-03A
2 Jul 2018 20:10	3O116.D	W3VM180702-14	VSTD050	ICAL	5UL/5ML	1	N/A	16	w	JP1	N/A	O	MIX[B] UVM180503-04B/UVM180613-04A
2 Jul 2018 20:41	3O117.D	W3VM180702-15	VSTD100	ICAL	5UL/5ML	1	N/A	17	w	JP1	N/A	O	MIX[B] UVM180503-05B/UVM180613-05A
2 Jul 2018 21:12	3O118.D	W3VM180702-16	VSTD250	ICAL	5UL/5ML	1	N/A	18	w	JP1	N/A	O	MIX[B] UVM180503-06B(LOT 343576)/UVM180613-06A(LOT 347118)
2 Jul 2018 21:44	3O119.D	W3VM180702-17	VSTD300	ICAL	3UL/5ML	1	N/A	19	w	JP1	N/A	O	MIX[B] UVM180503-07B/UVM180613-07A
2 Jul 2018 22:15	3O120.D	W3VM180702-18	VSTD500	ICAL	5UL/5ML	1	N/A	20	w	JP1	N/A	O	MIX[B] UVM180503-07B/UVM180613-07A

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

Date: 7/2/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

CI test lot # 80315C

Sequence Number: 070218V3

Daily Standard Solution ID#		Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV			5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS				5uL ea.	
BFB	IVM180702-01				1
SHORT			5uL ea.	5uL ea.	
SHORT LCS					

Purge Amount	
5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
2 Jul 2018 22:46	3O121.D	120406----	GEL	BLANK	5ML	1	N/A	21	w	JP1	N/A	X	RINSE
2 Jul 2018 23:17	3O122.D	W3VM180702-19	ICV250	ICV	5UL/5ML	1	N/A	22	w	JP1	N/A	O	MIX[B] UVM180503-08C(LOT 343583)/UVM180613-08B(LOT 347133)

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

JP 07/19/2018

Date: 7/18/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____ 07/19/2018

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

CI test lot # 80315C

Sequence Number: 071818V3

	Daily Standard Solution ID#	Volume Added for Purge (ul) Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W3VM180718-02/06		5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS	W3VM180718-03/04			5uL ea.	
BFB	IVM180702-01				1
SHORT	W3VM180718-05		5uL ea.	5uL ea.	
SHORT LCS					

Purge Amount	
5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
7/18/2018 9:28	3Q301.D	IVM180702-01	GEL	BFB	10ML	1	N/A	1	w	JP1	N/A	O	
7/18/2018 9:55	3Q302.D	W3VM180718-01	GEL	CCV	5ML	1	N/A	2	w	JP1	N/A	X	MIX[A] UVM180411-10F/UVM180601-10H/IVM180713 01/UVM180312-09F. LOW
7/18/2018 10:26	3Q303.D	W3VM180718-02	GEL	CCV	5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F
7/18/2018 10:26	3Q303L.D	W3VM180718-03	GEL	LCS	5ML	1	N/A	3	w	JP1	N/A	O	MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F
7/18/2018 10:57	3Q304.D	W3VM180718-04	GEL	LCS	5ML	1	N/A	4	S	JP1	N/A	O	SOIL MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F
7/18/2018 11:28	3Q305.D	W3VM180718-05	GEL	CCV	5ML	1	N/A	5	W	JP1	N/A	O	MIX[B] UVM180503-08D/UVM180613-08C
7/18/2018 11:59	3Q306.D	120406----	GEL	BLANK	5ML	1	N/A	6	W	JP1	N/A	O	
7/18/2018 12:30	3Q307.D	120406----	GEL	BLANK	5ML	1	N/A	7	S	JP1	N/A	O	SOIL
7/18/2018 13:02	3Q308.D	454398001	BBES	1782981	6.1G	1	N/A	8	S	JP1	N/A	O	SOIL. FROM 3Q210(1X). SS HIGH NO TARGET ANALYTE HITS.
7/18/2018 13:33	3Q309.D	454398003	BBES	1782981	6.3G	1	N/A	9	S	JP1	N/A	O	SOIL. FROM 3Q211(1X). SS HIGH NO TARGET ANALYTE HITS.
7/18/2018 14:04	3Q310.D	1204070949	GEL	1782981	100UL	50	N/A	10	S	JP1	N/A	O	SOIL HB
7/18/2018 14:35	3Q311.D	454688003	DMAX	1782981	100UL	50	N/A	11	S	JP1	N/A	O	SOIL
7/18/2018 15:06	3Q312.D	454474001	URSC	1782981	100UL	50	N/A	12	S	JP1	N/A	O	SOIL
7/18/2018 15:37	3Q313.D	454474002	URSC	1782981	100UL	50	N/A	13	S	JP1	N/A	O	SOIL
7/18/2018 16:08	3Q314.D	454474003	URSC	1782981	100UL	50	N/A	14	S	JP1	N/A	O	SOIL
7/18/2018 16:40	3Q315.D	454474004	URSC	1782981	100UL	50	N/A	15	S	JP1	N/A	O	SOIL
7/18/2018 17:11	3Q316.D	454474005	URSC	1782981	100UL	50	N/A	16	S	JP1	N/A	O	SOIL
7/18/2018 17:42	3Q317.D	454474006	URSC	1782981	100UL	50	N/A	17	S	JP1	N/A	O	SOIL
7/18/2018 18:12	3Q318.D	454715001	URSC	1782981	100UL	50	N/A	18	S	JP1	N/A	O	SOIL
7/18/2018 18:44	3Q319.D	454715002	URSC	1782981	100UL	50	N/A	19	S	JP1	N/A	O	SOIL
7/18/2018 19:15	3Q320.D	454715003	URSC	1782981	100UL	50	N/A	20	S	JP1	N/A	O	SOIL
7/18/2018 19:46	3Q321.D	1204070951	DMAX	1782981	100UL	50	N/A	21	S	JP1	N/A	O	SOIL MIX[A] 454688003PS
7/18/2018 20:17	3Q322.D	1204070952	DMAX	1782981	100UL	50	N/A	22	S	JP1	N/A	O	SOIL MIX[A] 454688003PSD

GEL Laboratories, LLC
Revision:11/22/04

ORGANIC RUN LOG - INSTRUMENT ID#VOA3

Date: 7/18/2018 Method 8260C Operator: JP1

REVIEWED BY: _____
DATE: _____

HARDWARE CONFIGURATION & METHOD CONDITIONS SUMMARY No# 50

Daily Instrument Readings:
Multiplier Voltage: 1647

CALIBRATION & CC INFORMATION:

Initial Calibration Date: 7/2/2018

Daily Standard Volume Added for Purge (ul)

	Solution ID#	Blk/ Smpl	CCV	MS/ LCS	BFB
CCV	W3VM180718-02/06		5uL ea.		
IS	UVM180620-01	1	1	1	
SS	UVM18620-01A	1	1	1	
LCS/MS	W3VM180718-03/04			5uL ea.	
BFB	IVM180702-01				1
SHORT	W3VM180718-05		5uL ea.	5uL ea.	
SHORT LCS					

CI test lot # 80315C

Sequence Number: 071818V3

Purge Amount

5ML	Water Purge Vol:
5G	Soil Purge Wt.
N/A	Mid level ext. MeOH Vol:
N/A	ul
N/A	Methanol Lot #
X	Heated Purge

Analysis Date	Time	Data File	Lab Sample ID	Client	Batch #	Wt.(g) or Vol(ml/ul)	Dil. Factor	pH	AS Slot #	Matrix w or s	Analyst	CI test (Y/N)	Acceptable(O/X)	Comments
7/18/2018	20:48	3Q323.D	W3VM180718-06	GEL	CCV	5ML	1	N/A	23	W	JP1	N/A	O	MIX[A] UVM180411-10G/UVM180601-10H/IVM180713-01/UVM180312-09F. DODQSM5.0 CLOSING CHECK.

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
URS Energy & Construction (URSC)
SDG #: 454474

Product: Determination of Metals by ICP
Analytical Method: SW846 3050B/6010D
Analytical Procedure: GL-MA-E-013 REV# 30
Analytical Batch: 1782317

Product: Determination of Metals by ICP-MS
Analytical Method: SW846 3050B/6020
Analytical Procedure: GL-MA-E-014 REV# 32
Analytical Batch: 1782305

Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer
Analytical Method: SW846 7471A
Analytical Procedure: GL-MA-E-010 REV# 36
Analytical Batch: 1785669

Preparation Method: SW846 3050B
Preparation Procedure: GL-MA-E-009 REV# 28
Preparation Batches: 1782304 and 1782316

Preparation Method: SW846 7471A Prep
Preparation Procedure: GL-MA-E-010 REV# 36
Preparation Batch: 1785668

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
454474001	SHS01
454474002	SET01
454474003	SW17
454474004	SW18
454474005	SW19
454474006	SW20
1204069476	Method Blank (MB)**ICP**
1204069477	Laboratory Control Sample (LCS)
1204069480	454474001(SHS01L) Serial Dilution (SD)
1204070401	454474001(SHS01S) Matrix Spike (MS)
1204070402	454474001(SHS01SD) Matrix Spike Duplicate (MSD)
1204072647	454474001(SHS01PS) Post Spike (PS)
1204069454	Method Blank (MB)**ICP-MS**
1204069455	Laboratory Control Sample (LCS)
1204069458	454474001(SHS01L) Serial Dilution (SD)
1204070403	454474001(SHS01D) Sample Duplicate (DUP)
1204070404	454474001(SHS01S) Matrix Spike (MS)
1204076863	Method Blank (MB)**CVAA**
1204076864	Laboratory Control Sample (LCS)
1204076867	454344002(NonSDGL) Serial Dilution (SD)
1204076865	454344002(NonSDGD) Sample Duplicate (DUP)

1204076866 454344002(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

CRDL/PQL Requirements
The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of zinc. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected. 454474001 (SHS01), 454474002 (SET01), 454474003 (SW17), 454474005 (SW19) and 454474006 (SW20)-ICP.

ICSA/ICSAB Statement
For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

Quality Control (QC) Information

Matrix Spike (MS/MSD) Recovery Statement
The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204070401 (SHS01MS)	Antimony	66.9* (75%-125%)
	Barium	140* (75%-125%)
	Potassium	200* (75%-125%)
	Thallium	71.6* (75%-125%)
1204070402 (SHS01MSD)	Potassium	137* (75%-125%)

MS/MSD Relative Percent Difference (RPD) Statement
The RPD did not meet the recommended quality control acceptance criteria for the following applicable analyte. The post spike was not applicable due to high background concentrations. The serial dilution passed, confirming the absence of matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1204070401MS and 1204070402MSD (SHS01)	Barium	RPD 20.7* (0%-20%)

Technical Information

Preparation/Analytical Method Verification

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.
Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions
Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions for antimony in order to minimize suppression due to matrix interferences. 454474001 (SHS01), 454474002 (SET01), 454474003 (SW17), 454474004 (SW18), 454474005 (SW19) and 454474006 (SW20)-ICP. The ICPMS solid samples in this SDG were diluted the standard two times. ICP-MS.

Analyte	454474					
	001	**002**	**003**	**004**	**005**	**006**
Antimony	10X	10X	10X	10X	10X	10X
Selenium	2X	2X	2X	2X	2X	2X

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

URSC013 URS Energy & Construction (2012-SC-SPRU-29463-171)

Client SDG: 454474 GEL Work Order: 454474

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria
B Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
J Value is estimated
N Metals--The Matrix spike sample recovery is not within specified control limits
Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
Q Quality Issue: Sample was received out of temperature specification > 12C.
U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Nik-Cole A. Elmore **Name: Nik-Cole Elmore**

Date: 27 JUL 2018 **Title: Data Validator**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474001 **CLIENT ID:** SHS01

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 96.9

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	9800	mg/kg			P	6.92	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.36	mg/kg	U	N	P	3.36	10	OPTIMA3	072318−1
7440−38−2	Arsenic	8.21	mg/kg			P	0.509	1	OPTIMA3	072318−1
7440−39−3	Barium	52.7	mg/kg		*N	P	0.102	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.626	mg/kg			P	0.102	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.102	mg/kg	U		P	0.102	1	OPTIMA3	072318−1
7440−70−2	Calcium	17000	mg/kg			P	8.14	1	OPTIMA3	072318−1
7440−47−3	Chromium	16.1	mg/kg			P	0.153	1	OPTIMA3	072318−1
7440−48−4	Cobalt	12	mg/kg			P	0.153	1	OPTIMA3	072318−1
7440−50−8	Copper	32.7	mg/kg			P	0.305	1	OPTIMA3	072318−1
7439−89−6	Iron	27100	mg/kg			P	8.14	1	OPTIMA3	072318−1
7439−92−1	Lead	13.6	mg/kg			P	0.336	1	OPTIMA3	072318−1
7439−95−4	Magnesium	9570	mg/kg			P	8.65	1	OPTIMA3	072318−1
7439−96−5	Manganese	478	mg/kg			P	0.204	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.00415	mg/kg	U		AV	0.00415	1	HG3	072618S9−3
7440−02−0	Nickel	28.5	mg/kg			P	0.153	1	OPTIMA3	072318−1
7440−09−7	Potassium	977	mg/kg		N	P	6.51	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.818	mg/kg	B		MS	0.346	2	ICPMS14	180720−2
7440−22−4	Silver	0.751	mg/kg			P	0.102	1	OPTIMA3	072318−1
7440−23−5	Sodium	51.4	mg/kg			P	7.12	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.3	mg/kg	B	N	P	0.509	1	OPTIMA3	072318−1
7440−62−2	Vanadium	19.5	mg/kg			P	0.102	1	OPTIMA3	072318−1
7440−66−6	Zinc	58.3	mg/kg			P	0.407	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474001 **CLIENT ID:** SHS01

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 96.9

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	**SW846 7471A**									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474002 **CLIENT ID:** SET01

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 96.8

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	10000	mg/kg			P	7.04	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.41	mg/kg	U	N	P	3.41	10	OPTIMA3	072318−1
7440−38−2	Arsenic	8.52	mg/kg			P	0.517	1	OPTIMA3	072318−1
7440−39−3	Barium	74.1	mg/kg		*N	P	0.103	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.701	mg/kg			P	0.103	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.103	mg/kg	U		P	0.103	1	OPTIMA3	072318−1
7440−70−2	Calcium	22100	mg/kg			P	8.28	1	OPTIMA3	072318−1
7440−47−3	Chromium	16.8	mg/kg			P	0.155	1	OPTIMA3	072318−1
7440−48−4	Cobalt	13.3	mg/kg			P	0.155	1	OPTIMA3	072318−1
7440−50−8	Copper	33.6	mg/kg			P	0.31	1	OPTIMA3	072318−1
7439−89−6	Iron	28300	mg/kg			P	8.28	1	OPTIMA3	072318−1
7439−92−1	Lead	13.8	mg/kg			P	0.341	1	OPTIMA3	072318−1
7439−95−4	Magnesium	10200	mg/kg			P	8.79	1	OPTIMA3	072318−1
7439−96−5	Manganese	524	mg/kg			P	0.207	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.179	mg/kg			AV	0.00375	1	HG3	072618S9−3
7440−02−0	Nickel	31.6	mg/kg			P	0.155	1	OPTIMA3	072318−1
7440−09−7	Potassium	1260	mg/kg		N	P	6.62	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.779	mg/kg	B		MS	0.341	2	ICPMS14	180720−2
7440−22−4	Silver	0.728	mg/kg			P	0.103	1	OPTIMA3	072318−1
7440−23−5	Sodium	66.9	mg/kg			P	7.24	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.25	mg/kg	B	N	P	0.517	1	OPTIMA3	072318−1
7440−62−2	Vanadium	21.5	mg/kg			P	0.103	1	OPTIMA3	072318−1
7440−66−6	Zinc	59.1	mg/kg			P	0.414	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474002 **CLIENT ID:** SET01

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 96.8

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	**SW846 7471A**									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474003 **CLIENT ID:** SW17

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 98.6

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	4930	mg/kg			P	6.51	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.16	mg/kg	U	N	P	3.16	10	OPTIMA3	072318−1
7440−38−2	Arsenic	9.05	mg/kg			P	0.478	1	OPTIMA3	072318−1
7440−39−3	Barium	18.9	mg/kg		*N	P	0.0957	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.383	mg/kg	B		P	0.0957	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.129	mg/kg	B		P	0.0957	1	OPTIMA3	072318−1
7440−70−2	Calcium	13600	mg/kg			P	7.65	1	OPTIMA3	072318−1
7440−47−3	Chromium	8.2	mg/kg			P	0.143	1	OPTIMA3	072318−1
7440−48−4	Cobalt	14	mg/kg			P	0.143	1	OPTIMA3	072318−1
7440−50−8	Copper	21.2	mg/kg			P	0.287	1	OPTIMA3	072318−1
7439−89−6	Iron	16700	mg/kg			P	7.65	1	OPTIMA3	072318−1
7439−92−1	Lead	24	mg/kg			P	0.316	1	OPTIMA3	072318−1
7439−95−4	Magnesium	5680	mg/kg			P	8.13	1	OPTIMA3	072318−1
7439−96−5	Manganese	347	mg/kg			P	0.191	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.0036	mg/kg	U		AV	0.0036	1	HG3	072618S9−3
7440−02−0	Nickel	27.7	mg/kg			P	0.143	1	OPTIMA3	072318−1
7440−09−7	Potassium	551	mg/kg		N	P	6.12	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.743	mg/kg	B		MS	0.362	2	ICPMS14	180720−2
7440−22−4	Silver	0.432	mg/kg	B		P	0.0957	1	OPTIMA3	072318−1
7440−23−5	Sodium	89.3	mg/kg			P	6.7	1	OPTIMA3	072318−1
7440−28−0	Thallium	0.807	mg/kg	B	N	P	0.478	1	OPTIMA3	072318−1
7440−62−2	Vanadium	9.59	mg/kg			P	0.0957	1	OPTIMA3	072318−1
7440−66−6	Zinc	40.5	mg/kg			P	0.383	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474003 **CLIENT ID:** SW17

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 98.6

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	**SW846 7471A**									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474004 **CLIENT ID:** SW18

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.2

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	10200	mg/kg			P	6.98	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.39	mg/kg	U	N	P	3.39	10	OPTIMA3	072318−1
7440−38−2	Arsenic	8.94	mg/kg			P	0.513	1	OPTIMA3	072318−1
7440−39−3	Barium	53.1	mg/kg		*N	P	0.103	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.706	mg/kg			P	0.103	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.103	mg/kg	U		P	0.103	1	OPTIMA3	072318−1
7440−70−2	Calcium	10600	mg/kg			P	8.21	1	OPTIMA3	072318−1
7440−47−3	Chromium	16.6	mg/kg			P	0.154	1	OPTIMA3	072318−1
7440−48−4	Cobalt	12.3	mg/kg			P	0.154	1	OPTIMA3	072318−1
7440−50−8	Copper	35.3	mg/kg			P	0.308	1	OPTIMA3	072318−1
7439−89−6	Iron	29200	mg/kg			P	8.21	1	OPTIMA3	072318−1
7439−92−1	Lead	13.8	mg/kg			P	0.339	1	OPTIMA3	072318−1
7439−95−4	Magnesium	7400	mg/kg			P	8.73	1	OPTIMA3	072318−1
7439−96−5	Manganese	523	mg/kg			P	0.205	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.0595	mg/kg			AV	0.00435	1	HG3	072618S9−3
7440−02−0	Nickel	31.2	mg/kg			P	0.154	1	OPTIMA3	072318−1
7440−09−7	Potassium	797	mg/kg		N	P	6.57	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.657	mg/kg	B		MS	0.371	2	ICPMS14	180720−2
7440−22−4	Silver	0.893	mg/kg			P	0.103	1	OPTIMA3	072318−1
7440−23−5	Sodium	140	mg/kg			P	7.19	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.41	mg/kg	B	N	P	0.513	1	OPTIMA3	072318−1
7440−62−2	Vanadium	21	mg/kg			P	0.103	1	OPTIMA3	072318−1
7440−66−6	Zinc	71.2	mg/kg			P	0.411	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474004 **CLIENT ID:** SW18

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.2

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	**SW846 7471A**									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474005 **CLIENT ID:** SW19

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 97.3

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	9460	mg/kg			P	6.94	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.37	mg/kg	U	N	P	3.37	10	OPTIMA3	072318−1
7440−38−2	Arsenic	7.96	mg/kg			P	0.51	1	OPTIMA3	072318−1
7440−39−3	Barium	81.6	mg/kg		*N	P	0.102	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.682	mg/kg			P	0.102	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.102	mg/kg	U		P	0.102	1	OPTIMA3	072318−1
7440−70−2	Calcium	32000	mg/kg			P	8.16	1	OPTIMA3	072318−1
7440−47−3	Chromium	15.8	mg/kg			P	0.153	1	OPTIMA3	072318−1
7440−48−4	Cobalt	12.6	mg/kg			P	0.153	1	OPTIMA3	072318−1
7440−50−8	Copper	35.3	mg/kg			P	0.306	1	OPTIMA3	072318−1
7439−89−6	Iron	26300	mg/kg			P	8.16	1	OPTIMA3	072318−1
7439−92−1	Lead	13.3	mg/kg			P	0.337	1	OPTIMA3	072318−1
7439−95−4	Magnesium	9670	mg/kg			P	8.67	1	OPTIMA3	072318−1
7439−96−5	Manganese	513	mg/kg			P	0.204	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.027	mg/kg			AV	0.00394	1	HG3	072618S9−3
7440−02−0	Nickel	29.5	mg/kg			P	0.153	1	OPTIMA3	072318−1
7440−09−7	Potassium	1170	mg/kg		N	P	6.53	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.764	mg/kg	B		MS	0.367	2	ICPMS14	180720−2
7440−22−4	Silver	0.569	mg/kg			P	0.102	1	OPTIMA3	072318−1
7440−23−5	Sodium	105	mg/kg			P	7.14	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.25	mg/kg	B	N	P	0.51	1	OPTIMA3	072318−1
7440−62−2	Vanadium	19.2	mg/kg			P	0.102	1	OPTIMA3	072318−1
7440−66−6	Zinc	60.7	mg/kg			P	0.408	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474005 **CLIENT ID:** SW19

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 97.3

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	**SW846 7471A**									

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474006 **CLIENT ID:** SW20

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.1

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
7429−90−5	Aluminum	10700	mg/kg			P	7.18	1	OPTIMA3	072318−1
7440−36−0	Antimony	3.48	mg/kg	U	N	P	3.48	10	OPTIMA3	072318−1
7440−38−2	Arsenic	8.73	mg/kg			P	0.528	1	OPTIMA3	072318−1
7440−39−3	Barium	76.7	mg/kg		*N	P	0.106	1	OPTIMA3	072318−1
7440−41−7	Beryllium	0.754	mg/kg			P	0.106	1	OPTIMA3	072318−1
7440−43−9	Cadmium	0.106	mg/kg	U		P	0.106	1	OPTIMA3	072318−1
7440−70−2	Calcium	13500	mg/kg			P	8.45	1	OPTIMA3	072318−1
7440−47−3	Chromium	17.2	mg/kg			P	0.158	1	OPTIMA3	072318−1
7440−48−4	Cobalt	13.5	mg/kg			P	0.158	1	OPTIMA3	072318−1
7440−50−8	Copper	33.8	mg/kg			P	0.317	1	OPTIMA3	072318−1
7439−89−6	Iron	29200	mg/kg			P	8.45	1	OPTIMA3	072318−1
7439−92−1	Lead	14.8	mg/kg			P	0.348	1	OPTIMA3	072318−1
7439−95−4	Magnesium	7570	mg/kg			P	8.98	1	OPTIMA3	072318−1
7439−96−5	Manganese	547	mg/kg			P	0.211	1	OPTIMA3	072318−1
7439−97−6	Mercury	0.0242	mg/kg			AV	0.00426	1	HG3	072618S9−3
7440−02−0	Nickel	32.4	mg/kg			P	0.158	1	OPTIMA3	072318−1
7440−09−7	Potassium	938	mg/kg		N	P	6.76	1	OPTIMA3	072318−1
7782−49−2	Selenium	0.778	mg/kg	B		MS	0.389	2	ICPMS14	180720−2
7440−22−4	Silver	0.791	mg/kg			P	0.106	1	OPTIMA3	072318−1
7440−23−5	Sodium	68.2	mg/kg			P	7.39	1	OPTIMA3	072318−1
7440−28−0	Thallium	1.35	mg/kg	B	N	P	0.528	1	OPTIMA3	072318−1
7440−62−2	Vanadium	21.8	mg/kg			P	0.106	1	OPTIMA3	072318−1
7440−66−6	Zinc	74	mg/kg			P	0.422	1	OPTIMA3	072318−1

***Analytical Methods:**

MS **SW846 3050B/6020**
P **SW846 3050B/6010D**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 454474 **METHOD TYPE:** SW846

SAMPLE ID: 454474006 **CLIENT ID:** SW20

CONTRACT: URSC00114

MATRIX: Soil **DATE RECEIVED** 12−JUL−18 **LEVEL:** Low **%SOLIDS:** 92.1

CAS No	Analyte	Result	Units	C	Qual	M*	MDL	DF	Inst ID	Analytical Run
AV	**SW846 7471A**									

Quality Control Summary

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
ICV01										
	Selenium	51.1	ug/L	50	ug/L	102.2	90.0 − 110.0	MS	21−JUL−18 00:34	180720−2
	Aluminum	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Antimony	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Arsenic	506	ug/L	500	ug/L	101.1	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Barium	507	ug/L	500	ug/L	101.3	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Beryllium	248	ug/L	250	ug/L	99.3	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Cadmium	504	ug/L	500	ug/L	100.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Calcium	5400	ug/L	5000	ug/L	108.1	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Chromium	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Copper	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Iron	5210	ug/L	5000	ug/L	104.1	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Lead	507	ug/L	500	ug/L	101.4	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Magnesium	5390	ug/L	5000	ug/L	107.8	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Manganese	505	ug/L	500	ug/L	101	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Nickel	500	ug/L	500	ug/L	100	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Potassium	2560	ug/L	2500	ug/L	102.5	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Silver	252	ug/L	250	ug/L	100.7	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Sodium	2530	ug/L	2500	ug/L	101.3	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Thallium	515	ug/L	500	ug/L	103	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Vanadium	507	ug/L	500	ug/L	101.5	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Zinc	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	23−JUL−18 06:04	072318−1
	Mercury	4.9	ug/L	5	ug/L	98	90.0 − 110.0	AV	26−JUL−18 13:01	072618S9−3
CCV01										
	Selenium	50.7	ug/L	50	ug/L	101.3	90.0 − 110.0	MS	21−JUL−18 00:50	180720−2
	Aluminum	5400	ug/L	5000	ug/L	107.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Antimony	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Arsenic	523	ug/L	500	ug/L	104.6	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Barium	518	ug/L	500	ug/L	103.6	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Beryllium	517	ug/L	500	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Cadmium	518	ug/L	500	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 06:26	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Calcium	5410	ug/L	5000	ug/L	108.1	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Chromium	509	ug/L	500	ug/L	101.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Cobalt	514	ug/L	500	ug/L	102.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Copper	516	ug/L	500	ug/L	103.3	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Iron	5320	ug/L	5000	ug/L	106.4	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Lead	515	ug/L	500	ug/L	103	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Magnesium	5440	ug/L	5000	ug/L	108.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Manganese	519	ug/L	500	ug/L	103.8	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Nickel	520	ug/L	500	ug/L	103.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Potassium	5200	ug/L	5000	ug/L	104.1	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Silver	516	ug/L	500	ug/L	103.3	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Sodium	10500	ug/L	10000	ug/L	105.4	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Thallium	514	ug/L	500	ug/L	102.9	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Vanadium	519	ug/L	500	ug/L	103.7	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Zinc	514	ug/L	500	ug/L	102.7	90.0 − 110.0	P	23−JUL−18 06:26	072318−1
	Mercury	4.96	ug/L	5	ug/L	99.3	80.0 − 120.0	AV	26−JUL−18 13:08	072618S9−3
CCV02										
	Selenium	49.9	ug/L	50	ug/L	99.8	90.0 − 110.0	MS	21−JUL−18 01:00	180720−2
	Aluminum	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Antimony	455	ug/L	500	ug/L	91	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Arsenic	493	ug/L	500	ug/L	98.5	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Barium	471	ug/L	500	ug/L	94.2	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Beryllium	473	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Cadmium	478	ug/L	500	ug/L	95.7	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Calcium	4940	ug/L	5000	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Chromium	467	ug/L	500	ug/L	93.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Cobalt	471	ug/L	500	ug/L	94.2	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Copper	465	ug/L	500	ug/L	93	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Iron	4880	ug/L	5000	ug/L	97.6	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Lead	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Magnesium	5020	ug/L	5000	ug/L	100.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Manganese	471	ug/L	500	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Nickel	479	ug/L	500	ug/L	95.8	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Potassium	4670	ug/L	5000	ug/L	93.3	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Silver	470	ug/L	500	ug/L	94	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Sodium	9410	ug/L	10000	ug/L	94.1	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Thallium	475	ug/L	500	ug/L	95.1	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Vanadium	474	ug/L	500	ug/L	94.8	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Zinc	469	ug/L	500	ug/L	93.9	90.0 − 110.0	P	23−JUL−18 07:55	072318−1
	Mercury	4.47	ug/L	5	ug/L	89.4	80.0 − 120.0	AV	26−JUL−18 15:12	072618S9−3
CCV03										
	Selenium	49.1	ug/L	50	ug/L	98.2	90.0 − 110.0	MS	21−JUL−18 01:26	180720−2
	Aluminum	4880	ug/L	5000	ug/L	97.7	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Antimony	460	ug/L	500	ug/L	92	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Arsenic	496	ug/L	500	ug/L	99.1	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Barium	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Beryllium	478	ug/L	500	ug/L	95.7	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Cadmium	483	ug/L	500	ug/L	96.6	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Calcium	5000	ug/L	5000	ug/L	99.9	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Chromium	468	ug/L	500	ug/L	93.6	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Cobalt	473	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Copper	469	ug/L	500	ug/L	93.9	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Iron	4910	ug/L	5000	ug/L	98.3	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Lead	478	ug/L	500	ug/L	95.6	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Magnesium	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Manganese	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Nickel	480	ug/L	500	ug/L	96.1	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Potassium	4720	ug/L	5000	ug/L	94.4	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Silver	474	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Sodium	9470	ug/L	10000	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Thallium	478	ug/L	500	ug/L	95.6	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Vanadium	477	ug/L	500	ug/L	95.5	90.0 − 110.0	P	23−JUL−18 08:17	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Zinc	474	ug/L	500	ug/L	94.8	90.0 − 110.0	P	23−JUL−18 08:17	072318−1
	Mercury	4.98	ug/L	5	ug/L	99.7	80.0 − 120.0	AV	26−JUL−18 15:29	072618S9−3
CCV04										
	Selenium	49.8	ug/L	50	ug/L	99.5	90.0 − 110.0	MS	21−JUL−18 01:49	180720−2
	Aluminum	4960	ug/L	5000	ug/L	99.2	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Antimony	473	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Arsenic	512	ug/L	500	ug/L	102.4	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Barium	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Beryllium	489	ug/L	500	ug/L	97.7	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Cadmium	497	ug/L	500	ug/L	99.4	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Calcium	5140	ug/L	5000	ug/L	102.9	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Chromium	481	ug/L	500	ug/L	96.1	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Cobalt	487	ug/L	500	ug/L	97.5	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Copper	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Iron	5060	ug/L	5000	ug/L	101.1	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Lead	494	ug/L	500	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Magnesium	5190	ug/L	5000	ug/L	103.8	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Manganese	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Nickel	494	ug/L	500	ug/L	98.8	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Potassium	4770	ug/L	5000	ug/L	95.4	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Silver	481	ug/L	500	ug/L	96.1	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Sodium	9580	ug/L	10000	ug/L	95.8	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Thallium	493	ug/L	500	ug/L	98.7	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Vanadium	486	ug/L	500	ug/L	97.2	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Zinc	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:35	072318−1
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 − 120.0	AV	26−JUL−18 15:46	072618S9−3
CCV05										
	Aluminum	5030	ug/L	5000	ug/L	100.7	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Antimony	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Arsenic	522	ug/L	500	ug/L	104.4	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Barium	494	ug/L	500	ug/L	98.8	90.0 − 110.0	P	23−JUL−18 08:55	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Beryllium	498	ug/L	500	ug/L	99.6	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Cadmium	508	ug/L	500	ug/L	101.6	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Calcium	5250	ug/L	5000	ug/L	105.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Chromium	489	ug/L	500	ug/L	97.9	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Cobalt	495	ug/L	500	ug/L	99.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Copper	484	ug/L	500	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Iron	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Lead	505	ug/L	500	ug/L	100.9	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Magnesium	5360	ug/L	5000	ug/L	107.3	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Manganese	494	ug/L	500	ug/L	98.7	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Nickel	503	ug/L	500	ug/L	100.6	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Potassium	4850	ug/L	5000	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Silver	490	ug/L	500	ug/L	98	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Sodium	9730	ug/L	10000	ug/L	97.3	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Thallium	499	ug/L	500	ug/L	99.8	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Vanadium	495	ug/L	500	ug/L	99	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Zinc	496	ug/L	500	ug/L	99.1	90.0 − 110.0	P	23−JUL−18 08:55	072318−1
	Mercury	5.32	ug/L	5	ug/L	106.4	80.0 − 120.0	AV	26−JUL−18 16:03	072618S9−3
CCV06										
	Aluminum	4910	ug/L	5000	ug/L	98.1	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Antimony	467	ug/L	500	ug/L	93.3	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Arsenic	507	ug/L	500	ug/L	101.5	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Barium	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Beryllium	485	ug/L	500	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Cadmium	493	ug/L	500	ug/L	98.5	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Calcium	5100	ug/L	5000	ug/L	101.9	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Chromium	477	ug/L	500	ug/L	95.4	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Cobalt	483	ug/L	500	ug/L	96.6	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Copper	473	ug/L	500	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Iron	5020	ug/L	5000	ug/L	100.4	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Lead	491	ug/L	500	ug/L	98.2	90.0 − 110.0	P	23−JUL−18 09:22	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
	Magnesium	5180	ug/L	5000	ug/L	103.5	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Manganese	482	ug/L	500	ug/L	96.3	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Nickel	490	ug/L	500	ug/L	98.1	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Potassium	4740	ug/L	5000	ug/L	94.7	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Silver	478	ug/L	500	ug/L	95.7	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Sodium	9550	ug/L	10000	ug/L	95.5	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Thallium	486	ug/L	500	ug/L	97.3	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Vanadium	483	ug/L	500	ug/L	96.5	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
	Zinc	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 09:22	072318−1
CCV07										
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Antimony	475	ug/L	500	ug/L	94.9	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Arsenic	510	ug/L	500	ug/L	102	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Barium	487	ug/L	500	ug/L	97.5	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Beryllium	490	ug/L	500	ug/L	98	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Cadmium	496	ug/L	500	ug/L	99.3	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Calcium	5140	ug/L	5000	ug/L	102.8	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Chromium	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Cobalt	487	ug/L	500	ug/L	97.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Copper	479	ug/L	500	ug/L	95.8	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Iron	5070	ug/L	5000	ug/L	101.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Lead	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Manganese	487	ug/L	500	ug/L	97.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Nickel	495	ug/L	500	ug/L	98.9	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Potassium	4840	ug/L	5000	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Silver	483	ug/L	500	ug/L	96.7	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Sodium	9710	ug/L	10000	ug/L	97.1	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Thallium	492	ug/L	500	ug/L	98.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Vanadium	488	ug/L	500	ug/L	97.6	90.0 − 110.0	P	23−JUL−18 10:32	072318−1
	Zinc	487	ug/L	500	ug/L	97.4	90.0 − 110.0	P	23−JUL−18 10:32	072318−1

METALS
−2a−
Initial and Continuing Calibration Verification

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M*	Analysis Date/Time	Run Number
CCV08										
	Aluminum	4850	ug/L	5000	ug/L	97	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Antimony	464	ug/L	500	ug/L	92.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Arsenic	499	ug/L	500	ug/L	99.9	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Barium	475	ug/L	500	ug/L	95	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Beryllium	478	ug/L	500	ug/L	95.5	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Cadmium	484	ug/L	500	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Calcium	5020	ug/L	5000	ug/L	100.5	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Chromium	472	ug/L	500	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Cobalt	478	ug/L	500	ug/L	95.6	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Copper	466	ug/L	500	ug/L	93.2	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Iron	4940	ug/L	5000	ug/L	98.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Lead	484	ug/L	500	ug/L	96.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Magnesium	5070	ug/L	5000	ug/L	101.3	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Manganese	475	ug/L	500	ug/L	95	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Nickel	485	ug/L	500	ug/L	97	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Potassium	4660	ug/L	5000	ug/L	93.1	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Silver	471	ug/L	500	ug/L	94.2	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Sodium	9430	ug/L	10000	ug/L	94.3	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Thallium	482	ug/L	500	ug/L	96.4	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Vanadium	476	ug/L	500	ug/L	95.2	90.0 − 110.0	P	23−JUL−18 10:48	072318−1
	Zinc	474	ug/L	500	ug/L	94.8	90.0 − 110.0	P	23−JUL−18 10:48	072318−1

***Analytical Methods:**

MS SW846 3050B/6020
P SW846 3050B/6010D
AV SW846 7471A

METALS
−2b−
CRDL Standard for ICP & ICPMS

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument ID: HG3,ICPMS14,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M*	Analysis Date/Time	Run Number
CRDL01										
	Selenium	5.05	ug/L	5	ug/L	101	70.0 − 130.0	MS	21−JUL−18 00:40	180720−2
	Mercury	.148	ug/L	.2	ug/L	74	70.0 − 130.0	AV	26−JUL−18 13:04	072618S9−3
PQL01										
	Aluminum	203	ug/L	200	ug/L	101.4	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Antimony	8.37	ug/L	10	ug/L	83.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Arsenic	28.9	ug/L	30	ug/L	96.3	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Barium	4.92	ug/L	5	ug/L	98.5	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Beryllium	4.88	ug/L	5	ug/L	97.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Cadmium	5.03	ug/L	5	ug/L	100.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Calcium	184	ug/L	200	ug/L	92	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Chromium	4.98	ug/L	5	ug/L	99.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Cobalt	5.42	ug/L	5	ug/L	108.5	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Copper	10.1	ug/L	10	ug/L	101.1	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Iron	103	ug/L	100	ug/L	103.3	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Lead	10.7	ug/L	10	ug/L	106.8	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Magnesium	328	ug/L	300	ug/L	109.4	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Manganese	9.88	ug/L	10	ug/L	98.8	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Nickel	4.79	ug/L	5	ug/L	95.8	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Potassium	178	ug/L	150	ug/L	118.3	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Silver	5.43	ug/L	5	ug/L	108.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Sodium	284	ug/L	300	ug/L	94.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Thallium	18.5	ug/L	20	ug/L	92.6	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Vanadium	4.7	ug/L	5	ug/L	94	80.0 − 120.0	P	23−JUL−18 06:09	072318−1
	Zinc	7.47	ug/L	10	ug/L	74.7	80.0 − 120.0	P	23−JUL−18 06:09	072318−1

***Analytical Methods:**

MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**
AV	**SW846 7471A**

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
ICB01										
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	21−JUL−18 00:37	180720−2
	Aluminum	68.0	+/−100	U	68.0	200	SOL	P	23−JUL−18 06:06	072318−1
	Antimony	3.3	+/−5	U	3.3	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Arsenic	5.0	+/−15	U	5.0	30.0	SOL	P	23−JUL−18 06:06	072318−1
	Barium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Beryllium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Cadmium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Calcium	80.0	+/−125	U	80.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Chromium	1.5	+/−2.5	U	1.5	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Cobalt	1.5	+/−2.5	U	1.5	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Copper	3.0	+/−5	U	3.0	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Iron	80.0	+/−125	U	80.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Lead	3.3	+/−5	U	3.3	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Magnesium	85.0	+/−150	U	85.0	300	SOL	P	23−JUL−18 06:06	072318−1
	Manganese	2.0	+/−5	U	2.0	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Nickel	1.5	+/−2.5	U	1.5	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Potassium	64.0	+/−125	U	64.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Silver	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Sodium	70.0	+/−125	U	70.0	250	SOL	P	23−JUL−18 06:06	072318−1
	Thallium	5.0	+/−10	U	5.0	20.0	SOL	P	23−JUL−18 06:06	072318−1
	Vanadium	1.0	+/−2.5	U	1.0	5.0	SOL	P	23−JUL−18 06:06	072318−1
	Zinc	4.0	+/−5	U	4.0	10.0	SOL	P	23−JUL−18 06:06	072318−1
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	26−JUL−18 13:02	072618S9−3
CCB01										
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	21−JUL−18 00:53	180720−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 06:28	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Arsenic	−5.04	+/−30	B	5.0	30.0	SOL	P	23−JUL−18 06:28	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 06:28	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 06:28	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 06:28	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 06:28	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 06:28	072318−1
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	26−JUL−18 13:09	072618S9−3
CCB02										
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	21−JUL−18 01:03	180720−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 07:58	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 07:58	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 07:58	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 07:58	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 07:58	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 07:58	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 07:58	072318−1
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	26−JUL−18 15:14	072618S9−3
CCB03										
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	21−JUL−18 01:29	180720−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 08:19	072318−1
	Antimony	−4.12	+/−10	B	3.3	10.0	SOL	P	23−JUL−18 08:19	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 08:19	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:19	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 08:19	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:19	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:19	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 08:19	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 08:19	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 08:19	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:19	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 08:19	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 08:19	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:19	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 08:19	072318−1
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	26−JUL−18 15:31	072618S9−3
CCB04										
	Selenium	1.8	+/−5	U	1.8	5.0	SOL	MS	21−JUL−18 01:52	180720−2
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 08:37	072318−1
	Antimony	−3.55	+/−10	B	3.3	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 08:37	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 08:37	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 08:37	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 08:37	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:37	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 08:37	072318−1
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	26−JUL−18 15:47	072618S9−3
CCB05										
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 08:58	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 08:58	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 08:58	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 08:58	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 08:58	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 08:58	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 08:58	072318−1
	Mercury	0.067	+/−.2	U	0.067	0.2	SOL	AV	26−JUL−18 16:04	072618S9−3
CCB06										
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 09:24	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 09:24	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 09:24	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 09:24	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 09:24	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 09:24	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 09:24	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 09:24	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 09:24	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 09:24	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 09:24	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 09:24	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 09:24	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 09:24	072318−1
CCB07										
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 10:34	072318−1
	Antimony	−3.39	+/−10	B	3.3	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 10:34	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 10:34	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 10:34	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Silver	1.04	+/−5	B	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 10:34	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 10:34	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:34	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 10:34	072318−1

Metals
−3a−
Initial and Continuing Calibration Blank Summary

SDG No.: 454474

Contract: URSC00114

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M*	Analysis Date/Time	Run
CCB08										
	Aluminum	68.0	+/−200	U	68.0	200	SOL	P	23−JUL−18 10:51	072318−1
	Antimony	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Arsenic	5.0	+/−30	U	5.0	30.0	SOL	P	23−JUL−18 10:51	072318−1
	Barium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Beryllium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Cadmium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Calcium	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Chromium	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Cobalt	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Copper	3.0	+/−10	U	3.0	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Iron	80.0	+/−250	U	80.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Lead	3.3	+/−10	U	3.3	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Magnesium	85.0	+/−300	U	85.0	300	SOL	P	23−JUL−18 10:51	072318−1
	Manganese	2.0	+/−10	U	2.0	10.0	SOL	P	23−JUL−18 10:51	072318−1
	Nickel	1.5	+/−5	U	1.5	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Potassium	64.0	+/−250	U	64.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Silver	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Sodium	70.0	+/−250	U	70.0	250	SOL	P	23−JUL−18 10:51	072318−1
	Thallium	5.0	+/−20	U	5.0	20.0	SOL	P	23−JUL−18 10:51	072318−1
	Vanadium	1.0	+/−5	U	1.0	5.0	SOL	P	23−JUL−18 10:51	072318−1
	Zinc	4.0	+/−10	U	4.0	10.0	SOL	P	23−JUL−18 10:51	072318−1

***Analytical Methods:**

MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**
AV	**SW846 7471A**

METALS
−3b−
PREPARATION BLANK SUMMARY

SDG NO. 454474
Contract: URSC00114
Matrix: Soil

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M*	MDL	RDL
1204069454								
	Selenium	0.334	mg/kg	+/−0.928	U	MS	0.334	0.928
1204069476								
	Arsenic	0.486	mg/kg	+/−1.46	U	P	0.486	1.46
	Barium	0.0973	mg/kg	+/−0.243	U	P	0.0973	0.243
	Beryllium	0.0973	mg/kg	+/−0.243	U	P	0.0973	0.243
	Cadmium	0.0973	mg/kg	+/−0.243	U	P	0.0973	0.243
	Calcium	7.78	mg/kg	+/−12.2	U	P	7.78	12.2
	Chromium	0.146	mg/kg	+/−0.243	U	P	0.146	0.243
	Cobalt	0.146	mg/kg	+/−0.243	U	P	0.146	0.243
	Copper	0.292	mg/kg	+/−0.486	U	P	0.292	0.486
	Iron	7.78	mg/kg	+/−12.2	U	P	7.78	12.2
	Lead	0.321	mg/kg	+/−0.486	U	P	0.321	0.486
	Magnesium	8.27	mg/kg	+/−14.6	U	P	8.27	14.6
	Manganese	0.195	mg/kg	+/−0.486	U	P	0.195	0.486
	Nickel	0.146	mg/kg	+/−0.243	U	P	0.146	0.243
	Potassium	6.23	mg/kg	+/−12.2	U	P	6.23	12.2
	Silver	0.0973	mg/kg	+/−0.243	U	P	0.0973	0.243
	Sodium	6.81	mg/kg	+/−12.2	U	P	6.81	12.2
	Thallium	0.486	mg/kg	+/−0.973	U	P	0.486	0.973
	Aluminum	6.61	mg/kg	+/−9.73	U	P	6.61	9.73
	Antimony	0.321	mg/kg	+/−0.486	U	P	0.321	0.486
	Vanadium	0.0973	mg/kg	+/−0.243	U	P	0.0973	0.243
	Zinc	0.389	mg/kg	+/−0.486	U	P	0.389	0.486
1204076863								
	Mercury	0.00366	mg/kg	+/−0.0109	U	AV	0.00366	0.0109

***Analytical Methods:**

AV	**SW846 7471B**
MS	**SW846 3050B/6020**
P	**SW846 3050B/6010D**

METALS
−4−
Interference Check Sample

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	491000	ug/L	500000	ug/L	98.2	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Antimony	0.193	ug/L					23−JUL−18 06:12	072318−1
	Arsenic	−4.38	ug/L					23−JUL−18 06:12	072318−1
	Barium	1.69	ug/L					23−JUL−18 06:12	072318−1
	Beryllium	0.423	ug/L					23−JUL−18 06:12	072318−1
	Cadmium	−0.155	ug/L					23−JUL−18 06:12	072318−1
	Calcium	488000	ug/L	500000	ug/L	97.5	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Chromium	1.12	ug/L					23−JUL−18 06:12	072318−1
	Cobalt	−0.106	ug/L					23−JUL−18 06:12	072318−1
	Copper	0.578	ug/L					23−JUL−18 06:12	072318−1
	Iron	193000	ug/L	200000	ug/L	96.4	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Lead	0.246	ug/L					23−JUL−18 06:12	072318−1
	Magnesium	485000	ug/L	500000	ug/L	97	80.0 − 120.0	23−JUL−18 06:12	072318−1
	Manganese	0.395	ug/L					23−JUL−18 06:12	072318−1
	Nickel	−0.07	ug/L					23−JUL−18 06:12	072318−1
	Potassium	87.2	ug/L					23−JUL−18 06:12	072318−1
	Silver	1.15	ug/L					23−JUL−18 06:12	072318−1
	Sodium	−46.8	ug/L					23−JUL−18 06:12	072318−1
	Thallium	3.74	ug/L					23−JUL−18 06:12	072318−1
	Vanadium	0.884	ug/L					23−JUL−18 06:12	072318−1
	Zinc	6.98	ug/L					23−JUL−18 06:12	072318−1
ICSAB01									
	Aluminum	499000	ug/L	500000	ug/L	99.8	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Antimony	491	ug/L	500	ug/L	98.2	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Arsenic	520	ug/L	500	ug/L	104	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Barium	485	ug/L	500	ug/L	97	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Beryllium	246	ug/L	250	ug/L	98.4	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Cadmium	463	ug/L	500	ug/L	92.6	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Calcium	495000	ug/L	500000	ug/L	99.1	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Chromium	484	ug/L	500	ug/L	96.7	80.0 − 120.0	23−JUL−18 06:15	072318−1

METALS
−4−
Interference Check Sample

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Cobalt	469	ug/L	500	ug/L	93.9	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Copper	534	ug/L	500	ug/L	107	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Iron	195000	ug/L	200000	ug/L	97.6	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Lead	473	ug/L	500	ug/L	94.6	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Magnesium	487000	ug/L	500000	ug/L	97.5	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Manganese	489	ug/L	500	ug/L	97.8	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Nickel	465	ug/L	500	ug/L	92.9	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Potassium	5500	ug/L	5000	ug/L	110	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Silver	262	ug/L	250	ug/L	105	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Sodium	5180	ug/L	5000	ug/L	104	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Thallium	474	ug/L	500	ug/L	94.7	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Vanadium	503	ug/L	500	ug/L	101	80.0 − 120.0	23−JUL−18 06:15	072318−1
	Zinc	490	ug/L	500	ug/L	98	80.0 − 120.0	23−JUL−18 06:15	072318−1

METALS
−4−
Interference Check Sample

SDG No: 454474

Contract: URSC00114 **Lab Code:** GEL

Instrument: ICPMS14

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Selenium	0.049	ug/L					21−JUL−18 00:43	180720−2
ICSAB01									
	Selenium	19.2	ug/L	20	ug/L	95.8	80.0 − 120.0	21−JUL−18 00:47	180720−2

METALS
−5a−

Matrix Spike Summary

SDG NO. 454474 **Client ID** SHS01S

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 96.9

Sample ID: 454474001 **Spike ID:** 1204070401

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	mg/kg		11800		9800		502	408	N/A	P
Antimony	mg/kg	75−125	33.6		3.36	U	50.2	66.9	N	P
Arsenic	mg/kg	75−125	55.9		8.21		50.2	95		P
Barium	mg/kg	75−125	123		52.7		50.2	140	N	P
Beryllium	mg/kg	75−125	45.2		0.626		50.2	88.9		P
Cadmium	mg/kg	75−125	43		0.102	U	50.2	85.6		P
Calcium	mg/kg		18200		17000		502	253	N/A	P
Chromium	mg/kg	75−125	62.5		16.1		50.2	92.6		P
Cobalt	mg/kg	75−125	54.8		12		50.2	85.2		P
Copper	mg/kg	75−125	79.6		32.7		50.2	93.5		P
Iron	mg/kg		29600		27100		502	496	N/A	P
Lead	mg/kg	75−125	56.9		13.6		50.2	86.3		P
Magnesium	mg/kg		10500		9570		502	179	N/A	P
Manganese	mg/kg		521		478		50.2	85.6	N/A	P
Nickel	mg/kg	75−125	72.6		28.5		50.2	87.8		P
Potassium	mg/kg	75−125	1980		977		502	200	N	P
Silver	mg/kg	75−125	9.83		0.751		10	90.5		P
Sodium	mg/kg	75−125	493		51.4		502	88.1		P
Thallium	mg/kg	75−125	37.3		1.3	B	50.2	71.6	N	P
Vanadium	mg/kg	75−125	69.4		19.5		50.2	99.5		P
Zinc	mg/kg	75−125	99.3		58.3		50.2	81.5		P

METALS
−5a−

Matrix Spike Summary

SDG NO.	454474	**Client ID**	SHS01S
Contract:	URSC00114	**Level:**	Low
Matrix:	SOIL	**% Solids:**	96.9
Sample ID:	454474001	**Spike ID:**	1204070401

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO. 454474 **Client ID** SHS01SD

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 96.9

Sample ID: 454474001 **Spike ID:** 1204070402

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Aluminum	mg/kg		10400		9800		469	136	N/A	P
Antimony	mg/kg	75−125	35.6		3.36	U	46.9	75.9		P
Arsenic	mg/kg	75−125	50.5		8.21		46.9	90.3		P
Barium	mg/kg	75−125	100		52.7		46.9	101		P
Beryllium	mg/kg	75−125	42.1		0.626		46.9	88.4		P
Cadmium	mg/kg	75−125	40		0.102	U	46.9	85.3		P
Calcium	mg/kg		17600		17000		469	129	N/A	P
Chromium	mg/kg	75−125	57		16.1		46.9	87.3		P
Cobalt	mg/kg	75−125	49.9		12		46.9	80.7		P
Copper	mg/kg	75−125	77.2		32.7		46.9	95		P
Iron	mg/kg		26000		27100		469	−237	N/A	P
Lead	mg/kg	75−125	50.9		13.6		46.9	79.4		P
Magnesium	mg/kg		9390		9570		469	−38.9	N/A	P
Manganese	mg/kg		498		478		46.9	42.8	N/A	P
Nickel	mg/kg	75−125	65		28.5		46.9	77.9		P
Potassium	mg/kg	75−125	1620		977		469	137	N	P
Silver	mg/kg	75−125	9.18		0.751		9.38	89.8		P
Sodium	mg/kg	75−125	432		51.4		469	81		P
Thallium	mg/kg	75−125	36.5		1.3	B	46.9	75.1		P
Vanadium	mg/kg	75−125	63		19.5		46.9	92.8		P
Zinc	mg/kg	75−125	94.8		58.3		46.9	77.6		P

METALS
−5a−

Matrix Spike Duplicate Summary

SDG NO.	454474	**Client ID**	SHS01SD
Contract:	URSC00114	**Level:**	Low
Matrix:	SOIL	**% Solids:**	96.9
Sample ID:	454474001	**Spike ID:**	1204070402

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−5a−

Matrix Spike Summary

SDG NO. 454474 **Client ID** SHS01S

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 96.9

Sample ID: 454474001 **Spike ID:** 1204070404

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Selenium	mg/kg	75−125	4.89		0.818	B	5.02	81.2		MS

***Analytical Methods:**

MS **SW846 3050B/6020**

METALS
−5a−

Spike Summary

SDG NO. 454474 **Client ID** SHS01PS

Contract: URSC00114 **Level:** Low

Matrix: SOIL **% Solids:** 96.9

Sample ID: 454474001 **Spike ID:** 1204072647

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Antimony	ug/L	75−125	463		3.36	U	500	92.5		P
Barium	ug/L	75−125	992		517		500	95		P
Potassium	ug/L	75−125	14300		9600		5000	95		P
Thallium	ug/L	75−125	477		12.7	B	500	92.9		P

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−5a−

Matrix Spike Summary

SDG NO. 454474 **Client ID** DRM5657.1807001−002S

Contract: URSC00114 **Level:** Low

Matrix: SOLID **% Solids:** 99.42

Sample ID: 454344002 **Spike ID:** 1204076866

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M*
Mercury	mg/kg	80−120	0.112	Q	0.00482	BQ	0.102	105		AV

***Analytical Methods:**

AV **SW846 7471B**

Metals
−6−
Duplicate Sample Summary

SDG No.: 454474 **Lab Code:** GEL

Contract: URSC00114 **Client ID:** SHS01SD

Matrix: SOIL **Level:** Low

Sample ID: 1204070401 **Duplicate ID:** 1204070402 **Percent Solids for Dup:** 96.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Aluminum	mg/kg	+/−20	11800		10400		12.6		P
Antimony	mg/kg	+/−20	33.6		35.6		5.91		P
Arsenic	mg/kg	+/−20	55.9		50.5		10.1		P
Barium	mg/kg	+/−20	123		100		20.7	*	P
Beryllium	mg/kg	+/−20	45.2		42.1		7.14		P
Cadmium	mg/kg	+/−20	43		40		7.07		P
Calcium	mg/kg	+/−20	18200		17600		3.72		P
Chromium	mg/kg	+/−20	62.5		57		9.18		P
Cobalt	mg/kg	+/−20	54.8		49.9		9.33		P
Copper	mg/kg	+/−20	79.6		77.2		3.02		P
Iron	mg/kg	+/−20	29600		26000		13		P
Lead	mg/kg	+/−20	56.9		50.9		11.3		P
Magnesium	mg/kg	+/−20	10500		9390		10.9		P
Manganese	mg/kg	+/−20	521		498		4.49		P
Nickel	mg/kg	+/−20	72.6		65		10.9		P
Potassium	mg/kg	+/−20	1980		1620		20		P
Silver	mg/kg	+/−20	9.83		9.18		6.91		P
Sodium	mg/kg	+/−20	493		432		13.4		P
Thallium	mg/kg	+/−20	37.3		36.5		2		P
Vanadium	mg/kg	+/−20	69.4		63		9.63		P
Zinc	mg/kg	+/−20	99.3		94.8		4.63		P

***Analytical Methods:**
P SW846 3050B/6010D

Metals
−6−
Duplicate Sample Summary

SDG No.: 454474 **Lab Code:** GEL

Contract: URSC00114 **Client ID:** SHS01D

Matrix: SOIL **Level:** Low

Sample ID: 454474001 **Duplicate ID:** 1204070403 **Percent Solids for Dup:** 96.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Selenium	mg/kg	+/−1.01	0.818	B	0.937	B	13.6		MS

***Analytical Methods:**
MS SW846 3050B/6020

Metals
−6−
Duplicate Sample Summary

SDG No.: 454474 **Lab Code:** GEL

Contract: URSC00114 **Client ID:** DRM5657.1807001−002D

Matrix: SOLID **Level:** Low

Sample ID: 454344002 **Duplicate ID:** 1204076865 **Percent Solids for Dup:** 99.42

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M*
Mercury	mg/kg	+/−.0115	0.00482	BQ	0.00643	BQ	28.5		AV

***Analytical Methods:**
AV SW846 7471B

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 454474

Contract: URSC00114

Aqueous LCS Source: **Solid LCS Source:** Inorganic Ventures

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204069455								
	Selenium	mg/kg	4.6	3.84		83.4	80−120	MS

***Analytical Methods:**

MS **SW846 3050B/6020**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 454474

Contract: URSC00114

Aqueous LCS Source: **Solid LCS Source:** Inorganic Ventures

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204069477								
	Aluminum	mg/kg	477	441		92.5	80−120	P
	Antimony	mg/kg	47.7	42.4		88.8	80−120	P
	Arsenic	mg/kg	47.7	43.6		91.4	80−120	P
	Barium	mg/kg	47.7	43.2		90.6	80−120	P
	Beryllium	mg/kg	47.7	44.4		93.1	80−120	P
	Cadmium	mg/kg	47.7	44.1		92.5	80−120	P
	Calcium	mg/kg	477	457		95.8	80−120	P
	Chromium	mg/kg	47.7	42.5		89	80−120	P
	Cobalt	mg/kg	47.7	43.2		90.6	80−120	P
	Copper	mg/kg	47.7	42.4		89	80−120	P
	Iron	mg/kg	477	452		94.8	80−120	P
	Lead	mg/kg	47.7	43.6		91.3	80−120	P
	Magnesium	mg/kg	477	468		98.1	80−120	P
	Manganese	mg/kg	47.7	43.3		90.8	80−120	P
	Nickel	mg/kg	47.7	43.6		91.4	80−120	P
	Potassium	mg/kg	477	429		89.9	80−120	P
	Silver	mg/kg	9.54	8.86		92.8	80−120	P
	Sodium	mg/kg	477	426		89.4	80−120	P
	Thallium	mg/kg	47.7	44		92.2	80−120	P
	Vanadium	mg/kg	47.7	43.2		90.6	80−120	P
	Zinc	mg/kg	47.7	42.7		89.6	80−120	P

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−7−
Laboratory Control Sample Summary

SDG NO. 454474

Contract: URSC00114

Aqueous LCS Source: **Solid LCS Source:** GEL

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M*
1204076864								
	Mercury	mg/kg	.113	.109		97	80−120	AV

***Analytical Methods:**

AV **SW846 7471B**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 454474 **Client ID** SHS01L

Contract: URSC00114

Matrix: SOLID **Level:** Low

Sample ID: 454474001 **Serial Dilution ID:** 1204069458

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Selenium	4.26	B	9	U	7.638			MS

***Analytical Methods:**

MS SW846 3050B/6020

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 454474 **Client ID** SHS01L

Contract: URSC00114

Matrix: SOLID **Level:** Low

Sample ID: 454474001 **Serial Dilution ID:** 1204069480

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Aluminum	96300		105000		9.101		20	P
Antimony	3.3	U	16.5	U				P
Arsenic	80.7		89.4	B	10.799			P
Barium	517		544		5.05		20	P
Beryllium	6.15		8.21	B	33.424			P
Cadmium	1	U	5	U				P
Calcium	167000		178000		6.536		20	P
Chromium	158		170		7.502		20	P
Cobalt	118		131		10.927			P
Copper	321		303		5.603		20	P
Iron	266000		288000		8.272		20	P
Lead	134		140		4.927			P
Magnesium	94100		101000		7.426		20	P
Manganese	4700		5170		10.138		20	P
Nickel	280		305		8.932		20	P
Potassium	9600		10100		5.414		20	P
Silver	7.38		14.7	B	99.546			P
Sodium	506		637	B	25.947			P
Thallium	12.7	B	25	U	10.476			P
Vanadium	191		202		5.598		20	P
Zinc	573		609		6.181		20	P

***Analytical Methods:**

P **SW846 3050B/6010D**

METALS
−9−
Serial Dilution Sample Summary

SDG NO. 454474 **Client ID** DRM5657.1807001−002L

Contract: URSC00114

Matrix: SOLID **Level:** Low

Sample ID: 454344002 **Serial Dilution ID:** 1204076867

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M*
Mercury	.089	BQQ	.335	U	262.921			AV

***Analytical Methods:**

AV **SW846 7471B**

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 454474 **Method Type** P

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1782316							
1204069476	MB for batch 1782316	MB	S	17−JUL−18	.514g	50mL	
1204069477	LCS for batch 1782316	LCS	S	17−JUL−18	.524g	50mL	
1204070401	SHS01S	MS	S	17−JUL−18	.514g	50mL	96.9
1204070402	SHS01SD	MSD	S	17−JUL−18	.55g	50mL	96.9
454474001	SHS01	SAMPLE	S	17−JUL−18	.507g	50mL	96.9
454474002	SET01	SAMPLE	S	17−JUL−18	.499g	50mL	96.8
454474003	SW17	SAMPLE	S	17−JUL−18	.53g	50mL	98.6
454474004	SW18	SAMPLE	S	17−JUL−18	.528g	50mL	92.2
454474005	SW19	SAMPLE	S	17−JUL−18	.504g	50mL	97.3
454474006	SW20	SAMPLE	S	17−JUL−18	.514g	50mL	92.1

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 454474 **Method Type** MS

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1782304							
1204069454	MB for batch 1782304	MB	S	17−JUL−18	.539g	50mL	
1204069455	LCS for batch 1782304	LCS	S	17−JUL−18	.543g	50mL	
1204070404	SHS01S	MS	S	17−JUL−18	.514g	50mL	96.9
1204070403	SHS01D	DUP	S	17−JUL−18	.51g	50mL	96.9
454474001	SHS01	SAMPLE	S	17−JUL−18	.537g	50mL	96.9
454474002	SET01	SAMPLE	S	17−JUL−18	.545g	50mL	96.8
454474003	SW17	SAMPLE	S	17−JUL−18	.504g	50mL	98.6
454474004	SW18	SAMPLE	S	17−JUL−18	.526g	50mL	92.2
454474005	SW19	SAMPLE	S	17−JUL−18	.504g	50mL	97.3
454474006	SW20	SAMPLE	S	17−JUL−18	.502g	50mL	92.1

METALS
−13−
SAMPLE PREPARATION SUMMARY

SDG No: 454474 **Method Type:** AV

Contract: URSC00114 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 1785668							
1204076863	MB for batch 1785668	MB	c	25−JUL−18	.549g	30mL	
1204076864	LCS for batch 1785668	LCS	c	25−JUL−18	.533g	30mL	
1204076866	DRM5657.1807001−002S	MS	c	25−JUL−18	.593g	30mL	99.42
1204076865	DRM5657.1807001−002D	DUP	c	25−JUL−18	.526g	30mL	99.42
454474001	SHS01	SAMPLE	S	25−JUL−18	.5g	30mL	96.9
454474002	SET01	SAMPLE	S	25−JUL−18	.554g	30mL	96.8
454474003	SW17	SAMPLE	S	25−JUL−18	.566g	30mL	98.6
454474004	SW18	SAMPLE	S	25−JUL−18	.501g	30mL	92.2
454474005	SW19	SAMPLE	S	25−JUL−18	.524g	30mL	97.3
454474006	SW20	SAMPLE	S	25−JUL−18	.512g	30mL	92.1

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL **Client Sdg:** 454474

Inst Name: OPTIMA3 **Instrument Type:** P

Start Date: 23-JUL-18 **End Date:** 23-JUL-18 **Data File:** 072318-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	05:52:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
S0.1	1	05:56:15		X	X	X	X	X		X	X	X		X		X		X	X		X		X	X	X
S0.5	1	05:58:23	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X		X		X	X	X
SCAL	1	06:00:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
S10	1	06:03:16	X						X				X		X							X			
ICV01	1	06:04:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ICB01	1	06:06:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
PQL01	1	06:09:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ICSA01	1	06:12:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ICSAB01	1	06:15:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
LR01	1	06:17:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
LR02	1	06:23:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV01	1	06:26:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB01	1	06:28:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	06:33:46																							
ZZZZZZ	1	06:37:01																							
ZZZZZZ	1	06:39:25																							
ZZZZZZ	1	06:42:32																							
ZZZZZZ	1	06:45:38																							
ZZZZZZ	1	06:48:45																							
ZZZZZZ	1	06:51:52																							
ZZZZZZ	1	06:54:59																							
ZZZZZZ	5	06:57:23																							
CCV	1	07:00:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
PQL	1	07:02:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	07:06:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	10	07:09:12																							
CCV	1	07:12:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	07:14:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV	1	07:29:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	07:32:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	07:35:21																							
ZZZZZZ	1	07:38:29																							
ZZZZZZ	1	07:40:53																							
ZZZZZZ	1	07:43:21																							
ZZZZZZ	1	07:45:51																							
ZZZZZZ	5	07:48:21																							
ZZZZZZ	1	07:50:43																							
ZZZZZZ	1	07:53:11																							
CCV02	1	07:55:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB02	1	07:58:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL

Client Sdg: 454474

Inst Name: OPTIMA3

Instrument Type: P

Start Date: 23-JUL-18

End Date: 23-JUL-18

Data File: 072318-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
1204069476	1	08:01:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204069477	1	08:04:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474001	1	08:06:47	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070401	1	08:09:15	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204070402	1	08:11:56	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
1204069480	5	08:14:38	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV03	1	08:17:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB03	1	08:19:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474002	1	08:22:34	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474003	1	08:25:16	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474004	1	08:27:43	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474005	1	08:30:23	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474006	1	08:32:52	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV04	1	08:35:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB04	1	08:37:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	10	08:41:34																							
ZZZZZZ	10	08:44:04																							
ZZZZZZ	10	08:46:26																							
ZZZZZZ	50	08:48:48																							
ZZZZZZ	10	08:50:54																							
ZZZZZZ	10	08:53:16																							
CCV05	1	08:55:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB05	1	08:58:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
454474001	10	09:01:12		X																					
1204070401	10	09:03:37		X																					
1204070402	10	09:05:59		X																					
1204069480	50	09:08:21		X																					
454474002	10	09:10:28		X																					
454474003	10	09:12:50		X																					
454474004	10	09:15:12		X																					
454474005	10	09:17:34		X																					
454474006	10	09:19:56		X																					
CCV06	1	09:22:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB06	1	09:24:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	09:31:36																							
ZZZZZZ	1	09:34:51																							
ZZZZZZ	1	09:37:15																							
ZZZZZZ	1	09:40:22																							
ZZZZZZ	1	09:43:29																							
ZZZZZZ	5	09:45:53																							
CCV	1	09:49:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL **Client Sdg:** 454474

Inst Name: OPTIMA3 **Instrument Type:** P

Start Date: 23-JUL-18 **End Date:** 23-JUL-18 **Data File:** 072318-1

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
PQL	1	09:51:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	09:54:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCV	1	09:57:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	10:00:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	10:03:13																							
ZZZZZZ	1	10:06:22																							
ZZZZZZ	1	10:08:46																							
ZZZZZZ	1	10:11:53																							
ZZZZZZ	1	10:15:00																							
ZZZZZZ	5	10:17:24																							
CCV	1	10:20:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
PQL	1	10:22:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB	1	10:26:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	10	10:29:12																							
CCV07	1	10:32:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB07	1	10:34:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
ZZZZZZ	1	10:38:58																							
ZZZZZZ	10	10:41:37																							
1204072647	1	10:44:01				X													X				X		
1204072647	10	10:46:31		X																					
CCV08	1	10:48:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X
CCB08	1	10:51:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL **Client Sdg:** 454474

Inst Name: HG3 **Instrument Type:** AV

Start Date: 26-JUL-18 **End Date:** 26-JUL-18 **Data File:** 072618S9-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	12:51:00															X								
S0.2	1	12:52:00															X								
S0.5	1	12:54:00															X								
S2.0	1	12:56:00															X								
S5.0	1	12:57:00															X								
S10.0	1	12:59:00															X								
ICV01	1	13:01:00															X								
ICB01	1	13:02:00															X								
CRDL01	1	13:04:00															X								
CCV01	1	13:08:00															X								
CCB01	1	13:09:00															X								
ZZZZZZ	1	13:11:00																							
ZZZZZZ	1	13:13:00																							
ZZZZZZ	1	13:14:00																							
ZZZZZZ	1	13:16:00																							
ZZZZZZ	1	13:18:00																							
ZZZZZZ	5	13:19:00																							
ZZZZZZ	1	13:21:00																							
ZZZZZZ	1	13:23:00																							
CCV	1	13:24:00															X								
CCB	1	13:26:00															X								
ZZZZZZ	1	13:28:00																							
ZZZZZZ	1	13:29:00																							
ZZZZZZ	1	13:31:00																							
ZZZZZZ	1	13:33:00																							
ZZZZZZ	1	13:34:00																							
CCV	1	13:36:00															X								
CCB	1	13:38:00															X								
ZZZZZZ	1	13:39:00																							
ZZZZZZ	100	13:41:00																							
CCV	1	13:43:00															X								
CCB	1	13:44:00															X								
CCV	1	13:49:00															X								
CCB	1	13:55:00															X								
CCV	1	13:57:00															X								
CCB	1	13:59:00															X								
ZZZZZZ	1	14:13:00																							
ZZZZZZ	1	14:15:00																							
ZZZZZZ	1	14:16:00																							
ZZZZZZ	1	14:18:00																							
ZZZZZZ	1	14:20:00																							

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL **Client Sdg:** 454474

Inst Name: HG3 **Instrument Type:** AV

Start Date: 26-JUL-18 **End Date:** 26-JUL-18 **Data File:** 072618S9-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
ZZZZZZ	1	14:21:00																							
ZZZZZZ	1	14:23:00																							
ZZZZZZ	1	14:25:00																							
CCV	1	14:26:00															X								
CCB	1	14:28:00															X								
ZZZZZZ	1	14:30:00																							
ZZZZZZ	1	14:31:00																							
ZZZZZZ	1	14:33:00																							
ZZZZZZ	1	14:35:00																							
ZZZZZZ	1	14:37:00																							
ZZZZZZ	1	14:38:00																							
ZZZZZZ	1	14:40:00																							
ZZZZZZ	1	14:42:00																							
CCV	1	14:43:00															X								
CCB	1	14:45:00															X								
ZZZZZZ	1	14:47:00																							
ZZZZZZ	1	14:48:00																							
ZZZZZZ	5	14:50:00																							
ZZZZZZ	1	14:52:00																							
ZZZZZZ	1	14:53:00																							
ZZZZZZ	1	14:55:00																							
ZZZZZZ	1	14:57:00																							
ZZZZZZ	1	14:58:00																							
CCV	1	15:00:00															X								
CCB	1	15:02:00															X								
ZZZZZZ	1	15:03:00																							
ZZZZZZ	1	15:05:00																							
ZZZZZZ	1	15:07:00																							
CCV	1	15:09:00															X								
CCB	1	15:11:00															X								
CCV02	1	15:12:00															X								
CCB02	1	15:14:00															X								
1204076863	1	15:15:00															X								
1204076864	1	15:17:00															X								
ZZZZZZ	1	15:19:00																							
ZZZZZZ	1	15:21:00																							
1204076865	1	15:22:00															X								
1204076866	1	15:24:00															X								
1204076867	5	15:26:00															X								
ZZZZZZ	1	15:27:00																							
CCV03	1	15:29:00															X								

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL **Client Sdg:** 454474

Inst Name: HG3 **Instrument Type:** AV

Start Date: 26-JUL-18 **End Date:** 26-JUL-18 **Data File:** 072618S9-3

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
CCB03	1	15:31:00															X								
ZZZZZZ	1	15:32:00																							
ZZZZZZ	1	15:34:00																							
ZZZZZZ	1	15:36:00																							
ZZZZZZ	1	15:37:00																							
ZZZZZZ	1	15:39:00																							
ZZZZZZ	1	15:41:00																							
ZZZZZZ	1	15:42:00																							
454474001	1	15:44:00															X								
CCV04	1	15:46:00															X								
CCB04	1	15:47:00															X								
454474002	1	15:49:00															X								
454474003	1	15:51:00															X								
454474004	1	15:52:00															X								
454474005	1	15:54:00															X								
454474006	1	15:56:00															X								
ZZZZZZ	1	15:57:00																							
ZZZZZZ	1	15:59:00																							
ZZZZZZ	1	16:01:00																							
CCV05	1	16:03:00															X								
CCB05	1	16:04:00															X								

Metals
-14-
Analysis Run Log

Contract: URSC00114

Lab Code : GEL **Client Sdg:** 454474

Inst Name: ICPMS14 **Instrument Type:** MS

Start Date: 21-JUL-18 **End Date:** 21-JUL-18 **Data File:** 180720-2

Samp ID	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
S0.0	1	00:24:18																		X					
S10	1	00:27:35																		X					
S100	1	00:30:50																		X					
ICV01	1	00:34:06																		X					
ICB01	1	00:37:21																		X					
CRDL01	1	00:40:37																		X					
ICSA01	1	00:43:53																		X					
ICSAB01	1	00:47:08																		X					
CCV01	1	00:50:25																		X					
CCB01	1	00:53:41																		X					
LR01	1	00:56:57																		X					
CCV02	1	01:00:14																		X					
CCB02	1	01:03:32																		X					
1204069454	2	01:06:48																		X					
1204069455	2	01:10:04																		X					
454474001	2	01:13:20																		X					
1204070403	2	01:16:36																		X					
1204070404	2	01:19:51																		X					
1204069458	10	01:23:07																		X					
CCV03	1	01:26:23																		X					
CCB03	1	01:29:39																		X					
454474002	2	01:32:56																		X					
454474003	2	01:36:12																		X					
454474004	2	01:39:27																		X					
454474005	2	01:42:43																		X					
454474006	2	01:45:59																		X					
CCV04	1	01:49:15																		X					
CCB04	1	01:52:31																		X					

Standards

METALS
−10−
Instrument Detection Limits

SDG NO. 454474

Contract: URSC00114 **Lab Code: GEL** **MDL** **Effective Date:** 01−SEP−16

Instrument(s): ICPMS14 **Verified on:** 30−MAY−18

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		22.75	50.0
	Arsenic		1.69	5.0
	Barium		0.5	2.0
	Beryllium		0.1	0.5
	Cadmium		0.1	1.0
	Calcium		67.0	200
	Chromium		1.0	3.0
	Cobalt		0.3	1.0
	Copper		0.33	1.0
	Iron		33.0	100
	Lead		0.5	2.0
	Magnesium		10.0	30.0
	Manganese		1.0	5.0
	Nickel		0.5	2.0
	Potassium		80.0	300
	Selenium		1.8	5.0
	Silver		0.3	1.0
	Sodium		80.0	250
	Thallium		0.7	2.0
	Vanadium		1.5	5.0
	Zinc		4.0	10.0

METALS
−10−
Instrument Detection Limits

SDG NO. 454474

Contract: URSC00114 **Lab Code: GEL** **MDL** **Hg Effective Date:** 01−MAY−12

Instrument(s):	**Verified on:**
HG3	18−JUN−18
HG3	18−JUN−18

MERCURY	**Analyte**	**Wavelength (nm)**	**MDL ug/L**	**RDL ug/L**
SOLID	Mercury	253.7	0.067	0.2

METALS
−10−
Instrument Detection Limits

SDG NO. 454474

Contract: URSC00114 **Lab Code: GEL** **MDL** **Effective Date:** 23−JAN−11

Instrument(s): OPTIMA3 **Verified on:** 30−MAR−18

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10.0
	Arsenic	188.979	5.0	30.0
	Barium	233.527	1.0	5.0
	Beryllium	313.107	1.0	5.0
	Cadmium	226.502	1.0	5.0
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5.0
	Cobalt	228.616	1.5	5.0
	Copper	324.752	3.0	10.0
	Iron	238.204	80.0	250
	Lead	220.353	3.3	10.0
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10.0
	Nickel	231.604	1.5	5.0
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30.0
	Silver	328.068	1.0	5.0
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20.0
	Vanadium	292.402	1.0	5.0
	Zinc	213.857	4.0	10.0

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	**188.979**	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	**228.616**	0.00000	0.00000	0.00000	−0.68182	0.00000
Copper	**324.752**	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.36064	0.00000	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	−0.20977	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	−2.43110	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.08043	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	**189.927**	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	**367.007**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	**213.857**	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Calcium	Chromium	Cobalt
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	0.00000	0.00000	22.2745	0.00000
Arsenic	**188.979**	0.00000	0.00000	0.00000	−2.87735	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	−0.01199	−0.23265	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	3.92642
Cadmium	**226.502**	0.00000	0.00000	0.00000	0.00000	−0.12824
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	**228.616**	0.00000	0.00000	0.00000	0.32429	0.00000
Copper	**324.752**	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	−0.03857	0.00000	−1.84823
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	−0.27570
Phosphorous	**214.914**	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	−0.07076	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.03037	0.00000	0.00000
Sulfur	**181.975**	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	0.00000	0.33470	5.79216
Tin	**189.927**	0.00000	0.00000	0.02623	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	−0.05535	0.35976	0.00000
Uranium	**367.007**	0.00000	0.00000	0.49135	0.00000	0.00000
Vanadium	**292.402**	0.00000	0.00000	0.00000	−2.00387	0.00000
Zinc	**213.857**	0.00000	0.00000	−0.01057	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Copper	Iron	Lead	Magnesium	Manganese
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	0.07899	0.00000	0.00000	0.00000
Arsenic	**188.979**	0.00000	0.04587	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.02180	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	**249.677**	0.00000	−3.80099	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.09045	0.00000	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	−0.02250	0.00000	−0.02746	0.42232
Cobalt	**228.616**	0.00000	−0.00650	0.00000	0.00000	0.00000
Copper	**324.752**	0.00000	−0.06696	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	−0.05605	−0.04275	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	−0.05250	0.00000	0.03779	0.00000
Molybdenum	**202.031**	0.00000	−0.01942	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	−0.00835	0.00000	0.00000	0.00000
Phosphorous	**214.914**	11.5616	0.89778	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	−1.29103	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	−0.42501	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.17484	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	−0.16666	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.66191	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.00000	−0.02102	0.00000	0.00000	1.20261
Thallium	**190.801**	0.00000	−0.00996	0.00000	0.00000	0.00000
Tin	**189.927**	0.00000	−0.01885	0.00000	0.01769	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	**367.007**	0.00000	4.68515	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	−0.11818	0.00000	0.00000	0.00000
Zinc	**213.857**	0.26856	0.09024	0.00000	0.04456	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Molybdenum	Nickel	Phosphorous	Potassium	Selenium
Aluminum	**396.153**	46.4992	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	−11.3506	0.00000	0.00000	0.00000	0.00000
Arsenic	**188.979**	−6.19920	0.00000	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	−0.39139	0.00000	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	**228.616**	−1.52983	0.00000	0.00000	0.00000	0.00000
Copper	**324.752**	0.65227	0.00000	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	8.61561	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	16.5669	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	−4.19158	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	**189.927**	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	**367.007**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	−9.86752	0.00000	0.00000	0.00000	0.00000
Zinc	**213.857**	0.00000	5.43263	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silicon	Silver	Sodium	Strontium	Sulfur
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	**188.979**	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.00000	0.00000	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	**228.616**	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	**324.752**	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.00000	0.00000
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	**189.927**	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	**367.007**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	**213.857**	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Thallium	Tin	Titanium	Uranium	Vanadium
Aluminum	**396.153**	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	**206.836**	0.00000	−2.26792	−0.87028	0.00000	−1.35139
Arsenic	**188.979**	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	**233.527**	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	**313.107**	0.00000	0.00000	0.00000	−0.24653	0.00000
Boron	**249.677**	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	**226.502**	0.00000	0.00000	0.15743	0.00000	0.00000
Calcium	**317.933**	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	**267.716**	0.00000	0.00000	0.00000	0.79281	−0.47821
Cobalt	**228.616**	0.00000	0.00000	1.96686	0.00000	0.00000
Copper	**324.752**	0.00000	0.00000	0.00000	−0.61588	0.00000
Iron	**238.204**	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	**220.353**	0.00000	0.00000	0.00000	0.76728	0.00000
Magnesium	**279.077**	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	**257.61**	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	**202.031**	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	**231.604**	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	**214.914**	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	**766.49**	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	**196.026**	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	**251.611**	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	**328.068**	0.00000	0.00000	0.00000	0.57735	−1.57979
Sodium	**589.592**	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	**421.552**	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	**181.975**	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	**190.801**	0.00000	0.00000	−9.70069	−0.39670	−0.15590
Tin	**189.927**	0.00000	0.00000	−3.68936	0.00000	0.00000
Titanium	**334.94**	0.00000	0.00000	0.00000	0.46265	0.00000
Uranium	**367.007**	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	**292.402**	0.00000	0.00000	0.86352	−0.58460	0.00000
Zinc	**213.857**	0.00000	0.00000	−1.79228	0.00000	0.00000

METALS
−11−
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 454474
Contract: URSC00114
Instrument: OPTIMA3
Effective Dates: 14−FEB−18
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

		Zinc
Parmname	**Wavelength**	
Aluminum	**396.153**	0.00000
Antimony	**206.836**	0.00000
Arsenic	**188.979**	0.00000
Barium	**233.527**	0.00000
Beryllium	**313.107**	0.00000
Boron	**249.677**	0.00000
Cadmium	**226.502**	0.00000
Calcium	**317.933**	0.00000
Chromium	**267.716**	0.00000
Cobalt	**228.616**	0.00000
Copper	**324.752**	0.00000
Iron	**238.204**	0.00000
Lead	**220.353**	0.00000
Magnesium	**279.077**	0.00000
Manganese	**257.61**	0.00000
Molybdenum	**202.031**	0.00000
Nickel	**231.604**	0.00000
Phosphorous	**214.914**	0.00000
Potassium	**766.49**	0.00000
Selenium	**196.026**	0.00000
Silicon	**251.611**	0.00000
Silver	**328.068**	0.00000
Sodium	**589.592**	0.00000
Strontium	**421.552**	0.00000
Sulfur	**181.975**	0.00000
Thallium	**190.801**	0.00000
Tin	**189.927**	0.00000
Titanium	**334.94**	0.00000
Uranium	**367.007**	0.00000
Vanadium	**292.402**	0.00000
Zinc	**213.857**	0.00000

METALS
−12−
Linear Ranges

SDG NO. 454474

Contract: URSC00114 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	12−JUN−18
Antimony	20	1000	ug/L	12−JUN−18
Arsenic	20	10000	ug/L	12−JUN−18
Barium	20	15000	ug/L	12−JUN−18
Beryllium	20	1000	ug/L	12−JUN−18
Cadmium	20	10000	ug/L	12−JUN−18
Calcium	20	500000	ug/L	12−JUN−18
Chromium	20	25000	ug/L	12−JUN−18
Cobalt	20	10000	ug/L	12−JUN−18
Copper	20	20000	ug/L	12−JUN−18
Iron	20	500000	ug/L	12−JUN−18
Lead	20	25000	ug/L	12−JUN−18
Magnesium	20	500000	ug/L	12−JUN−18
Manganese	20	10000	ug/L	12−JUN−18
Nickel	20	10000	ug/L	12−JUN−18
Potassium	20	200000	ug/L	12−JUN−18
Selenium	20	1000	ug/L	12−JUN−18
Silver	20	1000	ug/L	12−JUN−18
Sodium	20	500000	ug/L	12−JUN−18
Thallium	20	1000	ug/L	12−JUN−18
Vanadium	20	10000	ug/L	12−JUN−18
Zinc	20	15000	ug/L	12−JUN−18

METALS
−12−
Linear Ranges

SDG NO. 454474

Contract: URSC00114 **Lab Code: GEL**

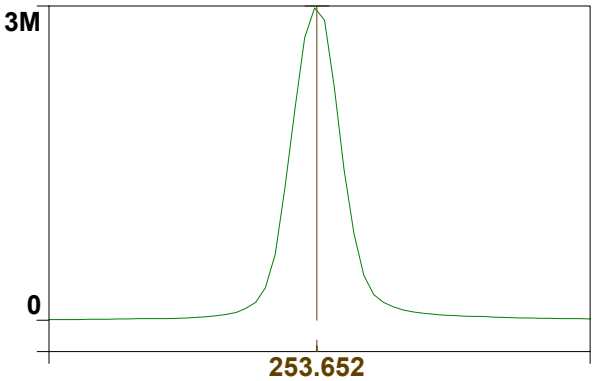
Instrument ID ICPMS14

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Cobalt	1000	1000	ug/L	01−AUG−17
Copper	1000	1000	ug/L	01−AUG−17
Iron	500	50000	ug/L	01−AUG−17
Lead	1000	5000	ug/L	01−AUG−17
Magnesium	1	50000	ug/L	01−AUG−17
Manganese	1000	1000	ug/L	01−AUG−17
Nickel	1000	1000	ug/L	01−AUG−17
Potassium	1	50000	ug/L	01−AUG−17
Selenium	1000	500	ug/L	01−AUG−17
Silver	1000	250	ug/L	01−AUG−17
Sodium	1	50000	ug/L	01−AUG−17
Thallium	1000	500	ug/L	01−AUG−17
Vanadium	1000	100	ug/L	01−AUG−17
Zinc	1000	2500	ug/L	01−AUG−17
Chromium	1000	1000	ug/L	01−AUG−17
Aluminum	1	50000	ug/L	01−AUG−17
Antimony	1000	250	ug/L	01−AUG−17
Arsenic	1000	1000	ug/L	01−AUG−17
Barium	1000	1000	ug/L	01−AUG−17
Beryllium	1000	1000	ug/L	01−AUG−17
Cadmium	1000	1000	ug/L	01−AUG−17
Calcium	500	50000	ug/L	01−AUG−17

Raw Data

Method: Hg_ReAlign **Sample ID: Hg_ReAlign**
Result: 072318

Hg 253.652 **Rep: 1**



Intensity: 2701292.0
Conc:

1

```
================================================================================================
7/23/2018 05:51:50 Hg ReAlign...  Actual peak offset (nm): 0.002
                  Drift (nm): -0.001      Slit adjustment:    -4
================================================================================================
```

```
================================================================================================
```

Analysis Begun

Start Time: 7/23/2018 05:52:47 **Plasma On Time: 7/23/2018 04:11:23**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer: Optima 5300 DV, S/N 077C7090601 **Autosampler: ESI**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

```
================================================================================================
```

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 7/23/2018 05:52:59**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time:

```
------------------------------------------------------------------------------------------------
```

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22124.3	22124.3	100	%	05:53:59
1	Al 396.153Radial†	-82.8	-82.7	[0.00]	µg/L	05:53:59
1	Ca 317.933Radial†	292.1	291.5	[0.00]	µg/L	05:53:59
1	Fe 238.204 Radial†	36.1	36.0	[0.00]	µg/L	05:53:59
1	K 766.490 Radial†	428.9	428.0	[0.00]	µg/L	05:53:39
1	Mg 279.077 IEC†	55.7	55.6	[0.00]	µg/L	05:53:59
1	Na 589.592 Radial†	139.3	139.0	[0.00]	µg/L	05:53:59
1	Sr 421.552†	227.7	227.2	[0.00]	µg/L	05:53:39
1	Sc 361.383	367327.4	367327.4	100.31	%	05:54:55
1	Y 371.029	360951.9	360951.9	100.30	%	05:54:55
1	Ag 328.068†	-660.5	-658.4	[0.00]	µg/L	05:54:55
1	As 188.979†	-11.8	-11.7	[0.00]	µg/L	05:55:16
1	B 249.677†	162.2	161.7	[0.00]	µg/L	05:55:16
1	Ba 233.527†	-17.2	-17.1	[0.00]	µg/L	05:55:16
1	Be 313.107†	-3621.8	-3610.8	[0.00]	µg/L	05:54:55
1	Cd 226.502†	-318.5	-317.5	[0.00]	µg/L	05:55:16
1	Co 228.616†	-223.9	-223.3	[0.00]	µg/L	05:55:16
1	Cr 267.716†	127.3	126.9	[0.00]	µg/L	05:55:16
1	Cu 324.752†	1906.7	1900.9	[0.00]	µg/L	05:54:55
1	Mn 257.610†	436.7	435.3	[0.00]	µg/L	05:55:16
1	Mo 202.031†	30.7	30.6	[0.00]	µg/L	05:55:16
1	Ni 231.604†	-182.4	-181.8	[0.00]	µg/L	05:55:16
1	P 214.914†	142.9	142.5	[0.00]	µg/L	05:55:16
1	Pb 220.353†	-64.0	-63.8	[0.00]	µg/L	05:55:16
1	S 181.975 Axial†	90.2	89.9	[0.00]	µg/L	05:55:16
1	Sb 206.836†	154.4	153.9	[0.00]	µg/L	05:55:16
1	Se 196.026†	-23.7	-23.6	[0.00]	µg/L	05:55:16
1	SiO2†	1056.7	1053.4	[0.00]	µg/L	05:55:16
1	Si 251.611†	-15.9	-15.9	[0.00]	µg/L	05:55:16
1	Sn 189.927†	45.6	45.4	[0.00]	µg/L	05:55:16
1	Ti 334.940†	-764.0	-761.7	[0.00]	µg/L	05:54:55
1	Tl 190.801†	-77.7	-77.4	[0.00]	µg/L	05:55:16
1	U 367.007†	907.9	905.1	[0.00]	µg/L	05:54:55
1	V 292.402†	-119.4	-119.1	[0.00]	µg/L	05:55:16
1	Zn 213.857†	889.6	886.9	[0.00]	µg/L	05:55:16
2	Sc RADIAL	22087.3	22087.3	100	%	05:54:24
2	Al 396.153Radial†	-94.9	-94.9	[0.00]	µg/L	05:54:24
2	Ca 317.933Radial†	287.2	287.1	[0.00]	µg/L	05:54:24
2	Fe 238.204 Radial†	30.4	30.3	[0.00]	µg/L	05:54:24
2	K 766.490 Radial†	466.1	466.0	[0.00]	µg/L	05:54:04
2	Mg 279.077 IEC†	60.3	60.2	[0.00]	µg/L	05:54:24
2	Na 589.592 Radial†	126.5	126.4	[0.00]	µg/L	05:54:24

2	Sr 421.552†	270.9	270.8	[0.00]	µg/L	05:54:04
2	Sc 361.383	368148.4	368148.4	100.53	%	05:55:21
2	Y 371.029	362130.5	362130.5	100.63	%	05:55:21
2	Ag 328.068†	-711.9	-708.2	[0.00]	µg/L	05:55:21
2	As 188.979†	-14.3	-14.3	[0.00]	µg/L	05:55:41
2	B 249.677†	196.5	195.5	[0.00]	µg/L	05:55:41
2	Ba 233.527†	-15.4	-15.4	[0.00]	µg/L	05:55:41
2	Be 313.107†	-3571.1	-3552.3	[0.00]	µg/L	05:55:21
2	Cd 226.502†	-330.6	-328.9	[0.00]	µg/L	05:55:41
2	Co 228.616†	-234.5	-233.3	[0.00]	µg/L	05:55:41
2	Cr 267.716†	102.2	101.6	[0.00]	µg/L	05:55:41
2	Cu 324.752†	1880.3	1870.4	[0.00]	µg/L	05:55:21
2	Mn 257.610†	468.8	466.3	[0.00]	µg/L	05:55:41
2	Mo 202.031†	24.2	24.1	[0.00]	µg/L	05:55:41
2	Ni 231.604†	-197.4	-196.4	[0.00]	µg/L	05:55:41
2	P 214.914†	129.3	128.6	[0.00]	µg/L	05:55:41
2	Pb 220.353†	-64.5	-64.2	[0.00]	µg/L	05:55:41
2	S 181.975 Axial†	93.3	92.8	[0.00]	µg/L	05:55:41
2	Sb 206.836†	154.0	153.2	[0.00]	µg/L	05:55:41
2	Se 196.026†	-23.5	-23.4	[0.00]	µg/L	05:55:41
2	SiO2†	1074.3	1068.7	[0.00]	µg/L	05:55:41
2	Si 251.611†	11.0	11.0	[0.00]	µg/L	05:55:41
2	Sn 189.927†	52.6	52.4	[0.00]	µg/L	05:55:41
2	Ti 334.940†	-676.3	-672.7	[0.00]	µg/L	05:55:21
2	Tl 190.801†	-76.1	-75.7	[0.00]	µg/L	05:55:41
2	U 367.007†	802.9	798.7	[0.00]	µg/L	05:55:21
2	V 292.402†	-151.1	-150.3	[0.00]	µg/L	05:55:41
2	Zn 213.857†	901.2	896.4	[0.00]	µg/L	05:55:41
3	Sc RADIAL	22028.8	22028.8	99.8	%	05:54:49
3	Al 396.153Radial†	-104.1	-104.4	[0.00]	µg/L	05:54:49
3	Ca 317.933Radial†	309.7	310.5	[0.00]	µg/L	05:54:49
3	Fe 238.204 Radial†	38.7	38.8	[0.00]	µg/L	05:54:49
3	K 766.490 Radial†	370.1	371.0	[0.00]	µg/L	05:54:29
3	Mg 279.077 IEC†	52.3	52.4	[0.00]	µg/L	05:54:49
3	Na 589.592 Radial†	117.1	117.3	[0.00]	µg/L	05:54:49
3	Sr 421.552†	282.8	283.5	[0.00]	µg/L	05:54:29
3	Sc 361.383	363139.8	363139.8	99.163	%	05:55:46
3	Y 371.029	356503.9	356503.9	99.067	%	05:55:46
3	Ag 328.068†	-678.7	-684.4	[0.00]	µg/L	05:55:46
3	As 188.979†	-12.3	-12.4	[0.00]	µg/L	05:56:06
3	B 249.677†	161.0	162.4	[0.00]	µg/L	05:56:06
3	Ba 233.527†	-13.9	-14.1	[0.00]	µg/L	05:56:06
3	Be 313.107†	-3528.9	-3558.7	[0.00]	µg/L	05:55:46
3	Cd 226.502†	-320.2	-322.9	[0.00]	µg/L	05:56:06
3	Co 228.616†	-208.9	-210.7	[0.00]	µg/L	05:56:06
3	Cr 267.716†	136.1	137.3	[0.00]	µg/L	05:56:06
3	Cu 324.752†	1972.4	1989.0	[0.00]	µg/L	05:55:46
3	Mn 257.610†	465.0	468.9	[0.00]	µg/L	05:56:06
3	Mo 202.031†	43.8	44.1	[0.00]	µg/L	05:56:06
3	Ni 231.604†	-231.7	-233.7	[0.00]	µg/L	05:56:06
3	P 214.914†	122.9	124.0	[0.00]	µg/L	05:56:06
3	Pb 220.353†	-62.1	-62.6	[0.00]	µg/L	05:56:06
3	S 181.975 Axial†	93.5	94.3	[0.00]	µg/L	05:56:06
3	Sb 206.836†	155.4	156.7	[0.00]	µg/L	05:56:06
3	Se 196.026†	-24.1	-24.3	[0.00]	µg/L	05:56:06
3	SiO2†	1064.6	1073.6	[0.00]	µg/L	05:56:06
3	Si 251.611†	-19.6	-19.7	[0.00]	µg/L	05:56:06
3	Sn 189.927†	44.4	44.8	[0.00]	µg/L	05:56:06
3	Ti 334.940†	-724.1	-730.3	[0.00]	µg/L	05:55:46
3	Tl 190.801†	-81.1	-81.8	[0.00]	µg/L	05:56:06
3	U 367.007†	938.7	946.6	[0.00]	µg/L	05:55:46
3	V 292.402†	-125.2	-126.2	[0.00]	µg/L	05:56:06
3	Zn 213.857†	902.6	910.2	[0.00]	µg/L	05:56:06

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	366205.2	2686.29	0.73%	100.00	%
Sc RADIAL	22080.1	48.19	0.22%	100	%
Y 371.029	359862.1	2967.37	0.82%	100.00	%

Ag 328.068†	-683.7	24.87	3.64%	[0.00]	µg/L
Al 396.153Radial†	-94.0	10.88	11.58%	[0.00]	µg/L
As 188.979†	-12.8	1.31	10.22%	[0.00]	µg/L
B 249.677†	173.2	19.31	11.15%	[0.00]	µg/L
Ba 233.527†	-15.5	1.54	9.94%	[0.00]	µg/L
Be 313.107†	-3573.9	32.06	0.90%	[0.00]	µg/L
Ca 317.933Radial†	296.3	12.41	4.19%	[0.00]	µg/L
Cd 226.502†	-323.1	5.70	1.76%	[0.00]	µg/L
Co 228.616†	-222.4	11.31	5.09%	[0.00]	µg/L
Cr 267.716†	121.9	18.33	15.03%	[0.00]	µg/L
Cu 324.752†	1920.1	61.59	3.21%	[0.00]	µg/L
Fe 238.204 Radial†	35.1	4.31	12.30%	[0.00]	µg/L
K 766.490 Radial†	421.7	47.81	11.34%	[0.00]	µg/L
Mg 279.077 IEC†	56.1	3.95	7.05%	[0.00]	µg/L
Mn 257.610†	456.9	18.69	4.09%	[0.00]	µg/L
Mo 202.031†	33.0	10.21	30.98%	[0.00]	µg/L
Na 589.592 Radial†	127.6	10.87	8.52%	[0.00]	µg/L
Ni 231.604†	-204.0	26.74	13.11%	[0.00]	µg/L
P 214.914†	131.7	9.62	7.31%	[0.00]	µg/L
Pb 220.353†	-63.5	0.81	1.27%	[0.00]	µg/L
S 181.975 Axial†	92.3	2.20	2.38%	[0.00]	µg/L
Sb 206.836†	154.6	1.86	1.20%	[0.00]	µg/L
Se 196.026†	-23.8	0.47	1.99%	[0.00]	µg/L
SiO2†	1065.2	10.52	0.99%	[0.00]	µg/L
Si 251.611†	-8.2	16.73	203.81%	[0.00]	µg/L
Sn 189.927†	47.5	4.20	8.85%	[0.00]	µg/L
Sr 421.552†	260.5	29.50	11.32%	[0.00]	µg/L
Ti 334.940†	-721.5	45.14	6.26%	[0.00]	µg/L
Tl 190.801†	-78.3	3.14	4.00%	[0.00]	µg/L
U 367.007†	883.5	76.29	8.64%	[0.00]	µg/L
V 292.402†	-131.9	16.38	12.42%	[0.00]	µg/L
Zn 213.857†	897.8	11.70	1.30%	[0.00]	µg/L

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.1 **Date Collected: 7/23/2018 05:56:15**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22529.6	22529.6	102	%	05:56:47
1	K 766.490 Radial†	1593.4	1140.0	[1000]	µg/L	05:56:47
1	Sr 421.552†	17704.0	17090.3	[100]	µg/L	05:56:47
1	Sc 361.383	363962.8	363962.8	99.388	%	05:57:04
1	Y 371.029	355858.6	355858.6	98.887	%	05:57:04
1	Ag 328.068†	9328.4	10069.6	[100]	µg/L	05:57:04
1	As 188.979†	195.2	209.2	[100]	µg/L	05:57:24
1	B 249.677†	3077.1	2922.8	[100]	µg/L	05:57:04
1	Ba 233.527†	11606.0	11693.0	[100]	µg/L	05:57:24
1	Be 313.107†	116788.4	121081.9	[100]	µg/L	05:57:04
1	Cd 226.502†	9445.5	9826.8	[100]	µg/L	05:57:04
1	Co 228.616†	4181.5	4429.7	[100]	µg/L	05:57:24
1	Cr 267.716†	5109.1	5018.7	[100]	µg/L	05:57:24
1	Cu 324.752†	15732.4	13909.2	[100]	µg/L	05:57:04
1	Mn 257.610†	66037.0	65987.0	[100]	µg/L	05:57:04
1	Mo 202.031†	1780.1	1758.1	[100]	µg/L	05:57:24
1	Ni 231.604†	3520.2	3745.9	[100]	µg/L	05:57:24
1	P 214.914†	882.1	755.9	[500]	µg/L	05:57:24
1	Pb 220.353†	761.7	829.9	[100]	µg/L	05:57:24
1	S 181.975 Axial†	260.5	169.8	[200]	µg/L	05:57:24
1	Sb 206.836†	497.3	345.8	[100]	µg/L	05:57:24
1	Se 196.026†	184.9	209.8	[100]	µg/L	05:57:24
1	SiO2†	7321.7	6301.5	[1069.5]	µg/L	05:57:04
1	Si 251.611†	8973.6	9037.1	[500]	µg/L	05:57:04
1	Sn 189.927†	851.9	809.6	[100]	µg/L	05:57:24
1	Ti 334.940†	22686.8	23548.1	[100]	µg/L	05:57:04
1	Tl 190.801†	403.7	484.5	[100]	µg/L	05:57:24
1	U 367.007†	1229.3	353.4	[100]	µg/L	05:57:04
1	V 292.402†	7403.0	7580.5	[100]	µg/L	05:57:04
1	Zn 213.857†	15364.2	14561.0	[100]	µg/L	05:57:04
2	Sc RADIAL	22707.0	22707.0	103	%	05:56:52
2	K 766.490 Radial†	1673.3	1205.4	[1000]	µg/L	05:56:52
2	Sr 421.552†	17886.5	17132.2	[100]	µg/L	05:56:52
2	Sc 361.383	364971.6	364971.6	99.663	%	05:57:29
2	Y 371.029	357014.8	357014.8	99.209	%	05:57:29
2	Ag 328.068†	9369.1	10084.4	[100]	µg/L	05:57:29
2	As 188.979†	217.7	231.2	[100]	µg/L	05:57:49
2	B 249.677†	3095.9	2933.2	[100]	µg/L	05:57:29
2	Ba 233.527†	11610.6	11665.3	[100]	µg/L	05:57:49
2	Be 313.107†	117341.9	121312.5	[100]	µg/L	05:57:29
2	Cd 226.502†	9539.9	9895.2	[100]	µg/L	05:57:29
2	Co 228.616†	4184.2	4420.8	[100]	µg/L	05:57:49
2	Cr 267.716†	5109.7	5005.0	[100]	µg/L	05:57:49
2	Cu 324.752†	15834.4	13967.8	[100]	µg/L	05:57:29
2	Mn 257.610†	66428.0	66195.7	[100]	µg/L	05:57:29
2	Mo 202.031†	1796.5	1769.6	[100]	µg/L	05:57:49
2	Ni 231.604†	3515.7	3731.5	[100]	µg/L	05:57:49
2	P 214.914†	883.0	754.2	[500]	µg/L	05:57:49
2	Pb 220.353†	769.4	835.6	[100]	µg/L	05:57:49
2	S 181.975 Axial†	256.6	165.1	[200]	µg/L	05:57:49
2	Sb 206.836†	485.4	332.5	[100]	µg/L	05:57:49
2	Se 196.026†	179.7	204.1	[100]	µg/L	05:57:49
2	SiO2†	7374.5	6334.2	[1069.5]	µg/L	05:57:29
2	Si 251.611†	9066.6	9105.4	[500]	µg/L	05:57:29
2	Sn 189.927†	845.9	801.3	[100]	µg/L	05:57:49
2	Ti 334.940†	22801.2	23599.8	[100]	µg/L	05:57:29
2	Tl 190.801†	397.6	477.3	[100]	µg/L	05:57:49
2	U 367.007†	1128.9	249.3	[100]	µg/L	05:57:29

2	V 292.402†	7494.1	7651.3	[100]	µg/L	05:57:29
2	Zn 213.857†	15465.9	14620.3	[100]	µg/L	05:57:29
3	Sc RADIAL	22521.8	22521.8	102	%	05:56:57
3	K 766.490 Radial†	1570.8	1118.3	[1000]	µg/L	05:56:57
3	Sr 421.552†	17749.7	17141.1	[100]	µg/L	05:56:57
3	Sc 361.383	366569.7	366569.7	100.10	%	05:57:55
3	Y 371.029	358731.3	358731.3	99.686	%	05:57:55
3	Ag 328.068†	9304.1	9978.5	[100]	µg/L	05:57:55
3	As 188.979†	200.0	212.5	[100]	µg/L	05:58:15
3	B 249.677†	3103.1	2926.8	[100]	µg/L	05:57:55
3	Ba 233.527†	11584.1	11588.1	[100]	µg/L	05:58:15
3	Be 313.107†	116845.7	120303.4	[100]	µg/L	05:57:55
3	Cd 226.502†	9468.2	9781.9	[100]	µg/L	05:57:55
3	Co 228.616†	4190.0	4408.2	[100]	µg/L	05:58:15
3	Cr 267.716†	5084.9	4957.9	[100]	µg/L	05:58:15
3	Cu 324.752†	15735.7	13799.9	[100]	µg/L	05:57:55
3	Mn 257.610†	66191.2	65668.5	[100]	µg/L	05:57:55
3	Mo 202.031†	1800.1	1765.3	[100]	µg/L	05:58:15
3	Ni 231.604†	3480.1	3680.6	[100]	µg/L	05:58:15
3	P 214.914†	887.5	754.9	[500]	µg/L	05:58:15
3	Pb 220.353†	761.4	824.2	[100]	µg/L	05:58:15
3	S 181.975 Axial†	258.0	165.4	[200]	µg/L	05:58:15
3	Sb 206.836†	489.3	334.2	[100]	µg/L	05:58:15
3	Se 196.026†	199.2	222.8	[100]	µg/L	05:58:15
3	SiO2†	7351.8	6279.2	[1069.5]	µg/L	05:57:55
3	Si 251.611†	8965.6	8964.9	[500]	µg/L	05:57:55
3	Sn 189.927†	851.5	803.1	[100]	µg/L	05:58:15
3	Ti 334.940†	22659.4	23358.4	[100]	µg/L	05:57:55
3	Tl 190.801†	395.4	473.4	[100]	µg/L	05:58:15
3	U 367.007†	1323.5	438.8	[100]	µg/L	05:57:55
3	V 292.402†	7473.5	7597.9	[100]	µg/L	05:57:55
3	Zn 213.857†	15396.8	14483.7	[100]	µg/L	05:57:55

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	365168.0	1314.48	0.36%	99.717	%
Sc RADIAL	22586.1	104.74	0.46%	102	%
Y 371.029	357201.6	1445.46	0.40%	99.261	%
Ag 328.068†	10044.2	57.33	0.57%	[100]	µg/L
As 188.979†	217.6	11.86	5.45%	[100]	µg/L
B 249.677†	2927.6	5.24	0.18%	[100]	µg/L
Ba 233.527†	11648.8	54.35	0.47%	[100]	µg/L
Be 313.107†	120899.3	528.74	0.44%	[100]	µg/L
Cd 226.502†	9834.6	57.10	0.58%	[100]	µg/L
Co 228.616†	4419.6	10.78	0.24%	[100]	µg/L
Cr 267.716†	4993.9	31.90	0.64%	[100]	µg/L
Cu 324.752†	13892.3	85.20	0.61%	[100]	µg/L
K 766.490 Radial†	1154.6	45.35	3.93%	[1000]	µg/L
Mn 257.610†	65950.4	265.50	0.40%	[100]	µg/L
Mo 202.031†	1764.4	5.82	0.33%	[100]	µg/L
Ni 231.604†	3719.3	34.29	0.92%	[100]	µg/L
P 214.914†	755.0	0.82	0.11%	[500]	µg/L
Pb 220.353†	829.9	5.68	0.68%	[100]	µg/L
S 181.975 Axial†	166.8	2.64	1.58%	[200]	µg/L
Sb 206.836†	337.5	7.25	2.15%	[100]	µg/L
Se 196.026†	212.2	9.60	4.53%	[100]	µg/L
SiO2†	6305.0	27.64	0.44%	[1069.5]	µg/L
Si 251.611†	9035.8	70.25	0.78%	[500]	µg/L
Sn 189.927†	804.7	4.39	0.55%	[100]	µg/L
Sr 421.552†	17121.2	27.11	0.16%	[100]	µg/L
Ti 334.940†	23502.1	127.08	0.54%	[100]	µg/L
Tl 190.801†	478.4	5.65	1.18%	[100]	µg/L
U 367.007†	347.2	94.89	27.33%	[100]	µg/L
V 292.402†	7609.9	36.89	0.48%	[100]	µg/L
Zn 213.857†	14555.0	68.54	0.47%	[100]	µg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 7/23/2018 05:58:23**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22380.5	22380.5	101	%	05:58:59
1	Al 396.153Radial†	16472.8	16345.6	[5000]	µg/L	05:58:59
1	Ca 317.933Radial†	25028.1	24395.8	[5000]	µg/L	05:58:59
1	K 766.490 Radial†	6017.6	5515.1	[5000]	µg/L	05:58:59
1	Mg 279.077 IEC†	3307.8	3207.4	[5000]	µg/L	05:58:59
1	Sr 421.552†	86959.9	85532.1	[500]	µg/L	05:58:54
1	Sc 361.383	367619.8	367619.8	100.39	%	05:59:26
1	Y 371.029	358244.9	358244.9	99.551	%	05:59:26
1	Ag 328.068†	48637.0	49133.6	[500]	µg/L	05:59:26
1	As 188.979†	1123.5	1132.0	[500]	µg/L	05:59:46
1	B 249.677†	15212.1	14980.3	[500]	µg/L	05:59:26
1	Ba 233.527†	59688.6	59474.5	[500]	µg/L	05:59:26
1	Be 313.107†	600779.4	602041.5	[500]	µg/L	05:59:26
1	Cd 226.502†	48339.0	48476.1	[500]	µg/L	05:59:26
1	Co 228.616†	21349.9	21490.2	[500]	µg/L	05:59:46
1	Cr 267.716†	24943.1	24725.2	[500]	µg/L	05:59:46
1	Cu 324.752†	70339.0	68148.2	[500]	µg/L	05:59:26
1	Mn 257.610†	320993.7	319301.7	[500]	µg/L	05:59:26
1	Mo 202.031†	8774.0	8707.3	[500]	µg/L	05:59:46
1	Ni 231.604†	18144.7	18278.8	[500]	µg/L	05:59:46
1	P 214.914†	3857.5	3711.0	[2500]	µg/L	05:59:46
1	Pb 220.353†	3993.5	4041.6	[500]	µg/L	05:59:46
1	S 181.975 Axial†	896.1	800.3	[1000]	µg/L	05:59:46
1	Sb 206.836†	1886.3	1724.4	[500]	µg/L	05:59:46
1	Se 196.026†	1035.1	1054.9	[500]	µg/L	05:59:46
1	SiO2†	32759.2	31567.9	[5347.5]	µg/L	05:59:26
1	Si 251.611†	45287.7	45121.6	[2500]	µg/L	05:59:26
1	Sn 189.927†	4032.2	3969.1	[500]	µg/L	05:59:46
1	Ti 334.940†	115987.1	116262.3	[500]	µg/L	05:59:26
1	Tl 190.801†	2243.0	2312.7	[500]	µg/L	05:59:46
1	U 367.007†	2295.3	1403.0	[500]	µg/L	05:59:26
1	V 292.402†	38209.0	38193.9	[500]	µg/L	05:59:26
1	Zn 213.857†	66603.1	65449.0	[500]	µg/L	05:59:26
2	Sc RADIAL	22371.4	22371.4	101	%	05:59:09
2	Al 396.153Radial†	16389.2	16269.9	[5000]	µg/L	05:59:09
2	Ca 317.933Radial†	25003.1	24381.2	[5000]	µg/L	05:59:09
2	K 766.490 Radial†	5948.1	5449.1	[5000]	µg/L	05:59:09
2	Mg 279.077 IEC†	3325.4	3226.0	[5000]	µg/L	05:59:09
2	Sr 421.552†	86949.7	85557.3	[500]	µg/L	05:59:04
2	Sc 361.383	364916.5	364916.5	99.648	%	05:59:52
2	Y 371.029	355340.9	355340.9	98.744	%	05:59:52
2	Ag 328.068†	48365.3	49219.8	[500]	µg/L	05:59:52
2	As 188.979†	1112.9	1129.6	[500]	µg/L	06:00:12
2	B 249.677†	15223.2	15103.8	[500]	µg/L	05:59:52
2	Ba 233.527†	59351.2	59576.3	[500]	µg/L	05:59:52
2	Be 313.107†	597804.1	603489.2	[500]	µg/L	05:59:52
2	Cd 226.502†	47832.3	48324.3	[500]	µg/L	05:59:52
2	Co 228.616†	21340.1	21637.8	[500]	µg/L	06:00:12
2	Cr 267.716†	24984.8	24951.1	[500]	µg/L	06:00:12
2	Cu 324.752†	70074.2	68401.5	[500]	µg/L	05:59:52
2	Mn 257.610†	319679.8	320351.9	[500]	µg/L	05:59:52
2	Mo 202.031†	8745.8	8743.7	[500]	µg/L	06:00:12
2	Ni 231.604†	18165.5	18433.6	[500]	µg/L	06:00:12
2	P 214.914†	3876.9	3758.9	[2500]	µg/L	06:00:12
2	Pb 220.353†	4011.7	4089.3	[500]	µg/L	06:00:12
2	S 181.975 Axial†	891.0	801.8	[1000]	µg/L	06:00:12
2	Sb 206.836†	1895.1	1747.2	[500]	µg/L	06:00:12
2	Se 196.026†	1041.2	1068.6	[500]	µg/L	06:00:12

2	SiO2†	32641.0	31691.0	[5347.5]	µg/L	05:59:52
2	Si 251.611†	45140.8	45308.5	[2500]	µg/L	05:59:52
2	Sn 189.927†	4038.1	4004.9	[500]	µg/L	06:00:12
2	Ti 334.940†	115743.1	116873.4	[500]	µg/L	05:59:52
2	Tl 190.801†	2261.5	2347.8	[500]	µg/L	06:00:12
2	U 367.007†	2321.3	1446.1	[500]	µg/L	05:59:52
2	V 292.402†	37884.4	38150.0	[500]	µg/L	05:59:52
2	Zn 213.857†	66189.9	65525.9	[500]	µg/L	05:59:52
3	Sc RADIAL	22252.5	22252.5	101	%	05:59:19
3	Al 396.153Radial†	16411.6	16378.5	[5000]	µg/L	05:59:19
3	Ca 317.933Radial†	24855.0	24366.1	[5000]	µg/L	05:59:19
3	K 766.490 Radial†	6061.3	5592.7	[5000]	µg/L	05:59:19
3	Mg 279.077 IEC†	3304.9	3223.2	[5000]	µg/L	05:59:19
3	Sr 421.552†	87095.6	86160.4	[500]	µg/L	05:59:14
3	Sc 361.383	363643.1	363643.1	99.300	%	06:00:18
3	Y 371.029	354606.6	354606.6	98.540	%	06:00:18
3	Ag 328.068†	48339.1	49363.3	[500]	µg/L	06:00:18
3	As 188.979†	1120.5	1141.2	[500]	µg/L	06:00:38
3	B 249.677†	15132.0	15065.4	[500]	µg/L	06:00:18
3	Ba 233.527†	58985.9	59417.1	[500]	µg/L	06:00:18
3	Be 313.107†	594822.3	602587.1	[500]	µg/L	06:00:18
3	Cd 226.502†	47490.5	48148.2	[500]	µg/L	06:00:18
3	Co 228.616†	21548.7	21922.9	[500]	µg/L	06:00:38
3	Cr 267.716†	25166.4	25221.7	[500]	µg/L	06:00:38
3	Cu 324.752†	69652.0	68222.7	[500]	µg/L	06:00:18
3	Mn 257.610†	317777.6	319559.7	[500]	µg/L	06:00:18
3	Mo 202.031†	8824.1	8853.3	[500]	µg/L	06:00:38
3	Ni 231.604†	18304.0	18637.0	[500]	µg/L	06:00:38
3	P 214.914†	3916.5	3812.4	[2500]	µg/L	06:00:38
3	Pb 220.353†	4036.2	4128.1	[500]	µg/L	06:00:38
3	S 181.975 Axial†	905.7	819.8	[1000]	µg/L	06:00:38
3	Sb 206.836†	1873.5	1732.1	[500]	µg/L	06:00:38
3	Se 196.026†	1033.5	1064.6	[500]	µg/L	06:00:38
3	SiO2†	32446.6	31609.9	[5347.5]	µg/L	06:00:18
3	Si 251.611†	44923.8	45248.5	[2500]	µg/L	06:00:18
3	Sn 189.927†	4080.7	4061.9	[500]	µg/L	06:00:38
3	Ti 334.940†	115273.6	116807.3	[500]	µg/L	06:00:18
3	Tl 190.801†	2276.7	2371.0	[500]	µg/L	06:00:38
3	U 367.007†	2377.4	1510.7	[500]	µg/L	06:00:18
3	V 292.402†	37868.9	38267.6	[500]	µg/L	06:00:18
3	Zn 213.857†	65709.9	65275.1	[500]	µg/L	06:00:18

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	365393.1	2030.76	0.56%	99.778	%
Sc RADIAL	22334.8	71.41	0.32%	101	%
Y 371.029	356064.2	1923.95	0.54%	98.945	%
Ag 328.068†	49238.9	116.07	0.24%	[500]	µg/L
Al 396.153Radial†	16331.3	55.70	0.34%	[5000]	µg/L
As 188.979†	1134.2	6.11	0.54%	[500]	µg/L
B 249.677†	15049.8	63.16	0.42%	[500]	µg/L
Ba 233.527†	59489.3	80.64	0.14%	[500]	µg/L
Be 313.107†	602706.0	731.12	0.12%	[500]	µg/L
Ca 317.933Radial†	24381.1	14.84	0.06%	[5000]	µg/L
Cd 226.502†	48316.2	164.08	0.34%	[500]	µg/L
Co 228.616†	21683.7	219.98	1.01%	[500]	µg/L
Cr 267.716†	24966.0	248.62	1.00%	[500]	µg/L
Cu 324.752†	68257.5	130.19	0.19%	[500]	µg/L
K 766.490 Radial†	5519.0	71.89	1.30%	[5000]	µg/L
Mg 279.077 IEC†	3218.9	10.05	0.31%	[5000]	µg/L
Mn 257.610†	319737.8	547.29	0.17%	[500]	µg/L
Mo 202.031†	8768.1	76.03	0.87%	[500]	µg/L
Ni 231.604†	18449.8	179.60	0.97%	[500]	µg/L
P 214.914†	3760.8	50.72	1.35%	[2500]	µg/L
Pb 220.353†	4086.4	43.33	1.06%	[500]	µg/L
S 181.975 Axial†	807.3	10.82	1.34%	[1000]	µg/L
Sb 206.836†	1734.6	11.56	0.67%	[500]	µg/L
Se 196.026†	1062.7	7.06	0.66%	[500]	µg/L
SiO2†	31623.0	62.57	0.20%	[5347.5]	µg/L

Si 251.611†	45226.2	95.39	0.21%	[2500]	µg/L
Sn 189.927†	4012.0	46.81	1.17%	[500]	µg/L
Sr 421.552†	85750.0	355.68	0.41%	[500]	µg/L
Ti 334.940†	116647.7	335.35	0.29%	[500]	µg/L
Tl 190.801†	2343.8	29.37	1.25%	[500]	µg/L
U 367.007†	1453.3	54.19	3.73%	[500]	µg/L
V 292.402†	38203.8	59.41	0.16%	[500]	µg/L
Zn 213.857†	65416.6	128.48	0.20%	[500]	µg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: SCAL **Date Collected: 7/23/2018 06:00:47**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22398.5	22398.5	101	%	06:01:23
1	Al 396.153Radial†	32414.3	32047.6	[10000]	µg/L	06:01:23
1	Ca 317.933Radial†	49923.1	48917.2	[10000]	µg/L	06:01:23
1	Fe 238.204 Radial†	53368.7	52575.2	[10000]	µg/L	06:01:23
1	K 766.490 Radial†	11606.2	11019.5	[10000]	µg/L	06:01:23
1	Mg 279.077 IEC†	6525.7	6376.9	[10000]	µg/L	06:01:23
1	Na 589.592 Radial†	6770.6	6546.8	[10000]	µg/L	06:01:23
1	Sr 421.552†	174227.8	171491.1	[1000]	µg/L	06:01:18
1	Sc 361.383	362103.6	362103.6	98.880	%	06:01:52
1	Y 371.029	351472.0	351472.0	97.669	%	06:01:52
1	Ag 328.068†	96954.5	98736.4	[1000]	µg/L	06:01:52
1	As 188.979†	2246.5	2284.8	[1000]	µg/L	06:02:12
1	B 249.677†	29881.5	30046.8	[1000]	µg/L	06:01:52
1	Ba 233.527†	117554.5	118901.6	[1000]	µg/L	06:01:52
1	Be 313.107†	1184892.2	1201887.5	[1000]	µg/L	06:01:52
1	Cd 226.502†	94782.6	96179.3	[1000]	µg/L	06:01:52
1	Co 228.616†	42715.9	43422.1	[1000]	µg/L	06:01:52
1	Cr 267.716†	49844.0	50286.7	[1000]	µg/L	06:01:52
1	Cu 324.752†	136561.5	136188.3	[1000]	µg/L	06:01:52
1	Mn 257.610†	629148.5	635818.1	[1000]	µg/L	06:01:52
1	Mo 202.031†	17432.2	17596.7	[1000]	µg/L	06:02:12
1	Ni 231.604†	35298.5	35902.3	[1000]	µg/L	06:02:12
1	P 214.914†	7523.0	7476.5	[5000]	µg/L	06:02:12
1	Pb 220.353†	7897.3	8050.3	[1000]	µg/L	06:02:12
1	S 181.975 Axial†	1704.0	1631.0	[2000]	µg/L	06:02:12
1	Sb 206.836†	3618.8	3505.2	[1000]	µg/L	06:02:12
1	Se 196.026†	2065.0	2112.2	[1000]	µg/L	06:02:12
1	SiO2†	63613.6	63268.9	[10695]	µg/L	06:01:52
1	Si 251.611†	89295.1	90314.7	[5000]	µg/L	06:01:52
1	Sn 189.927†	7987.4	8030.4	[1000]	µg/L	06:02:12
1	Ti 334.940†	231829.8	235177.3	[1000]	µg/L	06:01:52
1	Tl 190.801†	4512.2	4641.6	[1000]	µg/L	06:02:12
1	U 367.007†	3667.8	2825.8	[1000]	µg/L	06:01:52
1	V 292.402†	75638.2	76626.8	[1000]	µg/L	06:01:52
1	Zn 213.857†	130505.2	131085.6	[1000]	µg/L	06:01:52
2	Sc RADIAL	22516.7	22516.7	102	%	06:01:33
2	Al 396.153Radial†	32437.5	31902.6	[10000]	µg/L	06:01:33
2	Ca 317.933Radial†	49984.5	48719.1	[10000]	µg/L	06:01:33
2	Fe 238.204 Radial†	53348.1	52278.7	[10000]	µg/L	06:01:33
2	K 766.490 Radial†	11551.8	10906.2	[10000]	µg/L	06:01:33
2	Mg 279.077 IEC†	6548.3	6365.3	[10000]	µg/L	06:01:33
2	Na 589.592 Radial†	6795.7	6536.3	[10000]	µg/L	06:01:33
2	Sr 421.552†	172014.9	168419.3	[1000]	µg/L	06:01:28
2	Sc 361.383	361966.3	361966.3	98.842	%	06:02:20
2	Y 371.029	351883.0	351883.0	97.783	%	06:02:20
2	Ag 328.068†	97204.4	99026.4	[1000]	µg/L	06:02:20
2	As 188.979†	2218.1	2256.9	[1000]	µg/L	06:02:40
2	B 249.677†	30017.6	30195.9	[1000]	µg/L	06:02:20
2	Ba 233.527†	117644.1	119037.4	[1000]	µg/L	06:02:20
2	Be 313.107†	1188734.0	1206229.0	[1000]	µg/L	06:02:20
2	Cd 226.502†	95128.5	96565.6	[1000]	µg/L	06:02:20
2	Co 228.616†	42714.1	43436.7	[1000]	µg/L	06:02:20
2	Cr 267.716†	49893.7	50356.0	[1000]	µg/L	06:02:20
2	Cu 324.752†	136625.7	136305.6	[1000]	µg/L	06:02:20
2	Mn 257.610†	630186.2	637109.4	[1000]	µg/L	06:02:20
2	Mo 202.031†	17426.8	17597.9	[1000]	µg/L	06:02:40
2	Ni 231.604†	35286.7	35903.9	[1000]	µg/L	06:02:40
2	P 214.914†	7546.3	7503.0	[5000]	µg/L	06:02:40

2	Pb 220.353†	7904.0	8060.1	[1000] µg/L	06:02:40
2	S 181.975 Axial†	1701.0	1628.6	[2000] µg/L	06:02:40
2	Sb 206.836†	3594.5	3482.0	[1000] µg/L	06:02:40
2	Se 196.026†	2048.8	2096.5	[1000] µg/L	06:02:40
2	SiO2†	63745.4	63426.6	[10695] µg/L	06:02:20
2	Si 251.611†	89623.7	90681.5	[5000] µg/L	06:02:20
2	Sn 189.927†	7988.7	8034.8	[1000] µg/L	06:02:40
2	Ti 334.940†	232356.4	235799.1	[1000] µg/L	06:02:20
2	Tl 190.801†	4534.7	4666.1	[1000] µg/L	06:02:40
2	U 367.007†	3702.7	2862.6	[1000] µg/L	06:02:20
2	V 292.402†	75794.5	76814.0	[1000] µg/L	06:02:20
2	Zn 213.857†	130944.0	131579.7	[1000] µg/L	06:02:20
3	Sc RADIAL	22544.4	22544.4	102 %	06:01:43
3	Al 396.153Radial†	32746.8	32166.4	[10000] µg/L	06:01:43
3	Ca 317.933Radial†	50460.3	49124.8	[10000] µg/L	06:01:43
3	Fe 238.204 Radial†	54016.8	52869.4	[10000] µg/L	06:01:43
3	K 766.490 Radial†	11705.3	11042.6	[10000] µg/L	06:01:43
3	Mg 279.077 IEC†	6628.3	6435.7	[10000] µg/L	06:01:43
3	Na 589.592 Radial†	6871.2	6602.1	[10000] µg/L	06:01:43
3	Sr 421.552†	172969.8	169147.2	[1000] µg/L	06:01:38
3	Sc 361.383	361154.6	361154.6	98.621 %	06:02:47
3	Y 371.029	350985.3	350985.3	97.533 %	06:02:47
3	Ag 328.068†	96628.9	98663.9	[1000] µg/L	06:02:47
3	As 188.979†	2251.1	2295.3	[1000] µg/L	06:03:07
3	B 249.677†	29781.6	30024.9	[1000] µg/L	06:02:47
3	Ba 233.527†	116775.4	118424.0	[1000] µg/L	06:02:47
3	Be 313.107†	1180977.5	1201066.9	[1000] µg/L	06:02:47
3	Cd 226.502†	94509.0	96153.7	[1000] µg/L	06:02:47
3	Co 228.616†	42492.6	43309.2	[1000] µg/L	06:02:47
3	Cr 267.716†	49608.2	50180.0	[1000] µg/L	06:02:47
3	Cu 324.752†	135865.6	135845.5	[1000] µg/L	06:02:47
3	Mn 257.610†	626186.8	634486.9	[1000] µg/L	06:02:47
3	Mo 202.031†	17549.5	17762.0	[1000] µg/L	06:03:07
3	Ni 231.604†	35387.5	36086.4	[1000] µg/L	06:03:07
3	P 214.914†	7580.0	7554.3	[5000] µg/L	06:03:07
3	Pb 220.353†	7917.4	8091.6	[1000] µg/L	06:03:07
3	S 181.975 Axial†	1699.8	1631.2	[2000] µg/L	06:03:07
3	Sb 206.836†	3609.3	3505.1	[1000] µg/L	06:03:07
3	Se 196.026†	2078.3	2131.1	[1000] µg/L	06:03:07
3	SiO2†	63361.3	63182.1	[10695] µg/L	06:02:47
3	Si 251.611†	88960.5	90212.8	[5000] µg/L	06:02:47
3	Sn 189.927†	8038.7	8103.6	[1000] µg/L	06:03:07
3	Ti 334.940†	230681.7	234629.2	[1000] µg/L	06:02:47
3	Tl 190.801†	4564.8	4706.9	[1000] µg/L	06:03:07
3	U 367.007†	3607.5	2774.5	[1000] µg/L	06:02:47
3	V 292.402†	75286.3	76471.1	[1000] µg/L	06:02:47
3	Zn 213.857†	130056.9	130977.9	[1000] µg/L	06:02:47

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	361741.5	512.87	0.14%	98.781	%
Sc RADIAL	22486.5	77.51	0.34%	102	%
Y 371.029	351446.8	449.40	0.13%	97.662	%
Ag 328.068†	98808.9	191.81	0.19%	[1000]	µg/L
Al 396.153Radial†	32038.9	132.14	0.41%	[10000]	µg/L
As 188.979†	2279.0	19.86	0.87%	[1000]	µg/L
B 249.677†	30089.2	93.08	0.31%	[1000]	µg/L
Ba 233.527†	118787.7	322.19	0.27%	[1000]	µg/L
Be 313.107†	1203061.1	2773.97	0.23%	[1000]	µg/L
Ca 317.933Radial†	48920.4	202.88	0.41%	[10000]	µg/L
Cd 226.502†	96299.6	230.78	0.24%	[1000]	µg/L
Co 228.616†	43389.4	69.77	0.16%	[1000]	µg/L
Cr 267.716†	50274.3	88.67	0.18%	[1000]	µg/L
Cu 324.752†	136113.1	239.10	0.18%	[1000]	µg/L
Fe 238.204 Radial†	52574.4	295.35	0.56%	[10000]	µg/L
K 766.490 Radial†	10989.5	73.01	0.66%	[10000]	µg/L
Mg 279.077 IEC†	6392.6	37.76	0.59%	[10000]	µg/L
Mn 257.610†	635804.8	1311.29	0.21%	[1000]	µg/L
Mo 202.031†	17652.2	95.09	0.54%	[1000]	µg/L

Na 589.592 Radial†	6561.7	35.33	0.54%	[10000]	µg/L
Ni 231.604†	35964.2	105.84	0.29%	[1000]	µg/L
P 214.914†	7511.3	39.56	0.53%	[5000]	µg/L
Pb 220.353†	8067.3	21.61	0.27%	[1000]	µg/L
S 181.975 Axial†	1630.3	1.46	0.09%	[2000]	µg/L
Sb 206.836†	3497.4	13.41	0.38%	[1000]	µg/L
Se 196.026†	2113.3	17.34	0.82%	[1000]	µg/L
SiO2†	63292.6	123.97	0.20%	[10695]	µg/L
Si 251.611†	90403.0	246.50	0.27%	[5000]	µg/L
Sn 189.927†	8056.2	41.07	0.51%	[1000]	µg/L
Sr 421.552†	169685.9	1605.19	0.95%	[1000]	µg/L
Ti 334.940†	235201.9	585.31	0.25%	[1000]	µg/L
Tl 190.801†	4671.5	33.01	0.71%	[1000]	µg/L
U 367.007†	2821.0	44.28	1.57%	[1000]	µg/L
V 292.402†	76637.3	171.69	0.22%	[1000]	µg/L
Zn 213.857†	131214.4	320.90	0.24%	[1000]	µg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S10 **Date Collected: 7/23/2018 06:03:16**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc RADIAL	22016.2	22016.2	99.7	%	06:03:46
1	Al 396.153Radial†	155179.7	155724.4	[50000]	µg/L	06:03:46
1	Ca 317.933Radial†	233301.2	233682.5	[50000]	µg/L	06:03:46
1	Fe 238.204 Radial†	102225.7	102487.6	[20000]	µg/L	06:03:46
1	Mg 279.077 IEC†	30619.3	30652.2	[50000]	µg/L	06:03:46
1	Na 589.592 Radial†	13060.0	12970.3	[20000]	µg/L	06:03:46
1	Sc 361.383	358762.2	358762.2	97.968	%	06:04:03
1	Y 371.029	348117.5	348117.5	96.736	%	06:04:03
2	Sc RADIAL	22132.5	22132.5	100	%	06:03:52
2	Al 396.153Radial†	155193.0	154919.6	[50000]	µg/L	06:03:52
2	Ca 317.933Radial†	233081.6	232233.5	[50000]	µg/L	06:03:52
2	Fe 238.204 Radial†	102212.6	101935.6	[20000]	µg/L	06:03:52
2	Mg 279.077 IEC†	30537.0	30408.7	[50000]	µg/L	06:03:52
2	Na 589.592 Radial†	13097.5	12938.9	[20000]	µg/L	06:03:52
2	Sc 361.383	357252.2	357252.2	97.555	%	06:04:09
2	Y 371.029	346545.5	346545.5	96.300	%	06:04:09
3	Sc RADIAL	22230.7	22230.7	101	%	06:03:57
3	Al 396.153Radial†	155914.8	154952.7	[50000]	µg/L	06:03:57
3	Ca 317.933Radial†	234749.7	232863.3	[50000]	µg/L	06:03:57
3	Fe 238.204 Radial†	102789.1	102057.8	[20000]	µg/L	06:03:57
3	Mg 279.077 IEC†	30777.8	30513.3	[50000]	µg/L	06:03:57
3	Na 589.592 Radial†	13238.4	13021.1	[20000]	µg/L	06:03:57
3	Sc 361.383	357704.3	357704.3	97.679	%	06:04:14
3	Y 371.029	347004.3	347004.3	96.427	%	06:04:14

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	357906.3	774.98	0.22%	97.734	%
Sc RADIAL	22126.5	107.39	0.49%	100	%
Y 371.029	347222.4	808.35	0.23%	96.488	%
Al 396.153Radial†	155198.9	455.43	0.29%	[50000]	µg/L
Ca 317.933Radial†	232926.4	726.58	0.31%	[50000]	µg/L
Fe 238.204 Radial†	102160.3	289.95	0.28%	[20000]	µg/L
Mg 279.077 IEC†	30524.7	122.18	0.40%	[50000]	µg/L
Na 589.592 Radial†	12976.8	41.46	0.32%	[20000]	µg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	98.76	0.00000	0.999998	
Al 396.153Radial	3	Lin Thru 0	0.0	3.109	0.00000	0.999969	
As 188.979	3	Lin Thru 0	0.0	2.276	0.00000	0.999991	
B 249.677	3	Lin Thru 0	0.0	30.08	0.00000	0.999997	
Ba 233.527	3	Lin Thru 0	0.0	118.8	0.00000	0.999998	
Be 313.107	3	Lin Thru 0	0.0	1204	0.00000	1.000000	
Ca 317.933Radial	3	Lin Thru 0	0.0	4.669	0.00000	0.999945	
Cd 226.502	3	Lin Thru 0	0.0	96.38	0.00000	0.999997	
Co 228.616	3	Lin Thru 0	0.0	43.39	0.00000	0.999999	
Cr 267.716	3	Lin Thru 0	0.0	50.20	0.00000	0.999996	
Cu 324.752	3	Lin Thru 0	0.0	136.2	0.00000	0.999998	
Fe 238.204 Radia	2	Lin Thru 0	0.0	5.138	0.00000	0.999932	
K 766.490 Radial	3	Lin Thru 0	0.0	1.100	0.00000	0.999989	
Mg 279.077 IEC	3	Lin Thru 0	0.0	0.6119	0.00000	0.999946	
Mn 257.610	3	Lin Thru 0	0.0	636.7	0.00000	0.999992	
Mo 202.031	3	Lin Thru 0	0.0	17.63	0.00000	0.999997	

Na 589.592 Radia	2	Lin Thru 0	0.0	0.6503	0.00000	0.999990
Ni 231.604	3	Lin Thru 0	0.0	36.16	0.00000	0.999944
P 214.914	3	Lin Thru 0	0.0	1.503	0.00000	1.000000
Pb 220.353	3	Lin Thru 0	0.0	8.090	0.00000	0.999984
S 181.975 Axial	3	Lin Thru 0	0.0	0.8137	0.00000	0.999990
Sb 206.836	3	Lin Thru 0	0.0	3.491	0.00000	0.999990
Se 196.026	3	Lin Thru 0	0.0	2.116	0.00000	0.999997
SiO2	3	Lin Thru 0	0.0	5.917	0.00000	1.000000
Si 251.611	3	Lin Thru 0	0.0	18.08	0.00000	1.000000
Sn 189.927	3	Lin Thru 0	0.0	8.050	0.00000	0.999999
Sr 421.552	3	Lin Thru 0	0.0	170.1	0.00000	0.999991
Ti 334.940	3	Lin Thru 0	0.0	234.8	0.00000	0.999995
Tl 190.801	3	Lin Thru 0	0.0	4.676	0.00000	0.999997
U 367.007	3	Lin Thru 0	0.0	2.843	0.00000	0.999733
V 292.402	3	Lin Thru 0	0.0	76.59	0.00000	0.999999
Zn 213.857	3	Lin Thru 0	0.0	131.3	0.00000	0.999952

Sequence No.: 6 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 7/23/2018 06:04:22**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc RADIAL	22464.8	22464.8	102	%			06:04:58
1	Al 396.153Radial†	16906.9	16711.3	5351.2	µg/L	5351.2	ppb	06:04:58
1	Ca 317.933Radial†	25956.5	25215.7	5400.1	µg/L	5400.1	ppb	06:04:58
1	Fe 238.204 Radial†	27185.7	26685.1	5193.8	µg/L	5193.8	ppb	06:04:58
1	K 766.490 Radial†	3317.3	2838.8	2579.4	µg/L	2579.4	ppb	06:04:58
1	Mg 279.077 IEC†	3426.7	3312.0	5412.5	µg/L	5412.5	ppb	06:04:58
1	Na 589.592 Radial†	1803.1	1644.7	2522.3	µg/L	2522.3	ppb	06:04:58
1	Sr 421.552†	87985.5	86218.2	506.90	µg/L	506.90	ppb	06:04:53
1	Sc 361.383	366620.7	366620.7	100.11	%			06:05:25
1	Y 371.029	358080.4	358080.4	99.505	%			06:05:25
1	Ag 328.068†	24015.9	24672.3	251.26	µg/L	251.26	ppb	06:05:25
1	As 188.979†	1122.0	1133.5	502.87	µg/L	502.87	ppb	06:05:45
1	B 249.677†	15370.1	15179.5	522.82	µg/L	522.82	ppb	06:05:25
1	Ba 233.527†	60088.4	60035.9	505.19	µg/L	505.19	ppb	06:05:25
1	Be 313.107†	294741.4	297981.3	247.89	µg/L	247.89	ppb	06:05:25
1	Cd 226.502†	48280.4	48548.8	503.33	µg/L	503.33	ppb	06:05:25
1	Co 228.616†	21544.3	21742.3	501.03	µg/L	501.03	ppb	06:05:45
1	Cr 267.716†	25215.1	25064.6	498.97	µg/L	498.97	ppb	06:05:45
1	Cu 324.752†	71143.3	69142.5	507.90	µg/L	507.90	ppb	06:05:25
1	Mn 257.610†	321284.7	320463.7	503.63	µg/L	503.63	ppb	06:05:25
1	Mo 202.031†	8899.4	8856.3	502.47	µg/L	502.47	ppb	06:05:45
1	Ni 231.604†	17862.8	18046.5	498.91	µg/L	498.91	ppb	06:05:45
1	P 214.914†	3862.2	3726.2	2465.9	µg/L	2465.9	ppb	06:05:45
1	Pb 220.353†	4033.1	4092.1	506.20	µg/L	506.20	ppb	06:05:45
1	S 181.975 Axial†	2063.7	1969.0	2417.0	µg/L	2417.0	ppb	06:05:45
1	Sb 206.836†	1906.4	1749.6	497.70	µg/L	497.70	ppb	06:05:45
1	Se 196.026†	5324.3	5342.0	2527.2	µg/L	2527.2	ppb	06:05:45
1	SiO2†	64402.8	63264.6	10668	µg/L	10668	ppb	06:05:25
1	Si 251.611†	90424.4	90330.2	4986.7	µg/L	4986.7	ppb	06:05:25
1	Sn 189.927†	4117.9	4065.7	506.94	µg/L	506.94	ppb	06:05:45
1	Ti 334.940†	117780.4	118368.5	503.91	µg/L	503.91	ppb	06:05:25
1	Tl 190.801†	2320.2	2395.9	513.96	µg/L	513.96	ppb	06:05:45
1	U 367.007†	2342.8	1456.7	489.4	µg/L	489.4	ppb	06:05:25
1	V 292.402†	38245.2	38333.7	506.72	µg/L	506.72	ppb	06:05:25
1	Zn 213.857†	67953.7	66978.9	506.77	µg/L	506.77	ppb	06:05:25
2	Sc RADIAL	22412.6	22412.6	102	%			06:05:08
2	Al 396.153Radial†	16760.4	16605.7	5317.3	µg/L	5317.3	ppb	06:05:08
2	Ca 317.933Radial†	25936.9	25255.8	5408.7	µg/L	5408.7	ppb	06:05:08
2	Fe 238.204 Radial†	27239.2	26800.1	5216.1	µg/L	5216.1	ppb	06:05:08
2	K 766.490 Radial†	3278.9	2808.6	2552.0	µg/L	2552.0	ppb	06:05:08
2	Mg 279.077 IEC†	3414.0	3307.3	5404.8	µg/L	5404.8	ppb	06:05:08
2	Na 589.592 Radial†	1821.0	1666.4	2555.7	µg/L	2555.7	ppb	06:05:08
2	Sr 421.552†	87597.6	86037.7	505.84	µg/L	505.84	ppb	06:05:03
2	Sc 361.383	366113.1	366113.1	99.975	%			06:05:51
2	Y 371.029	357454.4	357454.4	99.331	%			06:05:51
2	Ag 328.068†	23998.2	24687.9	251.44	µg/L	251.44	ppb	06:05:51
2	As 188.979†	1126.7	1139.8	505.63	µg/L	505.63	ppb	06:06:11
2	B 249.677†	15399.1	15229.7	524.58	µg/L	524.58	ppb	06:05:51
2	Ba 233.527†	60181.1	60211.8	506.67	µg/L	506.67	ppb	06:05:51
2	Be 313.107†	294894.7	298542.8	248.35	µg/L	248.35	ppb	06:05:51
2	Cd 226.502†	48205.8	48541.0	503.24	µg/L	503.24	ppb	06:05:51
2	Co 228.616†	21517.4	21745.2	501.10	µg/L	501.10	ppb	06:06:11
2	Cr 267.716†	25158.9	25043.3	498.57	µg/L	498.57	ppb	06:06:11
2	Cu 324.752†	71148.4	69246.2	508.64	µg/L	508.64	ppb	06:05:51
2	Mn 257.610†	321454.6	321078.6	504.59	µg/L	504.59	ppb	06:05:51
2	Mo 202.031†	8886.3	8855.6	502.42	µg/L	502.42	ppb	06:06:11
2	Ni 231.604†	17841.3	18049.8	499.00	µg/L	499.00	ppb	06:06:11
2	P 214.914†	3864.0	3733.3	2470.6	µg/L	2470.6	ppb	06:06:11

2	Pb 220.353†	4024.5	4089.1	505.85 µg/L	505.85 ppb	06:06:11
2	S 181.975 Axial†	2050.5	1958.7	2404.2 µg/L	2404.2 ppb	06:06:11
2	Sb 206.836†	1892.8	1738.7	494.57 µg/L	494.57 ppb	06:06:11
2	Se 196.026†	5295.8	5320.9	2517.2 µg/L	2517.2 ppb	06:06:11
2	SiO2†	64411.7	63362.7	10684 µg/L	10684 ppb	06:05:51
2	Si 251.611†	90584.0	90615.0	5002.5 µg/L	5002.5 ppb	06:05:51
2	Sn 189.927†	4109.9	4063.4	506.65 µg/L	506.65 ppb	06:06:11
2	Ti 334.940†	117625.6	118376.7	503.95 µg/L	503.95 ppb	06:05:51
2	Tl 190.801†	2319.0	2397.9	514.39 µg/L	514.39 ppb	06:06:11
2	U 367.007†	2271.5	1388.6	465.3 µg/L	465.3 ppb	06:05:51
2	V 292.402†	38169.2	38310.6	506.41 µg/L	506.41 ppb	06:05:51
2	Zn 213.857†	68009.6	67128.9	507.91 µg/L	507.91 ppb	06:05:51
3	Sc RADIAL	22391.3	22391.3	101 %		06:05:18
3	Al 396.153Radial†	16671.6	16533.9	5294.0 µg/L	5294.0 ppb	06:05:18
3	Ca 317.933Radial†	25885.8	25229.8	5403.1 µg/L	5403.1 ppb	06:05:18
3	Fe 238.204 Radial†	27185.6	26772.8	5210.8 µg/L	5210.8 ppb	06:05:18
3	K 766.490 Radial†	3277.7	2810.5	2553.7 µg/L	2553.7 ppb	06:05:18
3	Mg 279.077 IEC†	3374.5	3271.5	5346.4 µg/L	5346.4 ppb	06:05:18
3	Na 589.592 Radial†	1795.7	1643.1	2519.9 µg/L	2519.9 ppb	06:05:18
3	Sr 421.552†	87049.3	85579.3	503.14 µg/L	503.14 ppb	06:05:13
3	Sc 361.383	364276.6	364276.6	99.473 %		06:06:16
3	Y 371.029	355632.3	355632.3	98.825 %		06:06:16
3	Ag 328.068†	24014.2	24825.1	252.81 µg/L	252.81 ppb	06:06:16
3	As 188.979†	1127.1	1145.9	508.33 µg/L	508.33 ppb	06:06:36
3	B 249.677†	15428.8	15337.3	528.12 µg/L	528.12 ppb	06:06:16
3	Ba 233.527†	60018.0	60351.3	507.85 µg/L	507.85 ppb	06:06:16
3	Be 313.107†	293996.9	299127.4	248.84 µg/L	248.84 ppb	06:06:16
3	Cd 226.502†	48151.5	48729.5	505.20 µg/L	505.20 ppb	06:06:16
3	Co 228.616†	21525.5	21861.9	503.79 µg/L	503.79 ppb	06:06:36
3	Cr 267.716†	25147.9	25159.1	500.84 µg/L	500.84 ppb	06:06:36
3	Cu 324.752†	71035.9	69491.9	510.47 µg/L	510.47 ppb	06:06:16
3	Mn 257.610†	320720.6	321961.7	505.98 µg/L	505.98 ppb	06:06:16
3	Mo 202.031†	8903.6	8917.8	505.95 µg/L	505.95 ppb	06:06:36
3	Ni 231.604†	17869.9	18168.5	502.28 µg/L	502.28 ppb	06:06:36
3	P 214.914†	3846.8	3735.4	2472.0 µg/L	2472.0 ppb	06:06:36
3	Pb 220.353†	4030.8	4115.7	509.10 µg/L	509.10 ppb	06:06:36
3	S 181.975 Axial†	2057.0	1975.5	2424.9 µg/L	2424.9 ppb	06:06:36
3	Sb 206.836†	1917.9	1773.4	504.54 µg/L	504.54 ppb	06:06:36
3	Se 196.026†	5312.3	5364.2	2537.7 µg/L	2537.7 ppb	06:06:36
3	SiO2†	64174.3	63448.9	10699 µg/L	10699 ppb	06:06:16
3	Si 251.611†	90326.7	90813.1	5013.4 µg/L	5013.4 ppb	06:06:16
3	Sn 189.927†	4115.9	4090.2	509.99 µg/L	509.99 ppb	06:06:36
3	Ti 334.940†	117472.3	118815.8	505.81 µg/L	505.81 ppb	06:06:16
3	Tl 190.801†	2320.5	2411.1	517.23 µg/L	517.23 ppb	06:06:36
3	U 367.007†	2370.7	1499.8	504.5 µg/L	504.5 ppb	06:06:16
3	V 292.402†	38177.4	38511.4	509.08 µg/L	509.08 ppb	06:06:16
3	Zn 213.857†	67807.3	67268.5	508.96 µg/L	508.96 ppb	06:06:16

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	365670.1	99.854	%	0.3368				0.34%
Sc RADIAL	22422.9	102	%	0.17				0.17%
Y 371.029	357055.7	99.220	%	0.3534				0.36%
Ag 328.068†	24728.4	251.84	µg/L	0.846	251.84	ppb	0.846	0.34%
QC value within limits for Ag 328.068 Recovery = 100.73%								
Al 396.153Radial†	16617.0	5320.8	µg/L	28.77	5320.8	ppb	28.77	0.54%
QC value within limits for Al 396.153Radial Recovery = 106.42%								
As 188.979†	1139.7	505.61	µg/L	2.729	505.61	ppb	2.729	0.54%
QC value within limits for As 188.979 Recovery = 101.12%								
B 249.677†	15248.8	525.18	µg/L	2.700	525.18	ppb	2.700	0.51%
QC value within limits for B 249.677 Recovery = 105.04%								
Ba 233.527†	60199.7	506.57	µg/L	1.330	506.57	ppb	1.330	0.26%
QC value within limits for Ba 233.527 Recovery = 101.31%								
Be 313.107†	298550.5	248.36	µg/L	0.478	248.36	ppb	0.478	0.19%
QC value within limits for Be 313.107 Recovery = 99.34%								
Ca 317.933Radial†	25233.8	5404.0	µg/L	4.36	5404.0	ppb	4.36	0.08%
QC value within limits for Ca 317.933Radial Recovery = 108.08%								
Cd 226.502†	48606.4	503.92	µg/L	1.107	503.92	ppb	1.107	0.22%
QC value within limits for Cd 226.502 Recovery = 100.78%								

Co 228.616†	21783.1	501.97 µg/L	1.574	501.97 ppb	1.574	0.31%
QC value within limits for Co 228.616 Recovery = 100.39%						
Cr 267.716†	25089.0	499.46 µg/L	1.213	499.46 ppb	1.213	0.24%
QC value within limits for Cr 267.716 Recovery = 99.89%						
Cu 324.752†	69293.5	509.00 µg/L	1.324	509.00 ppb	1.324	0.26%
QC value within limits for Cu 324.752 Recovery = 101.80%						
Fe 238.204 Radial†	26752.7	5206.9 µg/L	11.69	5206.9 ppb	11.69	0.22%
QC value within limits for Fe 238.204 Radial Recovery = 104.14%						
K 766.490 Radial†	2819.3	2561.7 µg/L	15.37	2561.7 ppb	15.37	0.60%
QC value within limits for K 766.490 Radial Recovery = 102.47%						
Mg 279.077 IEC†	3296.9	5387.9 µg/L	36.17	5387.9 ppb	36.17	0.67%
QC value within limits for Mg 279.077 IEC Recovery = 107.76%						
Mn 257.610†	321168.0	504.73 µg/L	1.183	504.73 ppb	1.183	0.23%
QC value within limits for Mn 257.610 Recovery = 100.95%						
Mo 202.031†	8876.6	503.61 µg/L	2.025	503.61 ppb	2.025	0.40%
QC value within limits for Mo 202.031 Recovery = 100.72%						
Na 589.592 Radial†	1651.4	2532.6 µg/L	20.02	2532.6 ppb	20.02	0.79%
QC value within limits for Na 589.592 Radial Recovery = 101.31%						
Ni 231.604†	18088.3	500.07 µg/L	1.921	500.07 ppb	1.921	0.38%
QC value within limits for Ni 231.604 Recovery = 100.01%						
P 214.914†	3731.6	2469.5 µg/L	3.19	2469.5 ppb	3.19	0.13%
QC value within limits for P 214.914 Recovery = 98.78%						
Pb 220.353†	4098.9	507.05 µg/L	1.787	507.05 ppb	1.787	0.35%
QC value within limits for Pb 220.353 Recovery = 101.41%						
S 181.975 Axial†	1967.7	2415.4 µg/L	10.44	2415.4 ppb	10.44	0.43%
QC value within limits for S 181.975 Axial Recovery = 96.61%						
Sb 206.836†	1753.9	498.94 µg/L	5.098	498.94 ppb	5.098	1.02%
QC value within limits for Sb 206.836 Recovery = 99.79%						
Se 196.026†	5342.4	2527.4 µg/L	10.22	2527.4 ppb	10.22	0.40%
QC value within limits for Se 196.026 Recovery = 101.10%						
SiO2†	63358.7	10684 µg/L	15.50	10684 ppb	15.50	0.15%
QC value within limits for SiO2 Recovery = 99.89%						
Si 251.611†	90586.1	5000.9 µg/L	13.40	5000.9 ppb	13.40	0.27%
QC value within limits for Si 251.611 Recovery = 100.02%						
Sn 189.927†	4073.1	507.86 µg/L	1.849	507.86 ppb	1.849	0.36%
QC value within limits for Sn 189.927 Recovery = 101.57%						
Sr 421.552†	85945.0	505.29 µg/L	1.937	505.29 ppb	1.937	0.38%
QC value within limits for Sr 421.552 Recovery = 101.06%						
Ti 334.940†	118520.3	504.56 µg/L	1.082	504.56 ppb	1.082	0.21%
QC value within limits for Ti 334.940 Recovery = 100.91%						
Tl 190.801†	2401.6	515.19 µg/L	1.772	515.19 ppb	1.772	0.34%
QC value within limits for Tl 190.801 Recovery = 103.04%						
U 367.007†	1448.4	486.4 µg/L	19.75	486.4 ppb	19.75	4.06%
QC value within limits for U 367.007 Recovery = 97.28%						
V 292.402†	38385.2	507.40 µg/L	1.463	507.40 ppb	1.463	0.29%
QC value within limits for V 292.402 Recovery = 101.48%						
Zn 213.857†	67125.4	507.88 µg/L	1.093	507.88 ppb	1.093	0.22%
QC value within limits for Zn 213.857 Recovery = 101.58%						

All analyte(s) passed QC.

Sequence No.: 7 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 7/23/2018 06:06:45**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	22182.1	22182.1	100	%			06:07:36
1	Al 396.153Radial†	-104.5	-10.1	-3.2662	µg/L	-3.2662	ppb	06:07:36
1	Ca 317.933Radial†	281.8	-15.8	-3.3918	µg/L	-3.3918	ppb	06:07:36
1	Fe 238.204 Radial†	28.4	-6.8	-1.3258	µg/L	-1.3258	ppb	06:07:36
1	K 766.490 Radial†	529.2	105.1	95.497	µg/L	95.497	ppb	06:07:16
1	Mg 279.077 IEC†	62.7	6.4	10.407	µg/L	10.407	ppb	06:07:36
1	Na 589.592 Radial†	99.7	-28.3	-43.558	µg/L	-43.558	ppb	06:07:36
1	Sr 421.552†	196.3	-65.1	-0.3827	µg/L	-0.3827	ppb	06:07:16
1	Sc 361.383	362307.2	362307.2	98.936	%			06:08:32
1	Y 371.029	356044.2	356044.2	98.939	%			06:08:32
1	Ag 328.068†	-724.3	-48.4	-0.4940	µg/L	-0.4940	ppb	06:08:32
1	As 188.979†	-14.0	-1.4	-0.6044	µg/L	-0.6044	ppb	06:08:52
1	B 249.677†	225.5	54.7	1.8110	µg/L	1.8110	ppb	06:08:52
1	Ba 233.527†	-8.1	7.3	0.0618	µg/L	0.0618	ppb	06:08:52
1	Be 313.107†	-3527.8	8.1	0.0081	µg/L	0.0081	ppb	06:08:32
1	Cd 226.502†	-307.3	12.5	0.1300	µg/L	0.1300	ppb	06:08:52
1	Co 228.616†	-206.1	14.1	0.3267	µg/L	0.3267	ppb	06:08:52
1	Cr 267.716†	120.6	0.0	-0.0042	µg/L	-0.0042	ppb	06:08:52
1	Cu 324.752†	1934.8	35.5	0.2634	µg/L	0.2634	ppb	06:08:32
1	Mn 257.610†	574.9	124.2	0.1950	µg/L	0.1950	ppb	06:08:52
1	Mo 202.031†	45.2	12.8	0.7246	µg/L	0.7246	ppb	06:08:52
1	Ni 231.604†	-177.1	25.0	0.6904	µg/L	0.6904	ppb	06:08:52
1	P 214.914†	115.2	-15.3	-10.183	µg/L	-10.183	ppb	06:08:52
1	Pb 220.353†	-52.8	10.2	1.2550	µg/L	1.2550	ppb	06:08:52
1	S 181.975 Axial†	92.3	1.0	1.2215	µg/L	1.2215	ppb	06:08:52
1	Sb 206.836†	164.0	11.1	3.1967	µg/L	3.1967	ppb	06:08:52
1	Se 196.026†	-29.0	-5.5	-2.6012	µg/L	-2.6012	ppb	06:08:52
1	SiO2†	1069.5	15.8	2.6336	µg/L	2.6336	ppb	06:08:52
1	Si 251.611†	23.6	32.1	1.7618	µg/L	1.7618	ppb	06:08:52
1	Sn 189.927†	53.4	6.4	0.8018	µg/L	0.8018	ppb	06:08:52
1	Ti 334.940†	-669.7	44.6	0.1874	µg/L	0.1874	ppb	06:08:32
1	Tl 190.801†	-88.9	-11.5	-2.4676	µg/L	-2.4676	ppb	06:08:52
1	U 367.007†	889.4	15.5	5.451	µg/L	5.451	ppb	06:08:32
1	V 292.402†	-154.7	-24.5	-0.3104	µg/L	-0.3104	ppb	06:08:52
1	Zn 213.857†	834.2	-54.7	-0.4204	µg/L	-0.4204	ppb	06:08:52
2	Sc RADIAL	22149.3	22149.3	100	%			06:08:01
2	Al 396.153Radial†	-135.8	-41.4	-13.302	µg/L	-13.302	ppb	06:08:01
2	Ca 317.933Radial†	275.6	-21.6	-4.6323	µg/L	-4.6323	ppb	06:08:01
2	Fe 238.204 Radial†	39.4	4.3	0.8314	µg/L	0.8314	ppb	06:08:01
2	K 766.490 Radial†	415.0	-8.0	-7.2377	µg/L	-7.2377	ppb	06:07:41
2	Mg 279.077 IEC†	71.7	15.4	25.229	µg/L	25.229	ppb	06:08:01
2	Na 589.592 Radial†	118.6	-9.3	-14.311	µg/L	-14.311	ppb	06:08:01
2	Sr 421.552†	216.9	-44.3	-0.2602	µg/L	-0.2602	ppb	06:07:41
2	Sc 361.383	364623.4	364623.4	99.568	%			06:08:58
2	Y 371.029	358316.3	358316.3	99.570	%			06:08:58
2	Ag 328.068†	-680.6	0.1	-0.0146	µg/L	-0.0146	ppb	06:08:58
2	As 188.979†	-12.1	0.6	0.2754	µg/L	0.2754	ppb	06:09:18
2	B 249.677†	231.8	59.6	1.9829	µg/L	1.9829	ppb	06:09:18
2	Ba 233.527†	-7.3	8.2	0.0693	µg/L	0.0693	ppb	06:09:18
2	Be 313.107†	-3557.2	1.3	0.0081	µg/L	0.0081	ppb	06:08:58
2	Cd 226.502†	-300.8	21.0	0.2175	µg/L	0.2175	ppb	06:09:18
2	Co 228.616†	-211.1	10.4	0.2381	µg/L	0.2381	ppb	06:09:18
2	Cr 267.716†	101.0	-20.5	-0.4317	µg/L	-0.4317	ppb	06:09:18
2	Cu 324.752†	1989.8	78.3	0.5931	µg/L	0.5931	ppb	06:08:58
2	Mn 257.610†	526.4	71.8	0.1128	µg/L	0.1128	ppb	06:09:18
2	Mo 202.031†	28.3	-4.5	-0.2556	µg/L	-0.2556	ppb	06:09:18
2	Ni 231.604†	-212.0	-9.0	-0.2494	µg/L	-0.2494	ppb	06:09:18
2	P 214.914†	132.5	1.3	0.8833	µg/L	0.8833	ppb	06:09:18

2	Pb 220.353†	-73.7	-10.5	-1.3268 µg/L	-1.3268 ppb	06:09:18
2	S 181.975 Axial†	92.1	0.2	0.2587 µg/L	0.2587 ppb	06:09:18
2	Sb 206.836†	156.2	2.2	0.6467 µg/L	0.6467 ppb	06:09:18
2	Se 196.026†	-23.0	0.6	0.2954 µg/L	0.2954 ppb	06:09:18
2	SiO2†	1060.6	-0.1	0.0020 µg/L	0.0020 ppb	06:09:18
2	Si 251.611†	12.0	20.3	1.1266 µg/L	1.1266 ppb	06:09:18
2	Sn 189.927†	43.0	-4.3	-0.5348 µg/L	-0.5348 ppb	06:09:18
2	Ti 334.940†	-631.1	87.7	0.3602 µg/L	0.3602 ppb	06:08:58
2	Tl 190.801†	-85.4	-7.4	-1.5773 µg/L	-1.5773 ppb	06:09:18
2	U 367.007†	961.8	82.5	29.01 µg/L	29.01 ppb	06:08:58
2	V 292.402†	-110.3	21.0	0.2889 µg/L	0.2889 ppb	06:09:18
2	Zn 213.857†	825.6	-68.6	-0.5224 µg/L	-0.5224 ppb	06:09:18
3	Sc RADIAL	22135.6	22135.6	100 %		06:08:26
3	Al 396.153Radial†	-135.8	-41.5	-13.360 µg/L	-13.360 ppb	06:08:26
3	Ca 317.933Radial†	284.0	-13.0	-2.7872 µg/L	-2.7872 ppb	06:08:26
3	Fe 238.204 Radial†	36.9	1.8	0.3476 µg/L	0.3476 ppb	06:08:26
3	K 766.490 Radial†	398.8	-23.9	-21.696 µg/L	-21.696 ppb	06:08:06
3	Mg 279.077 IEC†	56.4	0.1	0.2384 µg/L	0.2384 ppb	06:08:26
3	Na 589.592 Radial†	114.2	-13.7	-21.055 µg/L	-21.055 ppb	06:08:26
3	Sr 421.552†	301.4	40.1	0.2361 µg/L	0.2361 ppb	06:08:06
3	Sc 361.383	362027.9	362027.9	98.859 %		06:09:23
3	Y 371.029	355402.2	355402.2	98.761 %		06:09:23
3	Ag 328.068†	-672.3	3.7	0.0221 µg/L	0.0221 ppb	06:09:23
3	As 188.979†	-7.8	4.9	2.1580 µg/L	2.1580 ppb	06:09:43
3	B 249.677†	208.7	37.9	1.2570 µg/L	1.2570 ppb	06:09:43
3	Ba 233.527†	-7.8	7.6	0.0642 µg/L	0.0642 ppb	06:09:43
3	Be 313.107†	-3374.5	160.5	0.1391 µg/L	0.1391 ppb	06:09:23
3	Cd 226.502†	-310.1	9.4	0.0974 µg/L	0.0974 ppb	06:09:43
3	Co 228.616†	-182.1	38.2	0.8812 µg/L	0.8812 ppb	06:09:43
3	Cr 267.716†	109.5	-11.2	-0.2424 µg/L	-0.2424 ppb	06:09:43
3	Cu 324.752†	1909.7	11.7	0.0998 µg/L	0.0998 ppb	06:09:23
3	Mn 257.610†	506.6	55.6	0.0873 µg/L	0.0873 ppb	06:09:43
3	Mo 202.031†	43.1	10.6	0.6026 µg/L	0.6026 ppb	06:09:43
3	Ni 231.604†	-203.2	-1.6	-0.0456 µg/L	-0.0456 ppb	06:09:43
3	P 214.914†	105.2	-25.2	-16.810 µg/L	-16.810 ppb	06:09:43
3	Pb 220.353†	-69.4	-6.7	-0.8421 µg/L	-0.8421 ppb	06:09:43
3	S 181.975 Axial†	86.6	-4.8	-5.8611 µg/L	-5.8611 ppb	06:09:43
3	Sb 206.836†	150.4	-2.4	-0.6879 µg/L	-0.6879 ppb	06:09:43
3	Se 196.026†	-16.6	6.9	3.2813 µg/L	3.2813 ppb	06:09:43
3	SiO2†	1062.2	9.2	1.5246 µg/L	1.5246 ppb	06:09:43
3	Si 251.611†	14.7	23.1	1.2665 µg/L	1.2665 ppb	06:09:43
3	Sn 189.927†	43.0	-4.0	-0.4965 µg/L	-0.4965 ppb	06:09:43
3	Ti 334.940†	-672.6	41.2	0.1642 µg/L	0.1642 ppb	06:09:23
3	Tl 190.801†	-89.6	-12.3	-2.6300 µg/L	-2.6300 ppb	06:09:43
3	U 367.007†	940.3	67.7	23.80 µg/L	23.80 ppb	06:09:23
3	V 292.402†	-177.7	-47.9	-0.6063 µg/L	-0.6063 ppb	06:09:43
3	Zn 213.857†	811.3	-77.2	-0.5878 µg/L	-0.5878 ppb	06:09:43

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	362986.2	99.121	%	0.3891				0.39%
Sc RADIAL	22155.7	100	%	0.11				0.11%
Y 371.029	356587.6	99.090	%	0.4255				0.43%
Ag 328.068†	-14.9	-0.1622	µg/L	0.28797	-0.1622	ppb	0.28797	177.59%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-31.0	-9.9761	µg/L	5.81102	-9.9761	ppb	5.81102	58.25%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.4	0.6097	µg/L	1.41123	0.6097	ppb	1.41123	231.48%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	50.7	1.6837	µg/L	0.37935	1.6837	ppb	0.37935	22.53%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	7.7	0.0651	µg/L	0.00386	0.0651	ppb	0.00386	5.93%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	56.6	0.0518	µg/L	0.07567	0.0518	ppb	0.07567	146.19%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-16.8	-3.6038	µg/L	0.94066	-3.6038	ppb	0.94066	26.10%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	14.3	0.1483	µg/L	0.06208	0.1483	ppb	0.06208	41.86%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	20.9	0.4820 µg/L	0.34854	0.4820 ppb	0.34854	72.31%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-10.6	-0.2261 µg/L	0.21421	-0.2261 ppb	0.21421	94.76%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	41.8	0.3188 µg/L	0.25123	0.3188 ppb	0.25123	78.81%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-0.3	-0.0490 µg/L	1.13191	-0.0490 ppb	1.13191	>999.9%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	24.4	22.188 µg/L	63.8980	22.188 ppb	63.8980	287.99%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	7.3	11.958 µg/L	12.5672	11.958 ppb	12.5672	105.10%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	83.9	0.1317 µg/L	0.05627	0.1317 ppb	0.05627	42.73%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	6.3	0.3572 µg/L	0.53415	0.3572 ppb	0.53415	149.54%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-17.1	-26.308 µg/L	15.3148	-26.308 ppb	15.3148	58.21%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	4.8	0.1318 µg/L	0.49438	0.1318 ppb	0.49438	375.13%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-13.1	-8.7032 µg/L	8.93886	-8.7032 ppb	8.93886	102.71%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-2.3	-0.3046 µg/L	1.37228	-0.3046 ppb	1.37228	450.47%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-1.2	-1.4603 µg/L	3.84152	-1.4603 ppb	3.84152	263.07%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	3.6	1.0518 µg/L	1.97372	1.0518 ppb	1.97372	187.65%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	0.7	0.3252 µg/L	2.94132	0.3252 ppb	2.94132	904.52%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	8.3	1.3867 µg/L	1.32120	1.3867 ppb	1.32120	95.28%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	25.2	1.3850 µg/L	0.33372	1.3850 ppb	0.33372	24.10%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-0.6	-0.0765 µg/L	0.76089	-0.0765 ppb	0.76089	994.75%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-23.1	-0.1356 µg/L	0.32768	-0.1356 ppb	0.32768	241.65%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	57.8	0.2373 µg/L	0.10709	0.2373 ppb	0.10709	45.13%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-10.4	-2.2249 µg/L	0.56673	-2.2249 ppb	0.56673	25.47%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 367.007†	55.2	19.42 µg/L	12.374	19.42 ppb	12.374	63.72%	
QC value within limits for U 367.007 Recovery = Not calculated							
V 292.402†	-17.1	-0.2092 µg/L	0.45610	-0.2092 ppb	0.45610	217.97%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-66.8	-0.5102 µg/L	0.08436	-0.5102 ppb	0.08436	16.54%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 101**
Sample ID: PQL **Date Collected: 7/23/2018 06:09:52**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	22177.6	22177.6	100	%			06:10:43
1	Al 396.153Radial†	520.4	612.1	196.39	µg/L	196.39	ppb	06:10:43
1	Ca 317.933Radial†	1161.2	859.7	184.12	µg/L	184.12	ppb	06:10:43
1	Fe 238.204 Radial†	563.8	526.3	102.44	µg/L	102.44	ppb	06:10:43
1	K 766.490 Radial†	629.8	205.4	186.68	µg/L	186.68	ppb	06:10:23
1	Mg 279.077 IEC†	264.5	207.3	338.73	µg/L	338.73	ppb	06:10:43
1	Na 589.592 Radial†	317.2	188.2	289.28	µg/L	289.28	ppb	06:10:43
1	Sr 421.552†	1114.5	849.1	4.9895	µg/L	4.9895	ppb	06:10:23
1	Sc 361.383	363111.2	363111.2	99.155	%			06:11:39
1	Y 371.029	356248.5	356248.5	98.996	%			06:11:39
1	Ag 328.068†	-120.5	562.2	5.6735	µg/L	5.6735	ppb	06:11:39
1	As 188.979†	48.4	61.6	27.164	µg/L	27.164	ppb	06:12:00
1	B 249.677†	1596.9	1437.3	48.153	µg/L	48.153	ppb	06:12:00
1	Ba 233.527†	554.3	574.5	4.8331	µg/L	4.8331	ppb	06:12:00
1	Be 313.107†	2239.9	5832.9	4.8680	µg/L	4.8680	ppb	06:11:39
1	Cd 226.502†	159.1	483.5	5.0074	µg/L	5.0074	ppb	06:12:00
1	Co 228.616†	15.4	237.9	5.4898	µg/L	5.4898	ppb	06:12:00
1	Cr 267.716†	363.1	244.3	4.8111	µg/L	4.8111	ppb	06:12:00
1	Cu 324.752†	3243.4	1350.9	9.9628	µg/L	9.9628	ppb	06:11:39
1	Mn 257.610†	6675.9	6275.9	9.8624	µg/L	9.8624	ppb	06:11:39
1	Mo 202.031†	207.6	176.4	10.009	µg/L	10.009	ppb	06:12:00
1	Ni 231.604†	-35.9	167.7	4.6377	µg/L	4.6377	ppb	06:12:00
1	P 214.914†	345.4	216.6	143.89	µg/L	143.89	ppb	06:12:00
1	Pb 220.353†	24.4	88.1	10.856	µg/L	10.856	ppb	06:12:00
1	S 181.975 Axial†	166.8	75.9	93.249	µg/L	93.249	ppb	06:12:00
1	Sb 206.836†	185.5	32.5	9.3350	µg/L	9.3350	ppb	06:12:00
1	Se 196.026†	42.7	66.8	31.637	µg/L	31.637	ppb	06:12:00
1	SiO2†	2229.2	1183.0	199.43	µg/L	199.43	ppb	06:12:00
1	Si 251.611†	1726.5	1749.4	96.574	µg/L	96.574	ppb	06:12:00
1	Sn 189.927†	120.2	73.7	9.1753	µg/L	9.1753	ppb	06:12:00
1	Ti 334.940†	500.4	1226.2	5.1941	µg/L	5.1941	ppb	06:11:39
1	Tl 190.801†	10.9	89.3	19.140	µg/L	19.140	ppb	06:12:00
1	U 367.007†	1085.9	211.7	73.97	µg/L	73.97	ppb	06:11:39
1	V 292.402†	208.8	342.4	4.6284	µg/L	4.6284	ppb	06:12:00
1	Zn 213.857†	1870.2	988.3	7.4829	µg/L	7.4829	ppb	06:12:00
2	Sc RADIAL	22237.2	22237.2	101	%			06:11:08
2	Al 396.153Radial†	580.0	669.8	214.94	µg/L	214.94	ppb	06:11:08
2	Ca 317.933Radial†	1164.0	859.4	184.05	µg/L	184.05	ppb	06:11:08
2	Fe 238.204 Radial†	578.6	539.5	105.00	µg/L	105.00	ppb	06:11:08
2	K 766.490 Radial†	578.1	152.4	138.50	µg/L	138.50	ppb	06:10:48
2	Mg 279.077 IEC†	256.2	198.4	324.16	µg/L	324.16	ppb	06:11:08
2	Na 589.592 Radial†	314.7	184.9	284.15	µg/L	284.15	ppb	06:11:08
2	Sr 421.552†	1183.8	914.9	5.3768	µg/L	5.3768	ppb	06:10:48
2	Sc 361.383	363345.1	363345.1	99.219	%			06:12:05
2	Y 371.029	356740.6	356740.6	99.133	%			06:12:05
2	Ag 328.068†	-165.4	517.0	5.2212	µg/L	5.2212	ppb	06:12:05
2	As 188.979†	58.1	71.4	31.445	µg/L	31.445	ppb	06:12:25
2	B 249.677†	1603.1	1442.6	48.337	µg/L	48.337	ppb	06:12:25
2	Ba 233.527†	566.5	586.4	4.9335	µg/L	4.9335	ppb	06:12:25
2	Be 313.107†	2244.6	5836.2	4.8685	µg/L	4.8685	ppb	06:12:05
2	Cd 226.502†	166.8	491.2	5.0864	µg/L	5.0864	ppb	06:12:25
2	Co 228.616†	12.4	235.0	5.4226	µg/L	5.4226	ppb	06:12:25
2	Cr 267.716†	380.1	261.1	5.1536	µg/L	5.1536	ppb	06:12:25
2	Cu 324.752†	3293.1	1398.9	10.309	µg/L	10.309	ppb	06:12:05
2	Mn 257.610†	6724.0	6320.1	9.9321	µg/L	9.9321	ppb	06:12:05
2	Mo 202.031†	217.4	186.2	10.562	µg/L	10.562	ppb	06:12:25
2	Ni 231.604†	-59.6	143.9	3.9791	µg/L	3.9791	ppb	06:12:25
2	P 214.914†	319.6	190.4	126.46	µg/L	126.46	ppb	06:12:25

2	Pb 220.353†	31.4	95.2	11.740 µg/L	11.740 ppb	06:12:25
2	S 181.975 Axial†	162.7	71.6	87.951 µg/L	87.951 ppb	06:12:25
2	Sb 206.836†	178.5	25.3	7.2741 µg/L	7.2741 ppb	06:12:25
2	Se 196.026†	34.6	58.7	27.777 µg/L	27.777 ppb	06:12:25
2	SiO2†	2200.4	1152.4	194.24 µg/L	194.24 ppb	06:12:25
2	Si 251.611†	1726.7	1748.5	96.514 µg/L	96.514 ppb	06:12:25
2	Sn 189.927†	126.3	79.8	9.9282 µg/L	9.9282 ppb	06:12:25
2	Ti 334.940†	433.6	1158.5	4.9101 µg/L	4.9101 ppb	06:12:05
2	Tl 190.801†	6.7	85.1	18.245 µg/L	18.245 ppb	06:12:25
2	U 367.007†	1059.8	184.7	64.44 µg/L	64.44 ppb	06:12:05
2	V 292.402†	202.0	335.5	4.5382 µg/L	4.5382 ppb	06:12:25
2	Zn 213.857†	1883.9	1000.9	7.5816 µg/L	7.5816 ppb	06:12:25
3	Sc RADIAL	22146.5	22146.5	100 %		06:11:33
3	Al 396.153Radial†	521.9	614.3	197.11 µg/L	197.11 ppb	06:11:33
3	Ca 317.933Radial†	1158.8	859.0	183.95 µg/L	183.95 ppb	06:11:33
3	Fe 238.204 Radial†	563.2	526.5	102.47 µg/L	102.47 ppb	06:11:33
3	K 766.490 Radial†	651.8	228.1	207.34 µg/L	207.34 ppb	06:11:13
3	Mg 279.077 IEC†	253.5	196.6	321.37 µg/L	321.37 ppb	06:11:33
3	Na 589.592 Radial†	310.0	181.5	278.91 µg/L	278.91 ppb	06:11:33
3	Sr 421.552†	1087.6	823.8	4.8411 µg/L	4.8411 ppb	06:11:13
3	Sc 361.383	365175.7	365175.7	99.719 %		06:12:30
3	Y 371.029	358059.1	358059.1	99.499 %		06:12:30
3	Ag 328.068†	-148.9	534.4	5.3990 µg/L	5.3990 ppb	06:12:30
3	As 188.979†	50.7	63.7	28.046 µg/L	28.046 ppb	06:12:50
3	B 249.677†	1600.8	1432.1	47.981 µg/L	47.981 ppb	06:12:50
3	Ba 233.527†	578.1	595.2	5.0073 µg/L	5.0073 ppb	06:12:50
3	Be 313.107†	2311.5	5891.9	4.9142 µg/L	4.9142 ppb	06:12:30
3	Cd 226.502†	159.3	482.8	5.0003 µg/L	5.0003 ppb	06:12:50
3	Co 228.616†	9.8	232.2	5.3574 µg/L	5.3574 ppb	06:12:50
3	Cr 267.716†	372.6	251.7	4.9685 µg/L	4.9685 ppb	06:12:50
3	Cu 324.752†	3277.2	1366.3	10.069 µg/L	10.069 ppb	06:12:30
3	Mn 257.610†	6704.8	6266.8	9.8482 µg/L	9.8482 ppb	06:12:30
3	Mo 202.031†	205.1	172.7	9.8004 µg/L	9.8004 ppb	06:12:50
3	Ni 231.604†	4.3	208.3	5.7589 µg/L	5.7589 ppb	06:12:50
3	P 214.914†	336.5	205.8	136.68 µg/L	136.68 ppb	06:12:50
3	Pb 220.353†	13.2	76.7	9.4569 µg/L	9.4569 ppb	06:12:50
3	S 181.975 Axial†	164.8	72.9	89.525 µg/L	89.525 ppb	06:12:50
3	Sb 206.836†	183.7	29.6	8.5091 µg/L	8.5091 ppb	06:12:50
3	Se 196.026†	41.2	65.1	30.805 µg/L	30.805 ppb	06:12:50
3	SiO2†	2203.7	1144.7	192.97 µg/L	192.97 ppb	06:12:50
3	Si 251.611†	1721.5	1734.5	95.753 µg/L	95.753 ppb	06:12:50
3	Sn 189.927†	123.6	76.4	9.5090 µg/L	9.5090 ppb	06:12:50
3	Ti 334.940†	506.6	1229.6	5.2139 µg/L	5.2139 ppb	06:12:30
3	Tl 190.801†	6.4	84.7	18.166 µg/L	18.166 ppb	06:12:50
3	U 367.007†	1059.2	178.7	62.36 µg/L	62.36 ppb	06:12:30
3	V 292.402†	233.7	366.2	4.9305 µg/L	4.9305 ppb	06:12:50
3	Zn 213.857†	1862.6	970.0	7.3376 µg/L	7.3376 ppb	06:12:50

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	363877.4	99.364	%	0.3087				0.31%
Sc RADIAL	22187.1	100	%	0.21				0.21%
Y 371.029	357016.1	99.209	%	0.2601				0.26%
Ag 328.068†	537.8	5.4312	µg/L	0.22786	5.4312	ppb	0.22786	4.20%
QC value within limits for Ag 328.068 Recovery = 108.62%								
Al 396.153Radial†	632.1	202.81	µg/L	10.508	202.81	ppb	10.508	5.18%
QC value within limits for Al 396.153Radial Recovery = 101.41%								
As 188.979†	65.6	28.885	µg/L	2.2608	28.885	ppb	2.2608	7.83%
QC value within limits for As 188.979 Recovery = 96.28%								
B 249.677†	1437.3	48.157	µg/L	0.1784	48.157	ppb	0.1784	0.37%
QC value within limits for B 249.677 Recovery = 96.31%								
Ba 233.527†	585.4	4.9246	µg/L	0.08746	4.9246	ppb	0.08746	1.78%
QC value within limits for Ba 233.527 Recovery = 98.49%								
Be 313.107†	5853.7	4.8836	µg/L	0.02654	4.8836	ppb	0.02654	0.54%
QC value within limits for Be 313.107 Recovery = 97.67%								
Ca 317.933Radial†	859.4	184.04	µg/L	0.081	184.04	ppb	0.081	0.04%
QC value within limits for Ca 317.933Radial Recovery = 92.02%								
Cd 226.502†	485.9	5.0314	µg/L	0.04778	5.0314	ppb	0.04778	0.95%
QC value within limits for Cd 226.502 Recovery = 100.63%								

Co 228.616†	235.0	5.4232 µg/L	0.06620	5.4232 ppb	0.06620	1.22%
QC value within limits for Co 228.616 Recovery = 108.46%						
Cr 267.716†	252.4	4.9777 µg/L	0.17142	4.9777 ppb	0.17142	3.44%
QC value within limits for Cr 267.716 Recovery = 99.55%						
Cu 324.752†	1372.0	10.114 µg/L	0.1774	10.114 ppb	0.1774	1.75%
QC value within limits for Cu 324.752 Recovery = 101.14%						
Fe 238.204 Radial†	530.8	103.30 µg/L	1.470	103.30 ppb	1.470	1.42%
QC value within limits for Fe 238.204 Radial Recovery = 103.30%						
K 766.490 Radial†	195.3	177.51 µg/L	35.323	177.51 ppb	35.323	19.90%
QC value within limits for K 766.490 Radial Recovery = 118.34%						
Mg 279.077 IEC†	200.8	328.08 µg/L	9.323	328.08 ppb	9.323	2.84%
QC value within limits for Mg 279.077 IEC Recovery = 109.36%						
Mn 257.610†	6287.6	9.8809 µg/L	0.04487	9.8809 ppb	0.04487	0.45%
QC value within limits for Mn 257.610 Recovery = 98.81%						
Mo 202.031†	178.4	10.124 µg/L	0.3937	10.124 ppb	0.3937	3.89%
QC value within limits for Mo 202.031 Recovery = 101.24%						
Na 589.592 Radial†	184.8	284.11 µg/L	5.186	284.11 ppb	5.186	1.83%
QC value within limits for Na 589.592 Radial Recovery = 94.70%						
Ni 231.604†	173.3	4.7919 µg/L	0.89987	4.7919 ppb	0.89987	18.78%
QC value within limits for Ni 231.604 Recovery = 95.84%						
P 214.914†	204.3	135.67 µg/L	8.756	135.67 ppb	8.756	6.45%
QC value within limits for P 214.914 Recovery = 90.45%						
Pb 220.353†	86.7	10.684 µg/L	1.1512	10.684 ppb	1.1512	10.77%
QC value within limits for Pb 220.353 Recovery = 106.84%						
S 181.975 Axial†	73.5	90.241 µg/L	2.7205	90.241 ppb	2.7205	3.01%
QC value within limits for S 181.975 Axial Recovery = 90.24%						
Sb 206.836†	29.1	8.3727 µg/L	1.03719	8.3727 ppb	1.03719	12.39%
QC value within limits for Sb 206.836 Recovery = 83.73%						
Se 196.026†	63.5	30.073 µg/L	2.0313	30.073 ppb	2.0313	6.75%
QC value within limits for Se 196.026 Recovery = 100.24%						
SiO2†	1160.0	195.55 µg/L	3.422	195.55 ppb	3.422	1.75%
QC value within limits for SiO2 Recovery = 91.81%						
Si 251.611†	1744.2	96.280 µg/L	0.4577	96.280 ppb	0.4577	0.48%
QC value within limits for Si 251.611 Recovery = 96.28%						
Sn 189.927†	76.6	9.5375 µg/L	0.37724	9.5375 ppb	0.37724	3.96%
QC value within limits for Sn 189.927 Recovery = 95.38%						
Sr 421.552†	862.6	5.0691 µg/L	0.27661	5.0691 ppb	0.27661	5.46%
QC value within limits for Sr 421.552 Recovery = 101.38%						
Ti 334.940†	1204.8	5.1060 µg/L	0.16997	5.1060 ppb	0.16997	3.33%
QC value within limits for Ti 334.940 Recovery = 102.12%						
Tl 190.801†	86.4	18.517 µg/L	0.5407	18.517 ppb	0.5407	2.92%
QC value within limits for Tl 190.801 Recovery = 92.59%						
U 367.007†	191.7	66.93 µg/L	6.191	66.93 ppb	6.191	9.25%
QC value greater than the upper limit for U 367.007 Recovery = 133.85%						
V 292.402†	348.0	4.6990 µg/L	0.20548	4.6990 ppb	0.20548	4.37%
QC value within limits for V 292.402 Recovery = 93.98%						
Zn 213.857†	986.4	7.4674 µg/L	0.12271	7.4674 ppb	0.12271	1.64%
QC value within limits for Zn 213.857 Recovery = 74.67%						

QC Failed. Continue with analysis.

Sequence No.: 9 **Autosampler Location: 103**
Sample ID: ICSA **Date Collected: 7/23/2018 06:12:59**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21637.8	21637.8	98.0	%			06:13:36
1	Al 396.153Radial†	1478277.7	1508591.2	485180	µg/L	485180	ppb	06:13:31
1	Ca 317.933Radial†	2205012.9	2249792.2	481810	µg/L	481810	ppb	06:13:31
1	Fe 238.204 Radial†	959600.5	979182.0	190580	µg/L	190580	ppb	06:13:31
1	K 766.490 Radial†	524.6	113.6	149.16	µg/L	149.16	ppb	06:13:36
1	Mg 279.077 IEC†	288570.1	294413.1	481140	µg/L	481140	ppb	06:13:36
1	Na 589.592 Radial†	244.4	121.8	-62.038	µg/L	-62.038	ppb	06:13:36
1	Sr 421.552†	1664.4	1437.9	-0.0449	µg/L	-0.0449	ppb	06:13:36
1	Sc 361.383	325909.0	325909.0	88.996	%			06:14:03
1	Y 371.029	313366.5	313366.5	87.080	%			06:14:03
1	Ag 328.068†	-2905.3	-2580.8	1.6248	µg/L	1.6248	ppb	06:14:03
1	As 188.979†	-38.7	-30.7	-3.4891	µg/L	-3.4891	ppb	06:14:23
1	B 249.677†	-19618.4	-22217.3	4.0476	µg/L	4.0476	ppb	06:14:03
1	Ba 233.527†	648.2	743.8	1.5687	µg/L	1.5687	ppb	06:14:23
1	Be 313.107†	-9193.5	-6756.3	0.4000	µg/L	0.4000	ppb	06:14:23
1	Cd 226.502†	1483.2	1989.7	-0.1967	µg/L	-0.1967	ppb	06:14:23
1	Co 228.616†	-160.4	42.2	0.2179	µg/L	0.2179	ppb	06:14:23
1	Cr 267.716†	-383.1	-552.4	0.5431	µg/L	0.5431	ppb	06:14:23
1	Cu 324.752†	343.9	-1533.6	0.7054	µg/L	0.7054	ppb	06:14:23
1	Mn 257.610†	-5744.6	-6911.8	0.3636	µg/L	0.3636	ppb	06:14:03
1	Mo 202.031†	-31.3	-68.1	-0.2795	µg/L	-0.2795	ppb	06:14:23
1	Ni 231.604†	-297.2	-130.0	0.1348	µg/L	0.1348	ppb	06:14:23
1	P 214.914†	199.5	92.5	-7.5968	µg/L	-7.5968	ppb	06:14:23
1	Pb 220.353†	-387.1	-371.4	5.3273	µg/L	5.3273	ppb	06:14:23
1	S 181.975 Axial†	169.8	98.4	-6.3167	µg/L	-6.3167	ppb	06:14:23
1	Sb 206.836†	229.2	102.9	3.4128	µg/L	3.4128	ppb	06:14:23
1	Se 196.026†	-192.5	-192.6	-6.2577	µg/L	-6.2577	ppb	06:14:23
1	SiO2†	1316.0	413.4	26.113	µg/L	26.113	ppb	06:14:23
1	Si 251.611†	384.1	439.8	10.267	µg/L	10.267	ppb	06:14:23
1	Sn 189.927†	57.3	16.9	-2.4555	µg/L	-2.4555	ppb	06:14:23
1	Ti 334.940†	-5049.8	-4952.7	0.5517	µg/L	0.5517	ppb	06:14:23
1	Tl 190.801†	-134.7	-73.0	1.6847	µg/L	1.6847	ppb	06:14:23
1	U 367.007†	3253.1	2771.8	-27.77	µg/L	-27.77	ppb	06:14:03
1	V 292.402†	-2766.5	-2976.7	0.5542	µg/L	0.5542	ppb	06:14:23
1	Zn 213.857†	4575.1	4242.9	6.8726	µg/L	6.8726	ppb	06:14:23
2	Sc RADIAL	21577.0	21577.0	97.7	%			06:13:46
2	Al 396.153Radial†	1499941.8	1535011.0	493680	µg/L	493680	ppb	06:13:41
2	Ca 317.933Radial†	2240215.3	2292155.7	490880	µg/L	490880	ppb	06:13:41
2	Fe 238.204 Radial†	973760.2	996431.0	193940	µg/L	193940	ppb	06:13:41
2	K 766.490 Radial†	437.4	25.9	70.320	µg/L	70.320	ppb	06:13:46
2	Mg 279.077 IEC†	289906.2	296610.1	484730	µg/L	484730	ppb	06:13:46
2	Na 589.592 Radial†	250.0	128.3	-56.504	µg/L	-56.504	ppb	06:13:46
2	Sr 421.552†	1699.3	1478.4	0.0331	µg/L	0.0331	ppb	06:13:46
2	Sc 361.383	326002.9	326002.9	89.022	%			06:14:29
2	Y 371.029	313605.9	313605.9	87.146	%			06:14:29
2	Ag 328.068†	-3061.2	-2755.1	0.3548	µg/L	0.3548	ppb	06:14:29
2	As 188.979†	-36.1	-27.8	-2.0392	µg/L	-2.0392	ppb	06:14:49
2	B 249.677†	-19809.5	-22425.6	10.203	µg/L	10.203	ppb	06:14:29
2	Ba 233.527†	679.9	779.3	1.7846	µg/L	1.7846	ppb	06:14:49
2	Be 313.107†	-9283.1	-6854.0	0.4300	µg/L	0.4300	ppb	06:14:49
2	Cd 226.502†	1530.6	2042.4	-0.0174	µg/L	-0.0174	ppb	06:14:49
2	Co 228.616†	-166.6	35.3	0.0462	µg/L	0.0462	ppb	06:14:49
2	Cr 267.716†	-339.6	-503.4	1.6369	µg/L	1.6369	ppb	06:14:49
2	Cu 324.752†	247.8	-1641.8	0.1163	µg/L	0.1163	ppb	06:14:49
2	Mn 257.610†	-5855.3	-7034.2	0.3798	µg/L	0.3798	ppb	06:14:29
2	Mo 202.031†	-14.1	-48.8	0.8777	µg/L	0.8777	ppb	06:14:49
2	Ni 231.604†	-300.7	-133.9	0.0922	µg/L	0.0922	ppb	06:14:49
2	P 214.914†	202.5	95.8	-6.6527	µg/L	-6.6527	ppb	06:14:49

2	Pb 220.353†	-449.4	-441.2	-2.3832 µg/L	-2.3832 ppb	06:14:49
2	S 181.975 Axial†	153.9	80.6	-30.462 µg/L	-30.462 ppb	06:14:49
2	Sb 206.836†	207.9	78.9	-3.9473 µg/L	-3.9473 ppb	06:14:49
2	Se 196.026†	-192.7	-192.7	-4.8259 µg/L	-4.8259 ppb	06:14:49
2	SiO2†	1291.1	385.1	20.501 µg/L	20.501 ppb	06:14:49
2	Si 251.611†	391.8	448.3	10.471 µg/L	10.471 ppb	06:14:49
2	Sn 189.927†	44.4	2.4	-4.3136 µg/L	-4.3136 ppb	06:14:49
2	Ti 334.940†	-5086.4	-4992.1	0.7951 µg/L	0.7951 ppb	06:14:49
2	Tl 190.801†	-119.6	-56.0	5.6199 µg/L	5.6199 ppb	06:14:49
2	U 367.007†	3276.6	2797.3	-36.81 µg/L	-36.81 ppb	06:14:29
2	V 292.402†	-2783.1	-2994.4	1.0243 µg/L	1.0243 ppb	06:14:49
2	Zn 213.857†	4617.4	4288.9	6.8415 µg/L	6.8415 ppb	06:14:49
3	Sc RADIAL	21431.5	21431.5	97.1 %		06:13:57
3	Al 396.153Radial†	1490766.3	1535981.2	493990 µg/L	493990 ppb	06:13:52
3	Ca 317.933Radial†	2222220.2	2289183.6	490240 µg/L	490240 ppb	06:13:52
3	Fe 238.204 Radial†	966498.0	995715.9	193800 µg/L	193800 ppb	06:13:52
3	K 766.490 Radial†	404.4	-5.0	42.175 µg/L	42.175 ppb	06:13:57
3	Mg 279.077 IEC†	290107.3	298831.9	488360 µg/L	488360 ppb	06:13:57
3	Na 589.592 Radial†	270.1	150.7	-21.802 µg/L	-21.802 ppb	06:13:57
3	Sr 421.552†	1689.7	1480.3	0.0556 µg/L	0.0556 ppb	06:13:57
3	Sc 361.383	324264.5	324264.5	88.547 %		06:14:54
3	Y 371.029	311988.9	311988.9	86.697 %		06:14:54
3	Ag 328.068†	-2945.3	-2642.5	1.4618 µg/L	1.4618 ppb	06:14:54
3	As 188.979†	-47.1	-40.4	-7.6236 µg/L	-7.6236 ppb	06:15:14
3	B 249.677†	-19637.6	-22350.7	12.153 µg/L	12.153 ppb	06:14:54
3	Ba 233.527†	668.9	770.9	1.7172 µg/L	1.7172 ppb	06:15:14
3	Be 313.107†	-9222.1	-6841.0	0.4382 µg/L	0.4382 ppb	06:15:14
3	Cd 226.502†	1501.3	2018.6	-0.2497 µg/L	-0.2497 ppb	06:15:14
3	Co 228.616†	-189.7	8.1	-0.5827 µg/L	-0.5827 ppb	06:15:14
3	Cr 267.716†	-360.7	-529.3	1.1709 µg/L	1.1709 ppb	06:15:14
3	Cu 324.752†	341.7	-1534.2	0.9122 µg/L	0.9122 ppb	06:15:14
3	Mn 257.610†	-5780.2	-6984.7	0.4406 µg/L	0.4406 ppb	06:14:54
3	Mo 202.031†	-57.3	-97.6	-1.8937 µg/L	-1.8937 ppb	06:15:14
3	Ni 231.604†	-316.0	-153.0	-0.4378 µg/L	-0.4378 ppb	06:15:14
3	P 214.914†	197.8	91.7	-9.1580 µg/L	-9.1580 ppb	06:15:14
3	Pb 220.353†	-445.7	-439.8	-2.2050 µg/L	-2.2050 ppb	06:15:14
3	S 181.975 Axial†	164.5	93.5	-14.668 µg/L	-14.668 ppb	06:15:14
3	Sb 206.836†	222.4	96.6	1.1121 µg/L	1.1121 ppb	06:15:14
3	Se 196.026†	-191.1	-192.1	-4.5848 µg/L	-4.5848 ppb	06:15:14
3	SiO2†	1309.0	413.0	25.386 µg/L	25.386 ppb	06:15:14
3	Si 251.611†	392.2	451.1	10.682 µg/L	10.682 ppb	06:15:14
3	Sn 189.927†	44.2	2.4	-4.3267 µg/L	-4.3267 ppb	06:15:14
3	Ti 334.940†	-5136.5	-5079.4	0.3852 µg/L	0.3852 ppb	06:15:14
3	Tl 190.801†	-126.0	-63.9	3.9260 µg/L	3.9260 ppb	06:15:14
3	U 367.007†	3310.7	2855.4	-15.46 µg/L	-15.46 ppb	06:14:54
3	V 292.402†	-2762.1	-2987.5	1.0730 µg/L	1.0730 ppb	06:15:14
3	Zn 213.857†	4642.3	4344.9	7.2352 µg/L	7.2352 ppb	06:15:14

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	325392.1	88.855	%	0.2670				0.30%
Sc RADIAL	21548.8	97.6	%	0.48				0.49%
Y 371.029	312987.1	86.974	%	0.2425				0.28%
Ag 328.068†	-2659.5	1.1472	µg/L	0.69102	1.1472	ppb	0.69102	60.24%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1526527.8	490950	µg/L	4998.23	490950	ppb	4998.23	1.02%
QC value within limits for Al 396.153Radial Recovery = 98.19%								
As 188.979†	-33.0	-4.3840	µg/L	2.89777	-4.3840	ppb	2.89777	66.10%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	-22331.2	8.8010	µg/L	4.23048	8.8010	ppb	4.23048	48.07%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	764.7	1.6902	µg/L	0.11050	1.6902	ppb	0.11050	6.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-6817.1	0.4228	µg/L	0.02008	0.4228	ppb	0.02008	4.75%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	2277043.8	487640	µg/L	5064.21	487640	ppb	5064.21	1.04%
QC value within limits for Ca 317.933Radial Recovery = 97.53%								
Cd 226.502†	2016.9	-0.1546	µg/L	0.12176	-0.1546	ppb	0.12176	78.75%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	28.6	-0.1062 µg/L	0.42152	-0.1062 ppb	0.42152	396.83%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-528.4	1.1169 µg/L	0.54888	1.1169 ppb	0.54888	49.14%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-1569.9	0.5780 µg/L	0.41296	0.5780 ppb	0.41296	71.45%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	990443.0	192770 µg/L	1899.38	192770 ppb	1899.38	0.99%
QC value within limits for Fe 238.204 Radial Recovery = 96.39%							
K 766.490 Radial†	44.8	87.218 µg/L	55.4569	87.218 ppb	55.4569	63.58%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	296618.4	484740 µg/L	3610.73	484740 ppb	3610.73	0.74%
QC value within limits for Mg 279.077 IEC Recovery = 96.95%							
Mn 257.610†	-6976.9	0.3947 µg/L	0.04059	0.3947 ppb	0.04059	10.28%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-71.5	-0.4318 µg/L	1.39200	-0.4318 ppb	1.39200	322.35%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	133.6	-46.782 µg/L	21.8091	-46.782 ppb	21.8091	46.62%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-138.9	-0.0703 µg/L	0.31901	-0.0703 ppb	0.31901	454.00%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	93.3	-7.8025 µg/L	1.26527	-7.8025 ppb	1.26527	16.22%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-417.5	0.2464 µg/L	4.40112	0.2464 ppb	4.40112	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	90.8	-17.149 µg/L	12.2623	-17.149 ppb	12.2623	71.51%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	92.8	0.1925 µg/L	3.76525	0.1925 ppb	3.76525	>999.9%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	-192.4	-5.2228 µg/L	0.90431	-5.2228 ppb	0.90431	17.31%
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	403.9	24.000 µg/L	3.0517	24.000 ppb	3.0517	12.72%
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	446.4	10.473 µg/L	0.2073	10.473 ppb	0.2073	1.98%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	7.2	-3.6986 µg/L	1.07660	-3.6986 ppb	1.07660	29.11%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	1465.5	0.0146 µg/L	0.05275	0.0146 ppb	0.05275	360.88%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	-5008.1	0.5773 µg/L	0.20617	0.5773 ppb	0.20617	35.71%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-64.3	3.7435 µg/L	1.97390	3.7435 ppb	1.97390	52.73%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 367.007†	2808.2	-26.68 µg/L	10.714	-26.68 ppb	10.714	40.16%
QC value within limits for U 367.007 Recovery = Not calculated							
V 292.402†	-2986.2	0.8838 µg/L	0.28653	0.8838 ppb	0.28653	32.42%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	4292.3	6.9831 µg/L	0.21890	6.9831 ppb	0.21890	3.13%
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 104**
Sample ID: ICSAB **Date Collected: 7/23/2018 06:15:23**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21432.9	21432.9	97.1	%			06:15:59
1	Al 396.153Radial†	1486524.7	1531512.1	492530	µg/L	492530	ppb	06:15:54
1	Ca 317.933Radial†	2214951.3	2281547.1	488610	µg/L	488610	ppb	06:15:54
1	Fe 238.204 Radial†	961625.0	990631.3	192810	µg/L	192810	ppb	06:15:54
1	K 766.490 Radial†	6206.5	5972.2	5474.0	µg/L	5474.0	ppb	06:15:59
1	Mg 279.077 IEC†	288921.2	297590.7	486330	µg/L	486330	ppb	06:15:59
1	Na 589.592 Radial†	3529.9	3509.0	5143.6	µg/L	5143.6	ppb	06:15:59
1	Sr 421.552†	81309.2	83504.3	482.41	µg/L	482.41	ppb	06:15:59
1	Sc 361.383	323371.1	323371.1	88.303	%			06:16:27
1	Y 371.029	311719.3	311719.3	86.622	%			06:16:27
1	Ag 328.068†	19732.0	23029.3	261.99	µg/L	261.99	ppb	06:16:32
1	As 188.979†	990.7	1134.7	513.14	µg/L	513.14	ppb	06:16:32
1	B 249.677†	-5363.6	-6247.2	541.73	µg/L	541.73	ppb	06:16:27
1	Ba 233.527†	51308.8	58120.8	484.45	µg/L	484.45	ppb	06:16:32
1	Be 313.107†	251561.4	288457.5	245.98	µg/L	245.98	ppb	06:16:27
1	Cd 226.502†	40812.2	46541.4	461.96	µg/L	461.96	ppb	06:16:32
1	Co 228.616†	17769.7	20345.9	468.09	µg/L	468.09	ppb	06:16:32
1	Cr 267.716†	21041.9	23707.2	483.51	µg/L	483.51	ppb	06:16:32
1	Cu 324.752†	64588.9	71224.3	534.91	µg/L	534.91	ppb	06:16:27
1	Mn 257.610†	269197.1	304398.4	489.42	µg/L	489.42	ppb	06:16:27
1	Mo 202.031†	7735.4	8727.0	498.66	µg/L	498.66	ppb	06:16:32
1	Ni 231.604†	14504.0	16629.2	463.40	µg/L	463.40	ppb	06:16:32
1	P 214.914†	3607.4	3953.6	2550.9	µg/L	2550.9	ppb	06:16:32
1	Pb 220.353†	2984.2	3443.0	477.46	µg/L	477.46	ppb	06:16:32
1	S 181.975 Axial†	2074.8	2257.3	2644.4	µg/L	2644.4	ppb	06:16:32
1	Sb 206.836†	1732.8	1807.7	488.93	µg/L	488.93	ppb	06:16:32
1	Se 196.026†	4150.6	4724.2	2318.6	µg/L	2318.6	ppb	06:16:32
1	SiO2†	56084.1	62447.8	10487	µg/L	10487	ppb	06:16:32
1	Si 251.611†	81983.4	92851.2	5112.4	µg/L	5112.4	ppb	06:16:27
1	Sn 189.927†	3474.4	3887.1	480.12	µg/L	480.12	ppb	06:16:32
1	Ti 334.940†	100049.2	114023.3	507.16	µg/L	507.16	ppb	06:16:27
1	Tl 190.801†	1801.8	2118.7	471.74	µg/L	471.74	ppb	06:16:32
1	U 367.007†	4288.2	3972.7	382.2	µg/L	382.2	ppb	06:16:32
1	V 292.402†	30791.6	35002.2	501.93	µg/L	501.93	ppb	06:16:32
1	Zn 213.857†	60760.7	67911.2	488.92	µg/L	488.92	ppb	06:16:32
2	Sc RADIAL	21094.4	21094.4	95.5	%			06:16:10
2	Al 396.153Radial†	1494047.9	1563954.4	502960	µg/L	502960	ppb	06:16:04
2	Ca 317.933Radial†	2223482.6	2327083.1	498360	µg/L	498360	ppb	06:16:04
2	Fe 238.204 Radial†	964295.2	1009318.9	196450	µg/L	196450	ppb	06:16:04
2	K 766.490 Radial†	6165.2	6031.6	5529.0	µg/L	5529.0	ppb	06:16:10
2	Mg 279.077 IEC†	287155.8	300517.7	491120	µg/L	491120	ppb	06:16:10
2	Na 589.592 Radial†	3532.5	3570.0	5232.6	µg/L	5232.6	ppb	06:16:10
2	Sr 421.552†	81025.7	84551.3	488.40	µg/L	488.40	ppb	06:16:10
2	Sc 361.383	323946.3	323946.3	88.460	%			06:16:37
2	Y 371.029	312025.7	312025.7	86.707	%			06:16:37
2	Ag 328.068†	19745.5	23005.0	262.29	µg/L	262.29	ppb	06:16:42
2	As 188.979†	998.4	1141.4	516.31	µg/L	516.31	ppb	06:16:42
2	B 249.677†	-5341.8	-6211.8	557.06	µg/L	557.06	ppb	06:16:37
2	Ba 233.527†	51619.8	58369.1	486.46	µg/L	486.46	ppb	06:16:42
2	Be 313.107†	251467.2	287845.1	245.58	µg/L	245.58	ppb	06:16:37
2	Cd 226.502†	41195.8	46893.0	465.21	µg/L	465.21	ppb	06:16:42
2	Co 228.616†	17935.7	20497.8	471.58	µg/L	471.58	ppb	06:16:42
2	Cr 267.716†	21157.5	23795.6	485.43	µg/L	485.43	ppb	06:16:42
2	Cu 324.752†	64499.8	70993.7	533.43	µg/L	533.43	ppb	06:16:37
2	Mn 257.610†	269400.2	304086.7	489.16	µg/L	489.16	ppb	06:16:37
2	Mo 202.031†	7820.7	8808.0	503.32	µg/L	503.32	ppb	06:16:42
2	Ni 231.604†	14649.6	16764.6	467.22	µg/L	467.22	ppb	06:16:42
2	P 214.914†	3628.6	3970.3	2560.9	µg/L	2560.9	ppb	06:16:42

2	Pb 220.353†	2905.4	3347.9	466.82 µg/L	466.82 ppb	06:16:42
2	S 181.975 Axial†	2066.5	2243.7	2625.1 µg/L	2625.1 ppb	06:16:42
2	Sb 206.836†	1741.8	1814.4	490.38 µg/L	490.38 ppb	06:16:42
2	Se 196.026†	4163.2	4730.1	2323.0 µg/L	2323.0 ppb	06:16:42
2	SiO2†	56383.0	62673.0	10524 µg/L	10524 ppb	06:16:42
2	Si 251.611†	81943.3	92641.1	5100.4 µg/L	5100.4 ppb	06:16:37
2	Sn 189.927†	3489.8	3897.6	481.35 µg/L	481.35 ppb	06:16:42
2	Ti 334.940†	100114.0	113895.4	507.07 µg/L	507.07 ppb	06:16:37
2	Tl 190.801†	1810.4	2124.9	473.37 µg/L	473.37 ppb	06:16:42
2	U 367.007†	4263.1	3935.8	349.8 µg/L	349.8 ppb	06:16:42
2	V 292.402†	31032.9	35213.0	505.46 µg/L	505.46 ppb	06:16:42
2	Zn 213.857†	61303.7	68402.9	492.22 µg/L	492.22 ppb	06:16:42
3	Sc RADIAL	21430.9	21430.9	97.1 %		06:16:20
3	Al 396.153Radial†	1513735.9	1559684.4	501590 µg/L	501590 ppb	06:16:15
3	Ca 317.933Radial†	2262374.5	2330610.5	499110 µg/L	499110 ppb	06:16:15
3	Fe 238.204 Radial†	980329.2	1009990.5	196580 µg/L	196580 ppb	06:16:15
3	K 766.490 Radial†	6232.0	5999.1	5499.5 µg/L	5499.5 ppb	06:16:20
3	Mg 279.077 IEC†	287720.8	296380.5	484360 µg/L	484360 ppb	06:16:20
3	Na 589.592 Radial†	3550.7	3530.7	5172.0 µg/L	5172.0 ppb	06:16:20
3	Sr 421.552†	81036.3	83230.5	480.62 µg/L	480.62 ppb	06:16:20
3	Sc 361.383	325715.1	325715.1	88.943 %		06:16:47
3	Y 371.029	314127.6	314127.6	87.291 %		06:16:47
3	Ag 328.068†	19800.4	22945.5	261.72 µg/L	261.72 ppb	06:16:53
3	As 188.979†	1029.9	1170.7	529.17 µg/L	529.17 ppb	06:16:53
3	B 249.677†	-5408.9	-6254.5	556.16 µg/L	556.16 ppb	06:16:47
3	Ba 233.527†	51626.9	58060.2	483.85 µg/L	483.85 ppb	06:16:53
3	Be 313.107†	253554.0	288647.6	246.25 µg/L	246.25 ppb	06:16:47
3	Cd 226.502†	41079.0	46508.7	461.21 µg/L	461.21 ppb	06:16:53
3	Co 228.616†	17899.7	20347.3	468.11 µg/L	468.11 ppb	06:16:53
3	Cr 267.716†	21123.5	23627.5	481.97 µg/L	481.97 ppb	06:16:53
3	Cu 324.752†	64902.6	71050.6	533.84 µg/L	533.84 ppb	06:16:47
3	Mn 257.610†	270818.9	304027.9	489.09 µg/L	489.09 ppb	06:16:47
3	Mo 202.031†	7838.4	8779.8	501.73 µg/L	501.73 ppb	06:16:53
3	Ni 231.604†	14591.1	16608.9	462.92 µg/L	462.92 ppb	06:16:53
3	P 214.914†	3564.4	3875.8	2497.6 µg/L	2497.6 ppb	06:16:53
3	Pb 220.353†	2976.5	3410.0	474.41 µg/L	474.41 ppb	06:16:53
3	S 181.975 Axial†	2058.7	2222.3	2599.0 µg/L	2599.0 ppb	06:16:53
3	Sb 206.836†	1759.0	1823.1	492.89 µg/L	492.89 ppb	06:16:53
3	Se 196.026†	4147.7	4687.0	2302.7 µg/L	2302.7 ppb	06:16:53
3	SiO2†	56301.8	62235.5	10450 µg/L	10450 ppb	06:16:53
3	Si 251.611†	82350.5	92595.8	5097.9 µg/L	5097.9 ppb	06:16:47
3	Sn 189.927†	3517.4	3907.1	482.56 µg/L	482.56 ppb	06:16:53
3	Ti 334.940†	100484.3	113697.2	506.27 µg/L	506.27 ppb	06:16:47
3	Tl 190.801†	1830.7	2136.6	475.87 µg/L	475.87 ppb	06:16:53
3	U 367.007†	4237.8	3881.1	329.7 µg/L	329.7 ppb	06:16:53
3	V 292.402†	31016.1	35003.7	502.72 µg/L	502.72 ppb	06:16:53
3	Zn 213.857†	61260.8	67978.3	489.08 µg/L	489.08 ppb	06:16:53

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	324344.2	88.569	%	0.3336				0.38%
Sc RADIAL	21319.4	96.6	%	0.88				0.91%
Y 371.029	312624.2	86.873	%	0.3643				0.42%
Ag 328.068†	22993.3	262.00	µg/L	0.289	262.00	ppb	0.289	0.11%
QC value within limits for Ag 328.068 Recovery = 104.80%								
Al 396.153Radial†	1551717.0	499030	µg/L	5669.19	499030	ppb	5669.19	1.14%
QC value within limits for Al 396.153Radial Recovery = 99.81%								
As 188.979†	1148.9	519.54	µg/L	8.486	519.54	ppb	8.486	1.63%
QC value within limits for As 188.979 Recovery = 103.91%								
B 249.677†	-6237.9	551.65	µg/L	8.606	551.65	ppb	8.606	1.56%
QC value within limits for B 249.677 Recovery = 110.33%								
Ba 233.527†	58183.4	484.92	µg/L	1.363	484.92	ppb	1.363	0.28%
QC value within limits for Ba 233.527 Recovery = 96.98%								
Be 313.107†	288316.7	245.94	µg/L	0.337	245.94	ppb	0.337	0.14%
QC value within limits for Be 313.107 Recovery = 98.38%								
Ca 317.933Radial†	2313080.3	495360	µg/L	5860.46	495360	ppb	5860.46	1.18%
QC value within limits for Ca 317.933Radial Recovery = 99.07%								
Cd 226.502†	46647.7	462.80	µg/L	2.128	462.80	ppb	2.128	0.46%
QC value within limits for Cd 226.502 Recovery = 92.56%								

Co 228.616†	20397.0	469.26 µg/L	2.011	469.26 ppb	2.011	0.43%
QC value within limits for Co 228.616 Recovery = 93.85%						
Cr 267.716†	23710.1	483.63 µg/L	1.734	483.63 ppb	1.734	0.36%
QC value within limits for Cr 267.716 Recovery = 96.73%						
Cu 324.752†	71089.5	534.06 µg/L	0.767	534.06 ppb	0.767	0.14%
QC value within limits for Cu 324.752 Recovery = 106.81%						
Fe 238.204 Radial†	1003313.6	195280 µg/L	2138.67	195280 ppb	2138.67	1.10%
QC value within limits for Fe 238.204 Radial Recovery = 97.64%						
K 766.490 Radial†	6001.0	5500.8 µg/L	27.51	5500.8 ppb	27.51	0.50%
QC value within limits for K 766.490 Radial Recovery = 110.02%						
Mg 279.077 IEC†	298162.9	487270 µg/L	3476.23	487270 ppb	3476.23	0.71%
QC value within limits for Mg 279.077 IEC Recovery = 97.45%						
Mn 257.610†	304171.0	489.22 µg/L	0.177	489.22 ppb	0.177	0.04%
QC value within limits for Mn 257.610 Recovery = 97.84%						
Mo 202.031†	8771.6	501.24 µg/L	2.368	501.24 ppb	2.368	0.47%
QC value within limits for Mo 202.031 Recovery = 100.25%						
Na 589.592 Radial†	3536.5	5182.7 µg/L	45.50	5182.7 ppb	45.50	0.88%
QC value within limits for Na 589.592 Radial Recovery = 103.65%						
Ni 231.604†	16667.6	464.51 µg/L	2.355	464.51 ppb	2.355	0.51%
QC value within limits for Ni 231.604 Recovery = 92.90%						
P 214.914†	3933.2	2536.5 µg/L	34.00	2536.5 ppb	34.00	1.34%
QC value within limits for P 214.914 Recovery = 101.46%						
Pb 220.353†	3400.3	472.89 µg/L	5.482	472.89 ppb	5.482	1.16%
QC value within limits for Pb 220.353 Recovery = 94.58%						
S 181.975 Axial†	2241.1	2622.8 µg/L	22.79	2622.8 ppb	22.79	0.87%
QC value within limits for S 181.975 Axial Recovery = 104.91%						
Sb 206.836†	1815.1	490.73 µg/L	2.005	490.73 ppb	2.005	0.41%
QC value within limits for Sb 206.836 Recovery = 98.15%						
Se 196.026†	4713.8	2314.8 µg/L	10.68	2314.8 ppb	10.68	0.46%
QC value within limits for Se 196.026 Recovery = 92.59%						
SiO2†	62452.1	10487 µg/L	36.95	10487 ppb	36.95	0.35%
QC value within limits for SiO2 Recovery = 98.05%						
Si 251.611†	92696.0	5103.6 µg/L	7.73	5103.6 ppb	7.73	0.15%
QC value within limits for Si 251.611 Recovery = 102.07%						
Sn 189.927†	3897.2	481.34 µg/L	1.222	481.34 ppb	1.222	0.25%
QC value within limits for Sn 189.927 Recovery = 96.27%						
Sr 421.552†	83762.0	483.81 µg/L	4.074	483.81 ppb	4.074	0.84%
QC value within limits for Sr 421.552 Recovery = 96.76%						
Ti 334.940†	113872.0	506.83 µg/L	0.490	506.83 ppb	0.490	0.10%
QC value within limits for Ti 334.940 Recovery = 101.37%						
Tl 190.801†	2126.7	473.66 µg/L	2.082	473.66 ppb	2.082	0.44%
QC value within limits for Tl 190.801 Recovery = 94.73%						
U 367.007†	3929.9	353.9 µg/L	26.53	353.9 ppb	26.53	7.50%
QC value less than the lower limit for U 367.007 Recovery = 70.78%						
V 292.402†	35073.0	503.37 µg/L	1.852	503.37 ppb	1.852	0.37%
QC value within limits for V 292.402 Recovery = 100.67%						
Zn 213.857†	68097.5	490.07 µg/L	1.860	490.07 ppb	1.860	0.38%
QC value within limits for Zn 213.857 Recovery = 98.01%						

QC Failed. Continue with analysis.

Sequence No.: 11 **Autosampler Location: 105**
Sample ID: LR1 **Date Collected: 7/23/2018 06:17:01**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	20827.8	20827.8	94.3	%			06:17:37
1	Al 396.153Radial†	1427033.2	1512934.8	486110	µg/L	486110	ppb	06:17:32
1	Ca 317.933Radial†	2144805.3	2273476.3	486880	µg/L	486880	ppb	06:17:32
1	Fe 238.204 Radial†	2286191.6	2423625.5	471720	µg/L	471720	ppb	06:17:32
1	K 766.490 Radial†	227528.8	240788.5	218800	µg/L	218800	ppb	06:17:37
1	Mg 279.077 IEC†	280979.9	297819.2	486710	µg/L	486710	ppb	06:17:37
1	Na 589.592 Radial†	302509.1	320571.4	492340	µg/L	492340	ppb	06:17:32
1	Sr 421.552†	1520190.5	1611339.3	9466.6	µg/L	9466.6	ppb	06:17:32
1	Sc 361.383	317158.6	317158.6	86.607	%			06:18:11
1	Y 371.029	304528.7	304528.7	84.624	%			06:18:11
1	Ag 328.068†	-7256.4	-7694.9	2.4635	µg/L	2.4635	ppb	06:18:11
1	As 188.979†	20059.8	23174.7	10339	µg/L	10339	ppb	06:18:16
1	B 249.677†	1323647.7	1528168.2	52597	µg/L	52597	ppb	06:18:11
1	Ba 233.527†	1481574.1	1710705.7	14387	µg/L	14387	ppb	06:18:11
1	Be 313.107†	-14827.5	-13546.5	3.8972	µg/L	3.8972	ppb	06:18:11
1	Cd 226.502†	769423.3	888732.8	9172.6	µg/L	9172.6	ppb	06:18:11
1	Co 228.616†	350610.0	405052.1	9331.5	µg/L	9331.5	ppb	06:18:11
1	Cr 267.716†	1038226.6	1198659.9	23880	µg/L	23880	ppb	06:18:11
1	Cu 324.752†	2438281.0	2813425.7	20685	µg/L	20685	ppb	06:18:11
1	Mn 257.610†	5093152.3	5880319.4	9264.6	µg/L	9264.6	ppb	06:18:11
1	Mo 202.031†	152800.6	176397.3	10015	µg/L	10015	ppb	06:18:11
1	Ni 231.604†	288800.2	333665.3	9231.8	µg/L	9231.8	ppb	06:18:11
1	P 214.914†	744.7	728.1	-161.89	µg/L	-161.89	ppb	06:18:16
1	Pb 220.353†	161361.1	186378.1	23081	µg/L	23081	ppb	06:18:11
1	S 181.975 Axial†	37138.2	42789.0	52372	µg/L	52372	ppb	06:18:16
1	Sb 206.836†	1393.1	1454.0	-37.124	µg/L	-37.124	ppb	06:18:16
1	Se 196.026†	-469.9	-518.8	-35.414	µg/L	-35.414	ppb	06:18:16
1	SiO2†	553169.5	637648.4	107230	µg/L	107230	ppb	06:18:11
1	Si 251.611†	793836.7	916606.8	50490	µg/L	50490	ppb	06:18:11
1	Sn 189.927†	-281.7	-372.8	-7.3232	µg/L	-7.3232	ppb	06:18:16
1	Ti 334.940†	2043702.2	2360469.5	10059	µg/L	10059	ppb	06:18:11
1	Tl 190.801†	-316.9	-287.6	2.9215	µg/L	2.9215	ppb	06:18:16
1	U 367.007†	38331.6	43375.8	13170	µg/L	13170	ppb	06:18:11
1	V 292.402†	657196.2	758959.4	10129	µg/L	10129	ppb	06:18:11
1	Zn 213.857†	1611677.6	1860015.5	14051	µg/L	14051	ppb	06:18:11
2	Sc RADIAL	20881.2	20881.2	94.6	%			06:17:48
2	Al 396.153Radial†	1452169.3	1535643.4	493420	µg/L	493420	ppb	06:17:43
2	Ca 317.933Radial†	2183953.0	2309054.0	494500	µg/L	494500	ppb	06:17:43
2	Fe 238.204 Radial†	2325772.0	2459277.3	478650	µg/L	478650	ppb	06:17:43
2	K 766.490 Radial†	227988.4	240657.3	218680	µg/L	218680	ppb	06:17:48
2	Mg 279.077 IEC†	280933.0	297007.5	485380	µg/L	485380	ppb	06:17:48
2	Na 589.592 Radial†	307248.6	324762.5	498770	µg/L	498770	ppb	06:17:43
2	Sr 421.552†	1545656.1	1634143.5	9600.6	µg/L	9600.6	ppb	06:17:43
2	Sc 361.383	314755.2	314755.2	85.950	%			06:18:27
2	Y 371.029	302202.5	302202.5	83.977	%			06:18:27
2	Ag 328.068†	-7251.3	-7752.9	2.9190	µg/L	2.9190	ppb	06:18:27
2	As 188.979†	20116.8	23417.9	10447	µg/L	10447	ppb	06:18:32
2	B 249.677†	1317323.9	1532481.1	52767	µg/L	52767	ppb	06:18:27
2	Ba 233.527†	1472919.1	1713698.6	14412	µg/L	14412	ppb	06:18:27
2	Be 313.107†	-14621.5	-13437.6	4.1104	µg/L	4.1104	ppb	06:18:27
2	Cd 226.502†	764128.0	889355.8	9178.3	µg/L	9178.3	ppb	06:18:27
2	Co 228.616†	348619.0	405826.8	9349.3	µg/L	9349.3	ppb	06:18:27
2	Cr 267.716†	1033285.6	1202065.0	23948	µg/L	23948	ppb	06:18:27
2	Cu 324.752†	2425957.6	2820585.6	20738	µg/L	20738	ppb	06:18:27
2	Mn 257.610†	5067255.9	5895095.0	9288.3	µg/L	9288.3	ppb	06:18:27
2	Mo 202.031†	152118.1	176950.5	10046	µg/L	10046	ppb	06:18:27
2	Ni 231.604†	287155.1	334297.5	9249.4	µg/L	9249.4	ppb	06:18:27
2	P 214.914†	786.6	783.5	-130.63	µg/L	-130.63	ppb	06:18:32

2	Pb 220.353†	160410.6	186694.9	23120 µg/L	23120 ppb		06:18:27
2	S 181.975 Axial†	37274.8	43275.4	52966 µg/L	52966 ppb		06:18:32
2	Sb 206.836†	1412.8	1489.1	-29.083 µg/L	-29.083 ppb		06:18:32
2	Se 196.026†	-476.5	-530.6	-37.907 µg/L	-37.907 ppb		06:18:32
2	SiO2†	549928.9	638755.3	107410 µg/L	107410 ppb		06:18:27
2	Si 251.611†	789963.5	919099.5	50626 µg/L	50626 ppb		06:18:27
2	Sn 189.927†	-298.4	-394.7	-9.8736 µg/L	-9.8736 ppb		06:18:32
2	Ti 334.940†	2033503.1	2366622.0	10085 µg/L	10085 ppb		06:18:27
2	Tl 190.801†	-335.4	-312.0	-1.5881 µg/L	-1.5881 ppb		06:18:32
2	U 367.007†	38195.4	43555.4	13200 µg/L	13200 ppb		06:18:27
2	V 292.402†	653794.1	760795.4	10154 µg/L	10154 ppb		06:18:27
2	Zn 213.857†	1601876.1	1862821.6	14071 µg/L	14071 ppb		06:18:27
3	Sc RADIAL	20976.1	20976.1	95.0 %			06:17:59
3	Al 396.153Radial†	1435322.6	1510962.8	485480 µg/L	485480 ppb		06:17:54
3	Ca 317.933Radial†	2151809.0	2264770.2	485010 µg/L	485010 ppb		06:17:54
3	Fe 238.204 Radial†	2291659.0	2412242.3	469500 µg/L	469500 ppb		06:17:54
3	K 766.490 Radial†	229414.1	241067.4	219050 µg/L	219050 ppb		06:17:59
3	Mg 279.077 IEC†	283037.2	297878.4	486800 µg/L	486800 ppb		06:17:59
3	Na 589.592 Radial†	304129.1	320009.0	491470 µg/L	491470 ppb		06:17:54
3	Sr 421.552†	1527483.8	1607620.4	9444.8 µg/L	9444.8 ppb		06:17:54
3	Sc 361.383	314264.3	314264.3	85.816 %			06:18:43
3	Y 371.029	301577.3	301577.3	83.804 %			06:18:43
3	Ag 328.068†	-7265.1	-7782.2	1.2437 µg/L	1.2437 ppb		06:18:43
3	As 188.979†	20025.3	23347.8	10416 µg/L	10416 ppb		06:18:48
3	B 249.677†	1317559.7	1535150.0	52820 µg/L	52820 ppb		06:18:43
3	Ba 233.527†	1471832.8	1715109.8	14425 µg/L	14425 ppb		06:18:43
3	Be 313.107†	-14690.5	-13544.6	3.9188 µg/L	3.9188 ppb		06:18:43
3	Cd 226.502†	763313.4	889795.3	9183.9 µg/L	9183.9 ppb		06:18:43
3	Co 228.616†	348194.0	405965.2	9352.5 µg/L	9352.5 ppb		06:18:43
3	Cr 267.716†	1031791.2	1202201.6	23950 µg/L	23950 ppb		06:18:43
3	Cu 324.752†	2424781.2	2823623.9	20760 µg/L	20760 ppb		06:18:43
3	Mn 257.610†	5062852.1	5899173.0	9294.1 µg/L	9294.1 ppb		06:18:43
3	Mo 202.031†	151888.4	176959.3	10047 µg/L	10047 ppb		06:18:43
3	Ni 231.604†	286962.4	334594.9	9257.4 µg/L	9257.4 ppb		06:18:43
3	P 214.914†	715.0	701.4	-178.93 µg/L	-178.93 ppb		06:18:48
3	Pb 220.353†	160189.7	186729.1	23124 µg/L	23124 ppb		06:18:43
3	S 181.975 Axial†	37049.8	43081.0	52731 µg/L	52731 ppb		06:18:48
3	Sb 206.836†	1380.2	1453.7	-37.994 µg/L	-37.994 ppb		06:18:48
3	Se 196.026†	-440.1	-489.0	-22.334 µg/L	-22.334 ppb		06:18:48
3	SiO2†	549223.0	638932.2	107440 µg/L	107440 ppb		06:18:43
3	Si 251.611†	789273.7	919731.4	50662 µg/L	50662 ppb		06:18:43
3	Sn 189.927†	-218.3	-301.9	1.5870 µg/L	1.5870 ppb		06:18:48
3	Ti 334.940†	2032560.6	2369219.6	10096 µg/L	10096 ppb		06:18:43
3	Tl 190.801†	-336.8	-314.1	-2.8197 µg/L	-2.8197 ppb		06:18:48
3	U 367.007†	38238.2	43674.7	13290 µg/L	13290 ppb		06:18:43
3	V 292.402†	653078.0	761149.2	10157 µg/L	10157 ppb		06:18:43
3	Zn 213.857†	1601364.5	1865136.9	14090 µg/L	14090 ppb		06:18:43

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	315392.7	86.125	%	0.4230				0.49%
Sc RADIAL	20895.0	94.6	%	0.34				0.36%
Y 371.029	302769.5	84.135	%	0.4322				0.51%
Ag 328.068†	-7743.3	2.2087	µg/L	0.86625	2.2087	ppb	0.86625	39.22%
Al 396.153Radial†	1519847.0	488340	µg/L	4410.73	488340	ppb	4410.73	0.90%
QC value within limits for Al 396.153Radial Recovery = 97.67%								
As 188.979†	23313.5	10401	µg/L	55.35	10401	ppb	55.35	0.53%
QC value within limits for As 188.979 Recovery = 104.01%								
B 249.677†	1531933.1	52728	µg/L	116.70	52728	ppb	116.70	0.22%
QC value within limits for B 249.677 Recovery = 105.46%								
Ba 233.527†	1713171.4	14408	µg/L	18.93	14408	ppb	18.93	0.13%
QC value within limits for Ba 233.527 Recovery = 96.05%								
Be 313.107†	-13509.6	3.9754	µg/L	0.11734	3.9754	ppb	0.11734	2.95%
Ca 317.933Radial†	2282433.5	488800	µg/L	5024.40	488800	ppb	5024.40	1.03%
QC value within limits for Ca 317.933Radial Recovery = 97.76%								
Cd 226.502†	889294.6	9178.3	µg/L	5.64	9178.3	ppb	5.64	0.06%
QC value within limits for Cd 226.502 Recovery = 91.78%								
Co 228.616†	405614.7	9344.4	µg/L	11.33	9344.4	ppb	11.33	0.12%
QC value within limits for Co 228.616 Recovery = 93.44%								

Cr 267.716†	1200975.5	23926 µg/L	39.94	23926 ppb	39.94	0.17%
QC value within limits for Cr 267.716 Recovery = 95.70%						
Cu 324.752†	2819211.7	20728 µg/L	38.46	20728 ppb	38.46	0.19%
QC value within limits for Cu 324.752 Recovery = 103.64%						
Fe 238.204 Radial†	2431715.0	473290 µg/L	4776.03	473290 ppb	4776.03	1.01%
QC value within limits for Fe 238.204 Radial Recovery = 94.66%						
K 766.490 Radial†	240837.7	218840 µg/L	190.55	218840 ppb	190.55	0.09%
QC value within limits for K 766.490 Radial Recovery = 109.42%						
Mg 279.077 IEC†	297568.3	486300 µg/L	795.25	486300 ppb	795.25	0.16%
QC value within limits for Mg 279.077 IEC Recovery = 97.26%						
Mn 257.610†	5891529.1	9282.4 µg/L	15.61	9282.4 ppb	15.61	0.17%
QC value within limits for Mn 257.610 Recovery = 92.82%						
Mo 202.031†	176769.0	10036 µg/L	18.29	10036 ppb	18.29	0.18%
QC value within limits for Mo 202.031 Recovery = 100.36%						
Na 589.592 Radial†	321781.0	494190 µg/L	3987.82	494190 ppb	3987.82	0.81%
QC value within limits for Na 589.592 Radial Recovery = 98.84%						
Ni 231.604†	334185.9	9246.2 µg/L	13.12	9246.2 ppb	13.12	0.14%
QC value within limits for Ni 231.604 Recovery = 92.46%						
P 214.914†	737.7	-157.15 µg/L	24.498	-157.15 ppb	24.498	15.59%
Pb 220.353†	186600.7	23108 µg/L	24.05	23108 ppb	24.05	0.10%
QC value within limits for Pb 220.353 Recovery = 92.43%						
S 181.975 Axial†	43048.5	52690 µg/L	299.51	52690 ppb	299.51	0.57%
QC value within limits for S 181.975 Axial Recovery = 105.38%						
Sb 206.836†	1465.6	-34.733 µg/L	4.9131	-34.733 ppb	4.9131	14.15%
Se 196.026†	-512.8	-31.885 µg/L	8.3647	-31.885 ppb	8.3647	26.23%
SiO2†	638445.3	107360 µg/L	116.63	107360 ppb	116.63	0.11%
QC value within limits for SiO2 Recovery = 100.81%						
Si 251.611†	918479.2	50593 µg/L	91.03	50593 ppb	91.03	0.18%
QC value within limits for Si 251.611 Recovery = 101.19%						
Sn 189.927†	-356.5	-5.2033 µg/L	6.01724	-5.2033 ppb	6.01724	115.64%
Sr 421.552†	1617701.0	9504.0 µg/L	84.36	9504.0 ppb	84.36	0.89%
QC value within limits for Sr 421.552 Recovery = 95.04%						
Ti 334.940†	2365437.0	10080 µg/L	19.11	10080 ppb	19.11	0.19%
QC value within limits for Ti 334.940 Recovery = 100.80%						
Tl 190.801†	-304.6	-0.4954 µg/L	3.02256	-0.4954 ppb	3.02256	610.11%
U 367.007†	43535.3	13220 µg/L	59.15	13220 ppb	59.15	0.45%
QC value less than the lower limit for U 367.007 Recovery = 88.14%						
V 292.402†	760301.4	10147 µg/L	15.75	10147 ppb	15.75	0.16%
QC value within limits for V 292.402 Recovery = 101.47%						
Zn 213.857†	1862658.0	14071 µg/L	19.54	14071 ppb	19.54	0.14%
QC value within limits for Zn 213.857 Recovery = 93.80%						

QC Failed. Continue with analysis.

User canceled analysis.

==========

Analysis Begun

Start Time: 7/23/2018 06:22:59 **Plasma On Time: 7/23/2018 04:11:23**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer: Optima 5300 DV, S/N 077C7090601 **Autosampler: ESI**

Sample Information File: C:\Users\Public\PerkinElmer\ICP\Data\Sample Information\072318.sif
Batch ID:
Results Data Set: 072318
Results Library: C:\Users\Public\PerkinElmer\ICP\Data\Results\Results.mdb

==========

Sequence No.: 12 **Autosampler Location: 108**
Sample ID: LR2 **Date Collected: 7/23/2018 06:23:00**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21540.0	21540.0	97.6	%			06:23:52
1	Al 396.153Radial†	-78.8	13.2	4.2624	µg/L	4.2624	ppb	06:23:52
1	Ca 317.933Radial†	99.6	-194.2	-41.592	µg/L	-41.592	ppb	06:23:52
1	Fe 238.204 Radial†	48.9	15.1	2.9378	µg/L	2.9378	ppb	06:23:52
1	K 766.490 Radial†	488.0	78.6	71.411	µg/L	71.411	ppb	06:23:32
1	Mg 279.077 IEC†	27.8	-27.6	-45.030	µg/L	-45.030	ppb	06:23:52
1	Na 589.592 Radial†	98.5	-26.6	-40.886	µg/L	-40.886	ppb	06:23:52
1	Sr 421.552†	351.9	100.2	0.5898	µg/L	0.5898	ppb	06:23:32
1	Sc 361.383	346721.9	346721.9	94.680	%			06:24:49
1	Y 371.029	342252.1	342252.1	95.106	%			06:24:49
1	Ag 328.068†	-300.6	366.1	-1.8229	µg/L	-1.8229	ppb	06:24:49
1	As 188.979†	-15.0	-3.1	-1.3243	µg/L	-1.3243	ppb	06:25:09
1	B 249.677†	645.9	509.0	16.923	µg/L	16.923	ppb	06:25:09
1	Ba 233.527†	-133.2	-125.2	-1.0535	µg/L	-1.0535	ppb	06:25:09
1	Be 313.107†	-6518.3	-3310.7	-0.3919	µg/L	-0.3919	ppb	06:24:49
1	Cd 226.502†	-308.0	-2.3	-0.0245	µg/L	-0.0245	ppb	06:25:09
1	Co 228.616†	-134.1	80.7	1.8476	µg/L	1.8476	ppb	06:25:09
1	Cr 267.716†	422.8	324.6	-1.1202	µg/L	-1.1202	ppb	06:25:09
1	Cu 324.752†	1363.1	-480.4	2.3635	µg/L	2.3635	ppb	06:24:49
1	Mn 257.610†	945.0	541.2	0.8503	µg/L	0.8503	ppb	06:25:09
1	Mo 202.031†	27.9	-3.5	-0.1963	µg/L	-0.1963	ppb	06:25:09
1	Ni 231.604†	-208.3	-16.0	-0.4441	µg/L	-0.4441	ppb	06:25:09
1	P 214.914†	143.9	20.2	13.508	µg/L	13.508	ppb	06:25:09
1	Pb 220.353†	23.7	88.5	3.6057	µg/L	3.6057	ppb	06:25:09
1	S 181.975 Axial†	97.7	10.9	13.388	µg/L	13.388	ppb	06:25:09
1	Sb 206.836†	135.3	-11.7	-3.5049	µg/L	-3.5049	ppb	06:25:09
1	Se 196.026†	-43.2	-21.8	-10.314	µg/L	-10.314	ppb	06:25:09
1	SiO2†	1192.4	194.2	32.843	µg/L	32.843	ppb	06:25:09
1	Si 251.611†	-19.0	-11.9	-0.6535	µg/L	-0.6535	ppb	06:25:09
1	Sn 189.927†	47.7	2.9	0.3784	µg/L	0.3784	ppb	06:25:09
1	Ti 334.940†	484.4	1233.2	0.8228	µg/L	0.8228	ppb	06:24:49
1	Tl 190.801†	-103.5	-31.0	-2.8289	µg/L	-2.8289	ppb	06:25:09
1	U 367.007†	26580.4	27190.5	9564	µg/L	9564	ppb	06:24:49
1	V 292.402†	-480.2	-375.3	0.6942	µg/L	0.6942	ppb	06:24:49
1	Zn 213.857†	986.1	143.6	1.1036	µg/L	1.1036	ppb	06:25:09
2	Sc RADIAL	21395.8	21395.8	96.9	%			06:24:18
2	Al 396.153Radial†	-69.0	22.7	7.3028	µg/L	7.3028	ppb	06:24:18
2	Ca 317.933Radial†	87.9	-205.6	-44.034	µg/L	-44.034	ppb	06:24:18
2	Fe 238.204 Radial†	57.0	23.8	4.6279	µg/L	4.6279	ppb	06:24:18
2	K 766.490 Radial†	542.4	138.1	125.46	µg/L	125.46	ppb	06:23:57
2	Mg 279.077 IEC†	34.2	-20.7	-33.894	µg/L	-33.894	ppb	06:24:18
2	Na 589.592 Radial†	74.5	-50.7	-78.005	µg/L	-78.005	ppb	06:24:18
2	Sr 421.552†	313.6	63.1	0.3719	µg/L	0.3719	ppb	06:23:57
2	Sc 361.383	347481.6	347481.6	94.887	%			06:25:14
2	Y 371.029	342976.0	342976.0	95.308	%			06:25:14

2	Ag 328.068†	-245.4	425.1	-1.2427 µg/L	-1.2427 ppb	06:25:14
2	As 188.979†	-21.7	-10.1	-4.4177 µg/L	-4.4177 ppb	06:25:34
2	B 249.677†	606.9	466.4	15.514 µg/L	15.514 ppb	06:25:34
2	Ba 233.527†	-138.0	-129.9	-1.0935 µg/L	-1.0935 ppb	06:25:34
2	Be 313.107†	-6596.7	-3378.2	-0.4408 µg/L	-0.4408 ppb	06:25:14
2	Cd 226.502†	-283.4	24.4	0.2515 µg/L	0.2515 ppb	06:25:34
2	Co 228.616†	-133.5	81.7	1.8695 µg/L	1.8695 ppb	06:25:34
2	Cr 267.716†	412.3	312.6	-1.3833 µg/L	-1.3833 ppb	06:25:34
2	Cu 324.752†	1375.9	-470.0	2.4580 µg/L	2.4580 ppb	06:25:14
2	Mn 257.610†	920.2	512.9	0.8059 µg/L	0.8059 ppb	06:25:34
2	Mo 202.031†	32.8	1.6	0.0928 µg/L	0.0928 ppb	06:25:34
2	Ni 231.604†	-225.6	-33.8	-0.9357 µg/L	-0.9357 ppb	06:25:34
2	P 214.914†	150.7	27.1	18.086 µg/L	18.086 ppb	06:25:34
2	Pb 220.353†	21.8	86.5	3.3278 µg/L	3.3278 ppb	06:25:34
2	S 181.975 Axial†	94.1	6.8	8.3712 µg/L	8.3712 ppb	06:25:34
2	Sb 206.836†	124.3	-23.6	-6.8910 µg/L	-6.8910 ppb	06:25:34
2	Se 196.026†	-36.9	-15.1	-7.1459 µg/L	-7.1459 ppb	06:25:34
2	SiO2†	1200.5	199.9	33.794 µg/L	33.794 ppb	06:25:34
2	Si 251.611†	-15.4	-8.0	-0.4431 µg/L	-0.4431 ppb	06:25:34
2	Sn 189.927†	50.9	6.1	0.7841 µg/L	0.7841 ppb	06:25:34
2	Ti 334.940†	577.3	1329.9	1.2210 µg/L	1.2210 ppb	06:25:14
2	Tl 190.801†	-107.0	-34.5	-3.5602 µg/L	-3.5602 ppb	06:25:34
2	U 367.007†	26719.0	27275.2	9593 µg/L	9593 ppb	06:25:14
2	V 292.402†	-464.7	-357.8	0.9423 µg/L	0.9423 ppb	06:25:14
2	Zn 213.857†	1014.0	170.8	1.3135 µg/L	1.3135 ppb	06:25:34
3	Sc RADIAL	21318.5	21318.5	96.6 %		06:24:43
3	Al 396.153Radial†	-70.2	21.3	6.8605 µg/L	6.8605 ppb	06:24:43
3	Ca 317.933Radial†	117.2	-174.9	-37.459 µg/L	-37.459 ppb	06:24:43
3	Fe 238.204 Radial†	60.1	27.2	5.2915 µg/L	5.2915 ppb	06:24:43
3	K 766.490 Radial†	579.9	178.9	162.59 µg/L	162.59 ppb	06:24:23
3	Mg 279.077 IEC†	28.1	-27.0	-44.120 µg/L	-44.120 ppb	06:24:43
3	Na 589.592 Radial†	95.7	-28.5	-43.763 µg/L	-43.763 ppb	06:24:43
3	Sr 421.552†	325.4	76.5	0.4504 µg/L	0.4504 ppb	06:24:23
3	Sc 361.383	348248.7	348248.7	95.097 %		06:25:40
3	Y 371.029	343936.9	343936.9	95.575 %		06:25:40
3	Ag 328.068†	-279.0	390.3	-1.6392 µg/L	-1.6392 ppb	06:25:40
3	As 188.979†	-18.3	-6.5	-2.8255 µg/L	-2.8255 ppb	06:26:00
3	B 249.677†	520.4	374.1	12.448 µg/L	12.448 ppb	06:26:00
3	Ba 233.527†	-119.0	-109.6	-0.9230 µg/L	-0.9230 ppb	06:26:00
3	Be 313.107†	-6530.3	-3293.1	-0.3518 µg/L	-0.3518 ppb	06:25:40
3	Cd 226.502†	-311.7	-4.7	-0.0503 µg/L	-0.0503 ppb	06:26:00
3	Co 228.616†	-146.5	68.4	1.5614 µg/L	1.5614 ppb	06:26:00
3	Cr 267.716†	411.4	310.7	-1.4796 µg/L	-1.4796 ppb	06:26:00
3	Cu 324.752†	1345.5	-505.2	2.2455 µg/L	2.2455 ppb	06:25:40
3	Mn 257.610†	981.8	575.6	0.9044 µg/L	0.9044 ppb	06:26:00
3	Mo 202.031†	25.4	-6.3	-0.3567 µg/L	-0.3567 ppb	06:26:00
3	Ni 231.604†	-198.4	-4.7	-0.1314 µg/L	-0.1314 ppb	06:26:00
3	P 214.914†	138.5	14.0	9.3486 µg/L	9.3486 ppb	06:26:00
3	Pb 220.353†	13.1	77.3	2.1330 µg/L	2.1330 ppb	06:26:00
3	S 181.975 Axial†	99.7	12.5	15.337 µg/L	15.337 ppb	06:26:00
3	Sb 206.836†	127.9	-20.1	-5.8945 µg/L	-5.8945 ppb	06:26:00
3	Se 196.026†	-19.9	2.8	1.3352 µg/L	1.3352 ppb	06:26:00
3	SiO2†	1195.0	191.3	32.368 µg/L	32.368 ppb	06:26:00
3	Si 251.611†	0.9	9.2	0.5136 µg/L	0.5136 ppb	06:26:00
3	Sn 189.927†	43.0	-2.3	-0.2596 µg/L	-0.2596 ppb	06:26:00
3	Ti 334.940†	547.3	1297.1	1.0472 µg/L	1.0472 ppb	06:25:40
3	Tl 190.801†	-104.0	-31.1	-2.8011 µg/L	-2.8011 ppb	06:26:00
3	U 367.007†	26977.3	27484.9	9667 µg/L	9667 ppb	06:25:40
3	V 292.402†	-529.5	-425.0	0.1051 µg/L	0.1051 ppb	06:25:40
3	Zn 213.857†	989.4	142.6	1.0940 µg/L	1.0940 ppb	06:26:00

Mean Data: LR2

	Mean Corrected	Calib.		Sample		
Analyte	**Intensity**	**Conc. Units**	**Std.Dev.**	**Conc. Units**	**Std.Dev.**	**RSD**
Sc 361.383	347484.0	94.888 %	0.2085			0.22%
Sc RADIAL	21418.1	97.0 %	0.51			0.53%
Y 371.029	343055.0	95.330 %	0.2349			0.25%
Ag 328.068†	393.8	-1.5683 µg/L	0.29653	-1.5683 ppb	0.29653	18.91%
Al 396.153Radial†	19.1	6.1419 µg/L	1.64264	6.1419 ppb	1.64264	26.74%
As 188.979†	-6.5	-2.8558 µg/L	1.54692	-2.8558 ppb	1.54692	54.17%

B 249.677†	449.8	14.962 µg/L	2.2878	14.962 ppb	2.2878	15.29%
Ba 233.527†	-121.6	-1.0233 µg/L	0.08918	-1.0233 ppb	0.08918	8.72%
Be 313.107†	-3327.3	-0.3949 µg/L	0.04459	-0.3949 ppb	0.04459	11.29%
Ca 317.933Radial†	-191.6	-41.028 µg/L	3.3238	-41.028 ppb	3.3238	8.10%
Cd 226.502†	5.8	0.0589 µg/L	0.16729	0.0589 ppb	0.16729	284.00%
Co 228.616†	76.9	1.7595 µg/L	0.17192	1.7595 ppb	0.17192	9.77%
Cr 267.716†	316.0	-1.3277 µg/L	0.18608	-1.3277 ppb	0.18608	14.02%
Cu 324.752†	-485.2	2.3557 µg/L	0.10642	2.3557 ppb	0.10642	4.52%
Fe 238.204 Radial†	22.0	4.2857 µg/L	1.21358	4.2857 ppb	1.21358	28.32%
K 766.490 Radial†	131.9	119.82 µg/L	45.853	119.82 ppb	45.853	38.27%
Mg 279.077 IEC†	-25.1	-41.014 µg/L	6.1836	-41.014 ppb	6.1836	15.08%
Mn 257.610†	543.2	0.8535 µg/L	0.04936	0.8535 ppb	0.04936	5.78%
Mo 202.031†	-2.7	-0.1534 µg/L	0.22778	-0.1534 ppb	0.22778	148.48%
Na 589.592 Radial†	-35.3	-54.218 µg/L	20.6503	-54.218 ppb	20.6503	38.09%
Ni 231.604†	-18.2	-0.5038 µg/L	0.40545	-0.5038 ppb	0.40545	80.49%
P 214.914†	20.4	13.648 µg/L	4.3704	13.648 ppb	4.3704	32.02%
Pb 220.353†	84.1	3.0222 µg/L	0.78248	3.0222 ppb	0.78248	25.89%
S 181.975 Axial†	10.1	12.365 µg/L	3.5937	12.365 ppb	3.5937	29.06%
Sb 206.836†	-18.5	-5.4302 µg/L	1.74015	-5.4302 ppb	1.74015	32.05%
Se 196.026†	-11.4	-5.3747 µg/L	6.02294	-5.3747 ppb	6.02294	112.06%
SiO2†	195.1	33.002 µg/L	0.7264	33.002 ppb	0.7264	2.20%
Si 251.611†	-3.6	-0.1943 µg/L	0.62204	-0.1943 ppb	0.62204	320.07%
Sn 189.927†	2.3	0.3010 µg/L	0.52614	0.3010 ppb	0.52614	174.82%
Sr 421.552†	79.9	0.4707 µg/L	0.11038	0.4707 ppb	0.11038	23.45%
Ti 334.940†	1286.7	1.0303 µg/L	0.19964	1.0303 ppb	0.19964	19.38%
Tl 190.801†	-32.2	-3.0634 µg/L	0.43045	-3.0634 ppb	0.43045	14.05%
U 367.007†	27316.9	9608 µg/L	53.29	9608 ppb	53.29	0.55%
QC value within limits for U 367.007 Recovery = 96.08%						
V 292.402†	-386.0	0.5805 µg/L	0.42998	0.5805 ppb	0.42998	74.07%
Zn 213.857†	152.4	1.1704 µg/L	0.12402	1.1704 ppb	0.12402	10.60%

All analyte(s) passed QC.

Sequence No.: 13 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 06:26:08**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21630.0	21630.0	98.0	%			06:26:46
1	Al 396.153Radial†	16460.3	16896.8	5410.6	µg/L	5410.6	ppb	06:26:46
1	Ca 317.933Radial†	25066.2	25291.5	5416.3	µg/L	5416.3	ppb	06:26:46
1	Fe 238.204 Radial†	26859.0	27382.9	5329.6	µg/L	5329.6	ppb	06:26:46
1	K 766.490 Radial†	6084.0	5788.9	5260.4	µg/L	5260.4	ppb	06:26:46
1	Mg 279.077 IEC†	3320.8	3333.9	5448.3	µg/L	5448.3	ppb	06:26:46
1	Na 589.592 Radial†	6883.5	6899.1	10602	µg/L	10602	ppb	06:26:46
1	Sr 421.552†	86031.5	87561.4	514.80	µg/L	514.80	ppb	06:26:41
1	Sc 361.383	352517.7	352517.7	96.262	%			06:27:13
1	Y 371.029	343012.7	343012.7	95.318	%			06:27:13
1	Ag 328.068†	48327.0	50887.1	516.75	µg/L	516.75	ppb	06:27:13
1	As 188.979†	1114.5	1170.6	519.24	µg/L	519.24	ppb	06:27:34
1	B 249.677†	15571.7	16003.1	550.68	µg/L	550.68	ppb	06:27:13
1	Ba 233.527†	59465.6	61790.0	519.96	µg/L	519.96	ppb	06:27:13
1	Be 313.107†	596898.2	623648.4	518.48	µg/L	518.48	ppb	06:27:13
1	Cd 226.502†	47894.3	50077.0	519.17	µg/L	519.17	ppb	06:27:13
1	Co 228.616†	21246.3	22293.7	513.74	µg/L	513.74	ppb	06:27:34
1	Cr 267.716†	24738.4	25577.0	509.16	µg/L	509.16	ppb	06:27:34
1	Cu 324.752†	69738.3	70526.0	518.07	µg/L	518.07	ppb	06:27:13
1	Mn 257.610†	319396.3	331340.9	520.72	µg/L	520.72	ppb	06:27:13
1	Mo 202.031†	8670.4	8974.1	509.15	µg/L	509.15	ppb	06:27:34
1	Ni 231.604†	17886.0	18784.4	519.31	µg/L	519.31	ppb	06:27:34
1	P 214.914†	3778.4	3793.4	2510.3	µg/L	2510.3	ppb	06:27:34
1	Pb 220.353†	3958.5	4175.8	516.55	µg/L	516.55	ppb	06:27:34
1	S 181.975 Axial†	891.5	833.8	1021.8	µg/L	1021.8	ppb	06:27:34
1	Sb 206.836†	1859.4	1777.0	505.42	µg/L	505.42	ppb	06:27:34
1	Se 196.026†	1031.7	1095.5	520.15	µg/L	520.15	ppb	06:27:34
1	SiO2†	32576.0	32775.6	5514.5	µg/L	5514.5	ppb	06:27:13
1	Si 251.611†	44917.6	46669.9	2572.1	µg/L	2572.1	ppb	06:27:13
1	Sn 189.927†	3987.8	4095.1	510.63	µg/L	510.63	ppb	06:27:34
1	Ti 334.940†	115592.7	120802.5	514.26	µg/L	514.26	ppb	06:27:13
1	Tl 190.801†	2232.3	2397.3	514.29	µg/L	514.29	ppb	06:27:34
1	U 367.007†	2304.4	1510.4	507.8	µg/L	507.8	ppb	06:27:13
1	V 292.402†	37742.1	39339.4	519.95	µg/L	519.95	ppb	06:27:13
1	Zn 213.857†	66367.4	68046.4	514.78	µg/L	514.78	ppb	06:27:13
2	Sc RADIAL	21567.4	21567.4	97.7	%			06:26:56
2	Al 396.153Radial†	16357.2	16840.1	5392.3	µg/L	5392.3	ppb	06:26:56
2	Ca 317.933Radial†	24942.2	25238.9	5405.1	µg/L	5405.1	ppb	06:26:56
2	Fe 238.204 Radial†	26703.3	27303.1	5314.1	µg/L	5314.1	ppb	06:26:56
2	K 766.490 Radial†	5969.9	5690.1	5170.7	µg/L	5170.7	ppb	06:26:56
2	Mg 279.077 IEC†	3287.2	3309.3	5408.1	µg/L	5408.1	ppb	06:26:56
2	Na 589.592 Radial†	6805.3	6839.5	10510	µg/L	10510	ppb	06:26:56
2	Sr 421.552†	86064.2	87849.9	516.49	µg/L	516.49	ppb	06:26:51
2	Sc 361.383	350868.8	350868.8	95.812	%			06:27:40
2	Y 371.029	341468.9	341468.9	94.889	%			06:27:40
2	Ag 328.068†	47993.1	50774.5	515.59	µg/L	515.59	ppb	06:27:40
2	As 188.979†	1124.1	1186.0	526.01	µg/L	526.01	ppb	06:28:00
2	B 249.677†	15465.3	15968.1	549.45	µg/L	549.45	ppb	06:27:40
2	Ba 233.527†	58790.2	61375.4	516.47	µg/L	516.47	ppb	06:27:40
2	Be 313.107†	591520.6	620949.8	516.24	µg/L	516.24	ppb	06:27:40
2	Cd 226.502†	47422.0	49817.9	516.49	µg/L	516.49	ppb	06:27:40
2	Co 228.616†	21172.3	22320.1	514.35	µg/L	514.35	ppb	06:28:00
2	Cr 267.716†	24608.8	25562.5	508.85	µg/L	508.85	ppb	06:28:00
2	Cu 324.752†	69066.5	70165.2	515.43	µg/L	515.43	ppb	06:27:40
2	Mn 257.610†	316303.8	329672.6	518.10	µg/L	518.10	ppb	06:27:40
2	Mo 202.031†	8646.4	8991.3	510.13	µg/L	510.13	ppb	06:28:00
2	Ni 231.604†	17850.5	18834.7	520.70	µg/L	520.70	ppb	06:28:00
2	P 214.914†	3783.4	3817.1	2526.1	µg/L	2526.1	ppb	06:28:00

2	Pb 220.353†	3936.9	4172.5	516.12 µg/L	516.12 ppb	06:28:00
2	S 181.975 Axial†	885.7	832.0	1019.7 µg/L	1019.7 ppb	06:28:00
2	Sb 206.836†	1857.1	1783.6	507.33 µg/L	507.33 ppb	06:28:00
2	Se 196.026†	1038.2	1107.4	525.76 µg/L	525.76 ppb	06:28:00
2	SiO2†	32257.7	32602.4	5485.2 µg/L	5485.2 ppb	06:27:40
2	Si 251.611†	44516.6	46470.6	2561.1 µg/L	2561.1 ppb	06:27:40
2	Sn 189.927†	3978.1	4104.5	511.78 µg/L	511.78 ppb	06:28:00
2	Ti 334.940†	114269.8	119986.1	510.77 µg/L	510.77 ppb	06:27:40
2	Tl 190.801†	2213.7	2388.8	512.48 µg/L	512.48 ppb	06:28:00
2	U 367.007†	2355.3	1574.8	530.4 µg/L	530.4 ppb	06:27:40
2	V 292.402†	37371.0	39136.3	517.32 µg/L	517.32 ppb	06:27:40
2	Zn 213.857†	65902.0	67884.7	513.54 µg/L	513.54 ppb	06:27:40
3	Sc RADIAL	21523.5	21523.5	97.5 %		06:27:06
3	Al 396.153Radial†	16306.9	16822.6	5386.6 µg/L	5386.6 ppb	06:27:06
3	Ca 317.933Radial†	24853.1	25199.5	5396.6 µg/L	5396.6 ppb	06:27:06
3	Fe 238.204 Radial†	26633.9	27287.6	5311.0 µg/L	5311.0 ppb	06:27:06
3	K 766.490 Radial†	5970.8	5703.6	5182.9 µg/L	5182.9 ppb	06:27:06
3	Mg 279.077 IEC†	3308.9	3338.4	5455.7 µg/L	5455.7 ppb	06:27:06
3	Na 589.592 Radial†	6791.4	6839.4	10510 µg/L	10510 ppb	06:27:06
3	Sr 421.552†	86186.3	88154.8	518.29 µg/L	518.29 ppb	06:27:01
3	Sc 361.383	352621.2	352621.2	96.291 %		06:28:06
3	Y 371.029	343176.6	343176.6	95.363 %		06:28:06
3	Ag 328.068†	48326.2	50871.5	516.59 µg/L	516.59 ppb	06:28:06
3	As 188.979†	1123.2	1179.3	523.06 µg/L	523.06 ppb	06:28:26
3	B 249.677†	15557.2	15983.3	549.95 µg/L	549.95 ppb	06:28:06
3	Ba 233.527†	59164.3	61459.0	517.17 µg/L	517.17 ppb	06:28:06
3	Be 313.107†	595861.2	622389.4	517.43 µg/L	517.43 ppb	06:28:06
3	Cd 226.502†	47746.4	49908.8	517.43 µg/L	517.43 ppb	06:28:06
3	Co 228.616†	21250.1	22291.2	513.68 µg/L	513.68 ppb	06:28:26
3	Cr 267.716†	24704.3	25534.1	508.31 µg/L	508.31 ppb	06:28:26
3	Cu 324.752†	69409.3	70163.0	515.40 µg/L	515.40 ppb	06:28:06
3	Mn 257.610†	318326.2	330132.2	518.82 µg/L	518.82 ppb	06:28:06
3	Mo 202.031†	8688.5	8990.3	510.07 µg/L	510.07 ppb	06:28:26
3	Ni 231.604†	17870.9	18763.3	518.73 µg/L	518.73 ppb	06:28:26
3	P 214.914†	3772.0	3785.6	2505.2 µg/L	2505.2 ppb	06:28:26
3	Pb 220.353†	3930.0	4144.9	512.74 µg/L	512.74 ppb	06:28:26
3	S 181.975 Axial†	887.2	829.1	1016.0 µg/L	1016.0 ppb	06:28:26
3	Sb 206.836†	1845.9	1762.4	501.26 µg/L	501.26 ppb	06:28:26
3	Se 196.026†	1034.1	1097.7	521.19 µg/L	521.19 ppb	06:28:26
3	SiO2†	32495.7	32682.3	5498.7 µg/L	5498.7 ppb	06:28:06
3	Si 251.611†	44801.7	46535.8	2564.7 µg/L	2564.7 ppb	06:28:06
3	Sn 189.927†	4000.3	4106.8	512.08 µg/L	512.08 ppb	06:28:26
3	Ti 334.940†	115325.2	120489.4	512.93 µg/L	512.93 ppb	06:28:06
3	Tl 190.801†	2240.4	2405.0	515.93 µg/L	515.93 ppb	06:28:26
3	U 367.007†	2281.3	1485.7	499.1 µg/L	499.1 ppb	06:28:06
3	V 292.402†	37653.8	39236.2	518.60 µg/L	518.60 ppb	06:28:06
3	Zn 213.857†	66103.9	67752.6	512.55 µg/L	512.55 ppb	06:28:06

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	352002.6	96.122	%	0.2685				0.28%
Sc RADIAL	21573.6	97.7	%	0.24				0.25%
Y 371.029	342552.7	95.190	%	0.2618				0.28%
Ag 328.068†	50844.4	516.31	µg/L	0.629	516.31	ppb	0.629	0.12%
QC value within limits for Ag 328.068 Recovery = 103.26%								
Al 396.153Radial†	16853.2	5396.5	µg/L	12.51	5396.5	ppb	12.51	0.23%
QC value within limits for Al 396.153Radial Recovery = 107.93%								
As 188.979†	1178.6	522.77	µg/L	3.396	522.77	ppb	3.396	0.65%
QC value within limits for As 188.979 Recovery = 104.55%								
B 249.677†	15984.8	550.03	µg/L	0.617	550.03	ppb	0.617	0.11%
QC value greater than the upper limit for B 249.677 Recovery = 110.01%								
Ba 233.527†	61541.5	517.86	µg/L	1.845	517.86	ppb	1.845	0.36%
QC value within limits for Ba 233.527 Recovery = 103.57%								
Be 313.107†	622329.2	517.38	µg/L	1.119	517.38	ppb	1.119	0.22%
QC value within limits for Be 313.107 Recovery = 103.48%								
Ca 317.933Radial†	25243.3	5406.0	µg/L	9.88	5406.0	ppb	9.88	0.18%
QC value within limits for Ca 317.933Radial Recovery = 108.12%								
Cd 226.502†	49934.6	517.70	µg/L	1.363	517.70	ppb	1.363	0.26%
QC value within limits for Cd 226.502 Recovery = 103.54%								

Co 228.616†	22301.7	513.92 µg/L	0.372	513.92 ppb	0.372	0.07%
QC value within limits for Co 228.616 Recovery = 102.78%						
Cr 267.716†	25557.8	508.78 µg/L	0.429	508.78 ppb	0.429	0.08%
QC value within limits for Cr 267.716 Recovery = 101.76%						
Cu 324.752†	70284.8	516.30 µg/L	1.532	516.30 ppb	1.532	0.30%
QC value within limits for Cu 324.752 Recovery = 103.26%						
Fe 238.204 Radial†	27324.5	5318.2 µg/L	9.95	5318.2 ppb	9.95	0.19%
QC value within limits for Fe 238.204 Radial Recovery = 106.36%						
K 766.490 Radial†	5727.5	5204.7 µg/L	48.68	5204.7 ppb	48.68	0.94%
QC value within limits for K 766.490 Radial Recovery = 104.09%						
Mg 279.077 IEC†	3327.2	5437.4 µg/L	25.59	5437.4 ppb	25.59	0.47%
QC value within limits for Mg 279.077 IEC Recovery = 108.75%						
Mn 257.610†	330381.9	519.21 µg/L	1.354	519.21 ppb	1.354	0.26%
QC value within limits for Mn 257.610 Recovery = 103.84%						
Mo 202.031†	8985.2	509.78 µg/L	0.546	509.78 ppb	0.546	0.11%
QC value within limits for Mo 202.031 Recovery = 101.96%						
Na 589.592 Radial†	6859.4	10541 µg/L	52.95	10541 ppb	52.95	0.50%
QC value within limits for Na 589.592 Radial Recovery = 105.41%						
Ni 231.604†	18794.1	519.58 µg/L	1.014	519.58 ppb	1.014	0.20%
QC value within limits for Ni 231.604 Recovery = 103.92%						
P 214.914†	3798.7	2513.9 µg/L	10.91	2513.9 ppb	10.91	0.43%
QC value within limits for P 214.914 Recovery = 100.55%						
Pb 220.353†	4164.4	515.14 µg/L	2.085	515.14 ppb	2.085	0.40%
QC value within limits for Pb 220.353 Recovery = 103.03%						
S 181.975 Axial†	831.6	1019.1 µg/L	2.91	1019.1 ppb	2.91	0.29%
QC value within limits for S 181.975 Axial Recovery = 101.91%						
Sb 206.836†	1774.3	504.67 µg/L	3.104	504.67 ppb	3.104	0.61%
QC value within limits for Sb 206.836 Recovery = 100.93%						
Se 196.026†	1100.2	522.37 µg/L	2.984	522.37 ppb	2.984	0.57%
QC value within limits for Se 196.026 Recovery = 104.47%						
SiO2†	32686.8	5499.4 µg/L	14.68	5499.4 ppb	14.68	0.27%
QC value within limits for SiO2 Recovery = 102.84%						
Si 251.611†	46558.8	2566.0 µg/L	5.63	2566.0 ppb	5.63	0.22%
QC value within limits for Si 251.611 Recovery = 102.64%						
Sn 189.927†	4102.1	511.50 µg/L	0.769	511.50 ppb	0.769	0.15%
QC value within limits for Sn 189.927 Recovery = 102.30%						
Sr 421.552†	87855.3	516.52 µg/L	1.745	516.52 ppb	1.745	0.34%
QC value within limits for Sr 421.552 Recovery = 103.30%						
Ti 334.940†	120426.0	512.66 µg/L	1.760	512.66 ppb	1.760	0.34%
QC value within limits for Ti 334.940 Recovery = 102.53%						
Tl 190.801†	2397.0	514.24 µg/L	1.726	514.24 ppb	1.726	0.34%
QC value within limits for Tl 190.801 Recovery = 102.85%						
U 367.007†	1523.6	512.4 µg/L	16.18	512.4 ppb	16.18	3.16%
QC value within limits for U 367.007 Recovery = 102.49%						
V 292.402†	39237.3	518.63 µg/L	1.315	518.63 ppb	1.315	0.25%
QC value within limits for V 292.402 Recovery = 103.73%						
Zn 213.857†	67894.6	513.62 µg/L	1.118	513.62 ppb	1.118	0.22%
QC value within limits for Zn 213.857 Recovery = 102.72%						

QC Failed. Continue with analysis.

Sequence No.: 14 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 06:28:34**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	21353.4	21353.4	96.7	%			06:29:25
1	Al 396.153Radial†	-98.4	-7.8	-2.5407	µg/L	-2.5407	ppb	06:29:25
1	Ca 317.933Radial†	363.5	79.5	17.029	µg/L	17.029	ppb	06:29:25
1	Fe 238.204 Radial†	58.3	25.2	4.9125	µg/L	4.9125	ppb	06:29:25
1	K 766.490 Radial†	379.2	-29.5	-26.818	µg/L	-26.818	ppb	06:29:05
1	Mg 279.077 IEC†	68.9	15.2	24.858	µg/L	24.858	ppb	06:29:25
1	Na 589.592 Radial†	98.4	-25.8	-39.649	µg/L	-39.649	ppb	06:29:25
1	Sr 421.552†	158.2	-96.9	-0.5703	µg/L	-0.5703	ppb	06:29:05
1	Sc 361.383	348845.7	348845.7	95.260	%			06:30:21
1	Y 371.029	343089.9	343089.9	95.339	%			06:30:21
1	Ag 328.068†	-594.3	59.8	0.5913	µg/L	0.5913	ppb	06:30:21
1	As 188.979†	-22.3	-10.6	-4.6345	µg/L	-4.6345	ppb	06:30:41
1	B 249.677†	467.7	317.8	10.581	µg/L	10.581	ppb	06:30:41
1	Ba 233.527†	-17.0	-2.3	-0.0199	µg/L	-0.0199	ppb	06:30:41
1	Be 313.107†	-3517.7	-118.8	-0.0924	µg/L	-0.0924	ppb	06:30:21
1	Cd 226.502†	-306.9	0.9	0.0081	µg/L	0.0081	ppb	06:30:41
1	Co 228.616†	-206.7	5.5	0.1273	µg/L	0.1273	ppb	06:30:41
1	Cr 267.716†	131.3	15.9	0.2986	µg/L	0.2986	ppb	06:30:41
1	Cu 324.752†	2028.3	209.1	1.5497	µg/L	1.5497	ppb	06:30:21
1	Mn 257.610†	442.6	7.7	0.0124	µg/L	0.0124	ppb	06:30:41
1	Mo 202.031†	48.1	17.5	0.9946	µg/L	0.9946	ppb	06:30:41
1	Ni 231.604†	-235.7	-43.4	-1.2013	µg/L	-1.2013	ppb	06:30:41
1	P 214.914†	116.1	-9.9	-6.5883	µg/L	-6.5883	ppb	06:30:41
1	Pb 220.353†	-60.2	0.3	0.0155	µg/L	0.0155	ppb	06:30:41
1	S 181.975 Axial†	86.7	-1.3	-1.6184	µg/L	-1.6184	ppb	06:30:41
1	Sb 206.836†	159.3	12.7	3.6336	µg/L	3.6336	ppb	06:30:41
1	Se 196.026†	-21.2	1.5	0.6924	µg/L	0.6924	ppb	06:30:41
1	SiO2†	1029.0	15.0	2.4809	µg/L	2.4809	ppb	06:30:41
1	Si 251.611†	10.4	19.2	1.0431	µg/L	1.0431	ppb	06:30:41
1	Sn 189.927†	33.9	-11.9	-1.4803	µg/L	-1.4803	ppb	06:30:41
1	Ti 334.940†	-650.3	38.9	0.1549	µg/L	0.1549	ppb	06:30:21
1	Tl 190.801†	-85.6	-11.6	-2.4631	µg/L	-2.4631	ppb	06:30:41
1	U 367.007†	907.6	69.3	24.34	µg/L	24.34	ppb	06:30:21
1	V 292.402†	-152.0	-27.7	-0.3373	µg/L	-0.3373	ppb	06:30:41
1	Zn 213.857†	990.0	141.4	1.0816	µg/L	1.0816	ppb	06:30:41
2	Sc RADIAL	21262.6	21262.6	96.3	%			06:29:50
2	Al 396.153Radial†	-94.5	-4.1	-1.3200	µg/L	-1.3200	ppb	06:29:50
2	Ca 317.933Radial†	356.9	74.3	15.906	µg/L	15.906	ppb	06:29:50
2	Fe 238.204 Radial†	54.5	21.6	4.2007	µg/L	4.2007	ppb	06:29:50
2	K 766.490 Radial†	442.0	37.4	33.956	µg/L	33.956	ppb	06:29:30
2	Mg 279.077 IEC†	48.6	-5.6	-9.2169	µg/L	-9.2169	ppb	06:29:50
2	Na 589.592 Radial†	111.5	-11.8	-18.200	µg/L	-18.200	ppb	06:29:50
2	Sr 421.552†	257.0	6.4	0.0374	µg/L	0.0374	ppb	06:29:30
2	Sc 361.383	346709.6	346709.6	94.676	%			06:30:46
2	Y 371.029	340321.0	340321.0	94.570	%			06:30:46
2	Ag 328.068†	-603.0	46.8	0.4503	µg/L	0.4503	ppb	06:30:46
2	As 188.979†	-18.6	-6.9	-3.0226	µg/L	-3.0226	ppb	06:31:07
2	B 249.677†	450.6	302.7	10.076	µg/L	10.076	ppb	06:31:07
2	Ba 233.527†	-20.3	-6.0	-0.0502	µg/L	-0.0502	ppb	06:31:07
2	Be 313.107†	-3435.6	-54.9	-0.0351	µg/L	-0.0351	ppb	06:30:46
2	Cd 226.502†	-307.1	-1.2	-0.0131	µg/L	-0.0131	ppb	06:31:07
2	Co 228.616†	-194.9	16.6	0.3810	µg/L	0.3810	ppb	06:31:07
2	Cr 267.716†	118.7	3.4	0.0353	µg/L	0.0353	ppb	06:31:07
2	Cu 324.752†	1995.2	187.3	1.4011	µg/L	1.4011	ppb	06:30:46
2	Mn 257.610†	462.7	31.9	0.0504	µg/L	0.0504	ppb	06:31:07
2	Mo 202.031†	26.5	-4.9	-0.2800	µg/L	-0.2800	ppb	06:31:07
2	Ni 231.604†	-188.6	4.7	0.1300	µg/L	0.1300	ppb	06:31:07
2	P 214.914†	90.4	-36.2	-24.127	µg/L	-24.127	ppb	06:31:07

2	Pb 220.353†	-68.6	-8.9	-1.1353 µg/L	-1.1353 ppb	06:31:07
2	S 181.975 Axial†	103.0	16.4	20.178 µg/L	20.178 ppb	06:31:07
2	Sb 206.836†	147.6	1.3	0.3655 µg/L	0.3655 ppb	06:31:07
2	Se 196.026†	-6.1	17.3	8.1673 µg/L	8.1673 ppb	06:31:07
2	SiO2†	1046.9	40.6	6.8687 µg/L	6.8687 ppb	06:31:07
2	Si 251.611†	0.8	9.0	0.5046 µg/L	0.5046 ppb	06:31:07
2	Sn 189.927†	48.0	3.1	0.3890 µg/L	0.3890 ppb	06:31:07
2	Ti 334.940†	-612.8	74.2	0.2976 µg/L	0.2976 ppb	06:30:46
2	Tl 190.801†	-79.8	-5.9	-1.2489 µg/L	-1.2489 ppb	06:31:07
2	U 367.007†	948.4	118.3	41.58 µg/L	41.58 ppb	06:30:46
2	V 292.402†	-133.9	-9.6	-0.1023 µg/L	-0.1023 ppb	06:31:07
2	Zn 213.857†	979.0	136.2	1.0357 µg/L	1.0357 ppb	06:31:07
3	Sc RADIAL	21352.5	21352.5	96.7 %		06:30:15
3	Al 396.153Radial†	-92.1	-1.3	-0.4292 µg/L	-0.4292 ppb	06:30:15
3	Ca 317.933Radial†	373.0	89.4	19.146 µg/L	19.146 ppb	06:30:15
3	Fe 238.204 Radial†	52.3	19.0	3.7022 µg/L	3.7022 ppb	06:30:15
3	K 766.490 Radial†	468.7	63.0	57.290 µg/L	57.290 ppb	06:29:55
3	Mg 279.077 IEC†	62.0	8.0	13.140 µg/L	13.140 ppb	06:30:15
3	Na 589.592 Radial†	86.8	-37.8	-58.204 µg/L	-58.204 ppb	06:30:15
3	Sr 421.552†	285.9	35.2	0.2065 µg/L	0.2065 ppb	06:29:55
3	Sc 361.383	348140.8	348140.8	95.067 %		06:31:12
3	Y 371.029	341945.2	341945.2	95.021 %		06:31:12
3	Ag 328.068†	-645.7	4.5	0.0314 µg/L	0.0314 ppb	06:31:12
3	As 188.979†	-28.3	-17.0	-7.4702 µg/L	-7.4702 ppb	06:31:32
3	B 249.677†	446.6	296.5	9.8686 µg/L	9.8686 ppb	06:31:32
3	Ba 233.527†	0.4	15.9	0.1341 µg/L	0.1341 ppb	06:31:32
3	Be 313.107†	-3453.8	-59.1	-0.0430 µg/L	-0.0430 ppb	06:31:12
3	Cd 226.502†	-266.2	43.1	0.4466 µg/L	0.4466 ppb	06:31:32
3	Co 228.616†	-184.3	28.6	0.6586 µg/L	0.6586 ppb	06:31:32
3	Cr 267.716†	132.6	17.6	0.3311 µg/L	0.3311 ppb	06:31:32
3	Cu 324.752†	1997.2	180.7	1.3411 µg/L	1.3411 ppb	06:31:12
3	Mn 257.610†	482.9	51.1	0.0805 µg/L	0.0805 ppb	06:31:32
3	Mo 202.031†	37.6	6.6	0.3732 µg/L	0.3732 ppb	06:31:32
3	Ni 231.604†	-212.2	-19.2	-0.5323 µg/L	-0.5323 ppb	06:31:32
3	P 214.914†	117.9	-7.7	-5.1620 µg/L	-5.1620 ppb	06:31:32
3	Pb 220.353†	-50.4	10.5	1.2785 µg/L	1.2785 ppb	06:31:32
3	S 181.975 Axial†	97.7	10.4	12.782 µg/L	12.782 ppb	06:31:32
3	Sb 206.836†	159.7	13.4	3.8442 µg/L	3.8442 ppb	06:31:32
3	Se 196.026†	-30.9	-8.7	-4.1293 µg/L	-4.1293 ppb	06:31:32
3	SiO2†	1036.2	24.7	4.1630 µg/L	4.1630 ppb	06:31:32
3	Si 251.611†	2.1	10.4	0.5680 µg/L	0.5680 ppb	06:31:32
3	Sn 189.927†	42.0	-3.4	-0.4200 µg/L	-0.4200 ppb	06:31:32
3	Ti 334.940†	-602.8	87.5	0.3623 µg/L	0.3623 ppb	06:31:12
3	Tl 190.801†	-88.6	-14.9	-3.1683 µg/L	-3.1683 ppb	06:31:32
3	U 367.007†	903.4	66.8	23.48 µg/L	23.48 ppb	06:31:12
3	V 292.402†	-156.6	-32.9	-0.4113 µg/L	-0.4113 ppb	06:31:32
3	Zn 213.857†	986.7	140.0	1.0681 µg/L	1.0681 ppb	06:31:32

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	347898.7	95.001	%	0.2972				0.31%
Sc RADIAL	21322.8	96.6	%	0.24				0.24%
Y 371.029	341785.4	94.977	%	0.3866				0.41%
Ag 328.068†	37.0	0.3576	µg/L	0.29121	0.3576	ppb	0.29121	81.42%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-4.4	-1.4300	µg/L	1.06005	-1.4300	ppb	1.06005	74.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.5	-5.0424	µg/L	2.25167	-5.0424	ppb	2.25167	44.65%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	305.7	10.175	µg/L	0.3665	10.175	ppb	0.3665	3.60%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	2.5	0.0213	µg/L	0.09883	0.0213	ppb	0.09883	463.37%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-77.6	-0.0569	µg/L	0.03104	-0.0569	ppb	0.03104	54.59%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	81.1	17.360	µg/L	1.6451	17.360	ppb	1.6451	9.48%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	14.3	0.1472	µg/L	0.25954	0.1472	ppb	0.25954	176.32%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	16.9	0.3890 µg/L	0.26575	0.3890 ppb	0.26575	68.32%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	12.3	0.2217 µg/L	0.16221	0.2217 ppb	0.16221	73.16%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	192.4	1.4306 µg/L	0.10736	1.4306 ppb	0.10736	7.50%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	21.9	4.2718 µg/L	0.60826	4.2718 ppb	0.60826	14.24%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	23.6	21.476 µg/L	43.4208	21.476 ppb	43.4208	202.18%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	5.9	9.5938 µg/L	17.31220	9.5938 ppb	17.31220	180.45%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	30.2	0.0478 µg/L	0.03415	0.0478 ppb	0.03415	71.51%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	6.4	0.3626 µg/L	0.63733	0.3626 ppb	0.63733	175.76%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-25.2	-38.684 µg/L	20.0192	-38.684 ppb	20.0192	51.75%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-19.3	-0.5345 µg/L	0.66562	-0.5345 ppb	0.66562	124.52%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-17.9	-11.959 µg/L	10.5618	-11.959 ppb	10.5618	88.32%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	0.6	0.0529 µg/L	1.20734	0.0529 ppb	1.20734	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	8.5	10.447 µg/L	11.0843	10.447 ppb	11.0843	106.10%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	9.1	2.6144 µg/L	1.95050	2.6144 ppb	1.95050	74.61%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	3.3	1.5768 µg/L	6.19579	1.5768 ppb	6.19579	392.93%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	26.8	4.5042 µg/L	2.21372	4.5042 ppb	2.21372	49.15%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	12.9	0.7052 µg/L	0.29431	0.7052 ppb	0.29431	41.73%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-4.1	-0.5038 µg/L	0.93747	-0.5038 ppb	0.93747	186.10%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-18.5	-0.1088 µg/L	0.40851	-0.1088 ppb	0.40851	375.45%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	66.9	0.2716 µg/L	0.10610	0.2716 ppb	0.10610	39.06%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-10.8	-2.2934 µg/L	0.97088	-2.2934 ppb	0.97088	42.33%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	84.8	29.80 µg/L	10.213	29.80 ppb	10.213	34.27%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	-23.4	-0.2836 µg/L	0.16133	-0.2836 ppb	0.16133	56.88%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	139.2	1.0618 µg/L	0.02362	1.0618 ppb	0.02362	2.22%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 11 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 07:55:39**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25466.0	25466.0	115	%			07:56:18
1	Al 396.153Radial†	17295.2	15089.6	4831.4	µg/L	4831.4	ppb	07:56:18
1	Ca 317.933Radial†	26953.7	23073.6	4941.4	µg/L	4941.4	ppb	07:56:18
1	Fe 238.204 Radial†	28933.7	25051.7	4875.9	µg/L	4875.9	ppb	07:56:18
1	K 766.490 Radial†	6414.2	5139.7	4670.5	µg/L	4670.5	ppb	07:56:18
1	Mg 279.077 IEC†	3613.1	3076.7	5028.0	µg/L	5028.0	ppb	07:56:18
1	Na 589.592 Radial†	7145.4	6067.8	9324.2	µg/L	9324.2	ppb	07:56:18
1	Sr 421.552†	91726.0	79269.9	466.05	µg/L	466.05	ppb	07:56:13
1	Sc 361.383	412262.1	412262.1	112.58	%			07:56:45
1	Y 371.029	402676.8	402676.8	111.90	%			07:56:45
1	Ag 328.068†	51293.4	46246.7	469.66	µg/L	469.66	ppb	07:56:45
1	As 188.979†	1226.2	1102.0	488.67	µg/L	488.67	ppb	07:57:05
1	B 249.677†	16258.3	14268.8	491.44	µg/L	491.44	ppb	07:56:45
1	Ba 233.527†	62894.2	55883.3	470.25	µg/L	470.25	ppb	07:56:45
1	Be 313.107†	636078.6	568591.4	472.70	µg/L	472.70	ppb	07:56:45
1	Cd 226.502†	51531.4	46097.5	477.92	µg/L	477.92	ppb	07:56:45
1	Co 228.616†	22633.2	20327.1	468.43	µg/L	468.43	ppb	07:57:05
1	Cr 267.716†	26398.9	23327.7	464.42	µg/L	464.42	ppb	07:57:05
1	Cu 324.752†	73433.5	63309.6	465.04	µg/L	465.04	ppb	07:56:45
1	Mn 257.610†	337690.9	299508.0	470.69	µg/L	470.69	ppb	07:56:45
1	Mo 202.031†	9256.0	8189.0	464.61	µg/L	464.61	ppb	07:57:05
1	Ni 231.604†	19184.8	17245.5	476.77	µg/L	476.77	ppb	07:57:05
1	P 214.914†	4103.0	3512.9	2325.0	µg/L	2325.0	ppb	07:57:05
1	Pb 220.353†	4241.5	3831.1	473.94	µg/L	473.94	ppb	07:57:05
1	S 181.975 Axial†	964.5	764.5	936.85	µg/L	936.85	ppb	07:57:05
1	Sb 206.836†	1969.0	1594.5	453.46	µg/L	453.46	ppb	07:57:05
1	Se 196.026†	1110.1	1009.9	479.49	µg/L	479.49	ppb	07:57:05
1	SiO2†	34656.7	29719.7	5000.2	µg/L	5000.2	ppb	07:56:45
1	Si 251.611†	47936.0	42588.9	2347.2	µg/L	2347.2	ppb	07:56:45
1	Sn 189.927†	4312.5	3783.2	471.69	µg/L	471.69	ppb	07:57:05
1	Ti 334.940†	121874.1	108980.2	463.95	µg/L	463.95	ppb	07:56:45
1	Tl 190.801†	2403.4	2213.2	474.75	µg/L	474.75	ppb	07:57:05
1	U 367.007†	2409.0	1256.4	420.4	µg/L	420.4	ppb	07:56:45
1	V 292.402†	40157.1	35802.8	473.20	µg/L	473.20	ppb	07:56:45
1	Zn 213.857†	70653.7	61862.6	467.97	µg/L	467.97	ppb	07:56:45
2	Sc RADIAL	25391.9	25391.9	115	%			07:56:28
2	Al 396.153Radial†	17303.5	15140.7	4847.7	µg/L	4847.7	ppb	07:56:28
2	Ca 317.933Radial†	26858.4	23059.0	4938.2	µg/L	4938.2	ppb	07:56:28
2	Fe 238.204 Radial†	28895.5	25091.8	4883.7	µg/L	4883.7	ppb	07:56:28
2	K 766.490 Radial†	6382.2	5128.1	4659.9	µg/L	4659.9	ppb	07:56:28
2	Mg 279.077 IEC†	3596.7	3071.6	5019.7	µg/L	5019.7	ppb	07:56:28
2	Na 589.592 Radial†	7195.1	6129.1	9418.6	µg/L	9418.6	ppb	07:56:28
2	Sr 421.552†	91206.6	79050.4	464.76	µg/L	464.76	ppb	07:56:23
2	Sc 361.383	409809.6	409809.6	111.91	%			07:57:11
2	Y 371.029	400538.7	400538.7	111.30	%			07:57:11
2	Ag 328.068†	51008.6	46264.9	469.85	µg/L	469.85	ppb	07:57:11
2	As 188.979†	1225.1	1107.6	491.15	µg/L	491.15	ppb	07:57:31
2	B 249.677†	16256.8	14353.9	494.29	µg/L	494.29	ppb	07:57:11
2	Ba 233.527†	62617.5	55970.4	470.98	µg/L	470.98	ppb	07:57:11
2	Be 313.107†	634063.9	570172.3	474.01	µg/L	474.01	ppb	07:57:11
2	Cd 226.502†	51278.3	46145.3	478.42	µg/L	478.42	ppb	07:57:11
2	Co 228.616†	22660.6	20471.9	471.77	µg/L	471.77	ppb	07:57:31
2	Cr 267.716†	26391.5	23461.5	467.09	µg/L	467.09	ppb	07:57:31
2	Cu 324.752†	73027.6	63337.2	465.23	µg/L	465.23	ppb	07:57:11
2	Mn 257.610†	336490.7	300230.7	471.83	µg/L	471.83	ppb	07:57:11
2	Mo 202.031†	9267.0	8248.0	467.96	µg/L	467.96	ppb	07:57:31
2	Ni 231.604†	19170.5	17334.7	479.24	µg/L	479.24	ppb	07:57:31
2	P 214.914†	4104.6	3536.2	2340.4	µg/L	2340.4	ppb	07:57:31

2	Pb 220.353†	4242.4	3854.6	476.84 µg/L	476.84 ppb	07:57:31
2	S 181.975 Axial†	978.2	781.8	958.15 µg/L	958.15 ppb	07:57:31
2	Sb 206.836†	1964.1	1600.6	455.19 µg/L	455.19 ppb	07:57:31
2	Se 196.026†	1109.7	1015.3	482.07 µg/L	482.07 ppb	07:57:31
2	SiO2†	34641.8	29890.6	5028.9 µg/L	5028.9 ppb	07:57:11
2	Si 251.611†	47757.8	42684.5	2352.4 µg/L	2352.4 ppb	07:57:11
2	Sn 189.927†	4316.2	3809.4	474.96 µg/L	474.96 ppb	07:57:31
2	Ti 334.940†	121343.2	109153.6	464.69 µg/L	464.69 ppb	07:57:11
2	Tl 190.801†	2388.3	2212.5	474.60 µg/L	474.60 ppb	07:57:31
2	U 367.007†	2370.1	1234.4	412.7 µg/L	412.7 ppb	07:57:11
2	V 292.402†	40001.1	35876.8	474.20 µg/L	474.20 ppb	07:57:11
2	Zn 213.857†	70544.7	62140.8	470.08 µg/L	470.08 ppb	07:57:11
3	Sc RADIAL	25167.5	25167.5	114 %		07:56:38
3	Al 396.153Radial†	17270.2	15245.5	4881.4 µg/L	4881.4 ppb	07:56:38
3	Ca 317.933Radial†	26690.2	23119.6	4951.2 µg/L	4951.2 ppb	07:56:38
3	Fe 238.204 Radial†	28618.5	25072.7	4880.0 µg/L	4880.0 ppb	07:56:38
3	K 766.490 Radial†	6335.2	5136.4	4667.4 µg/L	4667.4 ppb	07:56:38
3	Mg 279.077 IEC†	3550.8	3059.1	4999.3 µg/L	4999.3 ppb	07:56:38
3	Na 589.592 Radial†	7185.8	6176.8	9491.8 µg/L	9491.8 ppb	07:56:38
3	Sr 421.552†	91538.4	80048.6	470.63 µg/L	470.63 ppb	07:56:33
3	Sc 361.383	406911.5	406911.5	111.12 %		07:57:37
3	Y 371.029	396895.1	396895.1	110.29 %		07:57:37
3	Ag 328.068†	50651.1	46267.8	469.87 µg/L	469.87 ppb	07:57:37
3	As 188.979†	1233.4	1122.8	497.85 µg/L	497.85 ppb	07:57:57
3	B 249.677†	16121.1	14335.2	493.65 µg/L	493.65 ppb	07:57:37
3	Ba 233.527†	62238.0	56027.4	471.46 µg/L	471.46 ppb	07:57:37
3	Be 313.107†	628474.5	569177.6	473.19 µg/L	473.19 ppb	07:57:37
3	Cd 226.502†	50915.5	46145.2	478.42 µg/L	478.42 ppb	07:57:37
3	Co 228.616†	22580.0	20543.6	473.42 µg/L	473.42 ppb	07:57:57
3	Cr 267.716†	26280.2	23529.3	468.43 µg/L	468.43 ppb	07:57:57
3	Cu 324.752†	72488.3	63316.6	465.09 µg/L	465.09 ppb	07:57:37
3	Mn 257.610†	333660.5	299825.2	471.19 µg/L	471.19 ppb	07:57:37
3	Mo 202.031†	9218.9	8263.7	468.85 µg/L	468.85 ppb	07:57:57
3	Ni 231.604†	19116.8	17408.4	481.27 µg/L	481.27 ppb	07:57:57
3	P 214.914†	4080.5	3540.6	2343.4 µg/L	2343.4 ppb	07:57:57
3	Pb 220.353†	4218.1	3859.7	477.47 µg/L	477.47 ppb	07:57:57
3	S 181.975 Axial†	965.1	776.2	951.27 µg/L	951.27 ppb	07:57:57
3	Sb 206.836†	1957.3	1606.9	456.99 µg/L	456.99 ppb	07:57:57
3	Se 196.026†	1110.2	1022.9	485.65 µg/L	485.65 ppb	07:57:57
3	SiO2†	34353.1	29851.2	5022.2 µg/L	5022.2 ppb	07:57:37
3	Si 251.611†	47338.4	42611.0	2348.4 µg/L	2348.4 ppb	07:57:37
3	Sn 189.927†	4318.3	3838.8	478.60 µg/L	478.60 ppb	07:57:57
3	Ti 334.940†	120328.2	109012.4	464.08 µg/L	464.08 ppb	07:57:37
3	Tl 190.801†	2381.5	2221.6	476.54 µg/L	476.54 ppb	07:57:57
3	U 367.007†	2405.1	1281.1	429.1 µg/L	429.1 ppb	07:57:37
3	V 292.402†	39689.3	35850.8	473.88 µg/L	473.88 ppb	07:57:37
3	Zn 213.857†	70047.1	62141.9	470.07 µg/L	470.07 ppb	07:57:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	409661.1	111.87	%	0.731				0.65%
Sc RADIAL	25341.8	115	%	0.70				0.61%
Y 371.029	400036.9	111.16	%	0.812				0.73%
Ag 328.068†	46259.8	469.79	µg/L	0.116	469.79	ppb	0.116	0.02%
QC value within limits for Ag 328.068 Recovery = 93.96%								
Al 396.153Radial†	15158.6	4853.5	µg/L	25.47	4853.5	ppb	25.47	0.52%
QC value within limits for Al 396.153Radial Recovery = 97.07%								
As 188.979†	1110.8	492.55	µg/L	4.750	492.55	ppb	4.750	0.96%
QC value within limits for As 188.979 Recovery = 98.51%								
B 249.677†	14319.3	493.13	µg/L	1.493	493.13	ppb	1.493	0.30%
QC value within limits for B 249.677 Recovery = 98.63%								
Ba 233.527†	55960.3	470.90	µg/L	0.611	470.90	ppb	0.611	0.13%
QC value within limits for Ba 233.527 Recovery = 94.18%								
Be 313.107†	569313.8	473.30	µg/L	0.663	473.30	ppb	0.663	0.14%
QC value within limits for Be 313.107 Recovery = 94.66%								
Ca 317.933Radial†	23084.1	4943.6	µg/L	6.78	4943.6	ppb	6.78	0.14%
QC value within limits for Ca 317.933Radial Recovery = 98.87%								
Cd 226.502†	46129.3	478.25	µg/L	0.286	478.25	ppb	0.286	0.06%
QC value within limits for Cd 226.502 Recovery = 95.65%								

Co 228.616†	20447.5	471.20 µg/L	2.545	471.20 ppb	2.545	0.54%
QC value within limits for Co 228.616 Recovery = 94.24%						
Cr 267.716†	23439.5	466.65 µg/L	2.040	466.65 ppb	2.040	0.44%
QC value within limits for Cr 267.716 Recovery = 93.33%						
Cu 324.752†	63321.1	465.12 µg/L	0.101	465.12 ppb	0.101	0.02%
QC value within limits for Cu 324.752 Recovery = 93.02%						
Fe 238.204 Radial†	25072.1	4879.8 µg/L	3.90	4879.8 ppb	3.90	0.08%
QC value within limits for Fe 238.204 Radial Recovery = 97.60%						
K 766.490 Radial†	5134.7	4666.0 µg/L	5.45	4666.0 ppb	5.45	0.12%
QC value within limits for K 766.490 Radial Recovery = 93.32%						
Mg 279.077 IEC†	3069.1	5015.7 µg/L	14.78	5015.7 ppb	14.78	0.29%
QC value within limits for Mg 279.077 IEC Recovery = 100.31%						
Mn 257.610†	299854.6	471.24 µg/L	0.569	471.24 ppb	0.569	0.12%
QC value within limits for Mn 257.610 Recovery = 94.25%						
Mo 202.031†	8233.6	467.14 µg/L	2.236	467.14 ppb	2.236	0.48%
QC value within limits for Mo 202.031 Recovery = 93.43%						
Na 589.592 Radial†	6124.5	9411.6 µg/L	84.02	9411.6 ppb	84.02	0.89%
QC value within limits for Na 589.592 Radial Recovery = 94.12%						
Ni 231.604†	17329.5	479.09 µg/L	2.254	479.09 ppb	2.254	0.47%
QC value within limits for Ni 231.604 Recovery = 95.82%						
P 214.914†	3529.9	2336.3 µg/L	9.87	2336.3 ppb	9.87	0.42%
QC value within limits for P 214.914 Recovery = 93.45%						
Pb 220.353†	3848.5	476.08 µg/L	1.883	476.08 ppb	1.883	0.40%
QC value within limits for Pb 220.353 Recovery = 95.22%						
S 181.975 Axial†	774.2	948.76 µg/L	10.869	948.76 ppb	10.869	1.15%
QC value within limits for S 181.975 Axial Recovery = 94.88%						
Sb 206.836†	1600.6	455.21 µg/L	1.766	455.21 ppb	1.766	0.39%
QC value within limits for Sb 206.836 Recovery = 91.04%						
Se 196.026†	1016.0	482.40 µg/L	3.097	482.40 ppb	3.097	0.64%
QC value within limits for Se 196.026 Recovery = 96.48%						
SiO2†	29820.5	5017.1 µg/L	15.03	5017.1 ppb	15.03	0.30%
QC value within limits for SiO2 Recovery = 93.82%						
Si 251.611†	42628.2	2349.3 µg/L	2.75	2349.3 ppb	2.75	0.12%
QC value within limits for Si 251.611 Recovery = 93.97%						
Sn 189.927†	3810.4	475.08 µg/L	3.455	475.08 ppb	3.455	0.73%
QC value within limits for Sn 189.927 Recovery = 95.02%						
Sr 421.552†	79456.3	467.14 µg/L	3.084	467.14 ppb	3.084	0.66%
QC value within limits for Sr 421.552 Recovery = 93.43%						
Ti 334.940†	109048.7	464.24 µg/L	0.395	464.24 ppb	0.395	0.09%
QC value within limits for Ti 334.940 Recovery = 92.85%						
Tl 190.801†	2215.7	475.30 µg/L	1.082	475.30 ppb	1.082	0.23%
QC value within limits for Tl 190.801 Recovery = 95.06%						
U 367.007†	1257.3	420.7 µg/L	8.21	420.7 ppb	8.21	1.95%
QC value less than the lower limit for U 367.007 Recovery = 84.14%						
V 292.402†	35843.5	473.76 µg/L	0.509	473.76 ppb	0.509	0.11%
QC value within limits for V 292.402 Recovery = 94.75%						
Zn 213.857†	62048.4	469.37 µg/L	1.215	469.37 ppb	1.215	0.26%
QC value within limits for Zn 213.857 Recovery = 93.87%						

QC Failed. Continue with analysis.

Sequence No.: 12 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 07:58:06**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24888.5	24888.5	113	%			07:58:57
1	Al 396.153Radial†	-84.2	19.3	6.2262	µg/L	6.2262	ppb	07:58:57
1	Ca 317.933Radial†	460.8	112.5	24.092	µg/L	24.092	ppb	07:58:57
1	Fe 238.204 Radial†	35.9	-3.2	-0.6294	µg/L	-0.6294	ppb	07:58:57
1	K 766.490 Radial†	534.9	52.8	48.032	µg/L	48.032	ppb	07:58:37
1	Mg 279.077 IEC†	74.0	9.6	15.704	µg/L	15.704	ppb	07:58:57
1	Na 589.592 Radial†	118.5	-22.5	-34.543	µg/L	-34.543	ppb	07:58:57
1	Sr 421.552†	261.2	-28.8	-0.1697	µg/L	-0.1697	ppb	07:58:37
1	Sc 361.383	409296.1	409296.1	111.77	%			07:59:53
1	Y 371.029	403762.2	403762.2	112.20	%			07:59:53
1	Ag 328.068†	-802.0	-33.9	-0.3585	µg/L	-0.3585	ppb	07:59:53
1	As 188.979†	-23.1	-7.9	-3.4788	µg/L	-3.4788	ppb	08:00:14
1	B 249.677†	234.7	36.8	1.2157	µg/L	1.2157	ppb	08:00:14
1	Ba 233.527†	-4.9	11.2	0.0939	µg/L	0.0939	ppb	08:00:14
1	Be 313.107†	-3594.2	358.1	0.3043	µg/L	0.3043	ppb	07:59:53
1	Cd 226.502†	-320.4	36.4	0.3785	µg/L	0.3785	ppb	08:00:14
1	Co 228.616†	-200.0	43.5	1.0011	µg/L	1.0011	ppb	08:00:14
1	Cr 267.716†	119.7	-14.9	-0.3167	µg/L	-0.3167	ppb	08:00:14
1	Cu 324.752†	2062.7	-74.6	-0.5307	µg/L	-0.5307	ppb	07:59:53
1	Mn 257.610†	504.4	-5.5	-0.0087	µg/L	-0.0087	ppb	08:00:14
1	Mo 202.031†	24.9	-10.7	-0.6065	µg/L	-0.6065	ppb	08:00:14
1	Ni 231.604†	-176.9	45.6	1.2615	µg/L	1.2615	ppb	08:00:14
1	P 214.914†	107.7	-35.3	-23.480	µg/L	-23.480	ppb	08:00:14
1	Pb 220.353†	-65.5	5.0	0.5936	µg/L	0.5936	ppb	08:00:14
1	S 181.975 Axial†	133.5	27.1	33.280	µg/L	33.280	ppb	08:00:14
1	Sb 206.836†	161.4	-10.2	-2.9334	µg/L	-2.9334	ppb	08:00:14
1	Se 196.026†	-27.9	-1.2	-0.5857	µg/L	-0.5857	ppb	08:00:14
1	SiO2†	1253.4	56.2	9.5294	µg/L	9.5294	ppb	08:00:14
1	Si 251.611†	210.9	196.9	10.897	µg/L	10.897	ppb	08:00:14
1	Sn 189.927†	31.9	-19.0	-2.3553	µg/L	-2.3553	ppb	08:00:14
1	Ti 334.940†	-727.8	70.3	0.2885	µg/L	0.2885	ppb	07:59:53
1	Tl 190.801†	-81.2	5.7	1.2306	µg/L	1.2306	ppb	08:00:14
1	U 367.007†	1071.6	75.3	26.49	µg/L	26.49	ppb	07:59:53
1	V 292.402†	-148.3	-0.8	-0.0015	µg/L	-0.0015	ppb	08:00:14
1	Zn 213.857†	1193.4	169.9	1.2884	µg/L	1.2884	ppb	08:00:14
2	Sc RADIAL	24806.2	24806.2	112	%			07:59:22
2	Al 396.153Radial†	-131.6	-23.2	-7.4488	µg/L	-7.4488	ppb	07:59:22
2	Ca 317.933Radial†	479.7	130.6	27.974	µg/L	27.974	ppb	07:59:22
2	Fe 238.204 Radial†	55.4	14.3	2.7806	µg/L	2.7806	ppb	07:59:22
2	K 766.490 Radial†	556.2	73.4	66.725	µg/L	66.725	ppb	07:59:02
2	Mg 279.077 IEC†	48.2	-13.1	-21.452	µg/L	-21.452	ppb	07:59:22
2	Na 589.592 Radial†	108.4	-31.1	-47.776	µg/L	-47.776	ppb	07:59:22
2	Sr 421.552†	338.8	41.1	0.2411	µg/L	0.2411	ppb	07:59:02
2	Sc 361.383	404818.5	404818.5	110.54	%			08:00:19
2	Y 371.029	399276.3	399276.3	110.95	%			08:00:19
2	Ag 328.068†	-658.8	87.7	0.8780	µg/L	0.8780	ppb	08:00:19
2	As 188.979†	-20.4	-5.7	-2.4967	µg/L	-2.4967	ppb	08:00:39
2	B 249.677†	228.0	33.1	1.1055	µg/L	1.1055	ppb	08:00:39
2	Ba 233.527†	-15.2	1.7	0.0145	µg/L	0.0145	ppb	08:00:39
2	Be 313.107†	-3560.4	353.1	0.2984	µg/L	0.2984	ppb	08:00:19
2	Cd 226.502†	-283.2	66.9	0.6935	µg/L	0.6935	ppb	08:00:39
2	Co 228.616†	-195.7	45.4	1.0444	µg/L	1.0444	ppb	08:00:39
2	Cr 267.716†	127.2	-6.9	-0.1521	µg/L	-0.1521	ppb	08:00:39
2	Cu 324.752†	1974.6	-133.9	-0.9708	µg/L	-0.9708	ppb	08:00:19
2	Mn 257.610†	495.8	-8.4	-0.0129	µg/L	-0.0129	ppb	08:00:39
2	Mo 202.031†	30.7	-5.2	-0.2940	µg/L	-0.2940	ppb	08:00:39
2	Ni 231.604†	-222.4	2.7	0.0748	µg/L	0.0748	ppb	08:00:39
2	P 214.914†	107.3	-34.7	-23.062	µg/L	-23.062	ppb	08:00:39

2	Pb 220.353†	-48.4	19.7	2.4245 µg/L	2.4245 ppb	08:00:39
2	S 181.975 Axial†	127.8	23.2	28.552 µg/L	28.552 ppb	08:00:39
2	Sb 206.836†	155.9	-13.6	-3.8837 µg/L	-3.8837 ppb	08:00:39
2	Se 196.026†	-12.8	12.2	5.7462 µg/L	5.7462 ppb	08:00:39
2	SiO2†	1248.6	64.3	10.875 µg/L	10.875 ppb	08:00:39
2	Si 251.611†	209.3	197.5	10.929 µg/L	10.929 ppb	08:00:39
2	Sn 189.927†	58.9	5.8	0.7223 µg/L	0.7223 ppb	08:00:39
2	Ti 334.940†	-652.1	131.6	0.5530 µg/L	0.5530 ppb	08:00:19
2	Tl 190.801†	-97.3	-9.7	-2.0594 µg/L	-2.0594 ppb	08:00:39
2	U 367.007†	1036.6	54.3	19.07 µg/L	19.07 ppb	08:00:19
2	V 292.402†	-143.0	2.5	0.0416 µg/L	0.0416 ppb	08:00:39
2	Zn 213.857†	1217.8	203.8	1.5537 µg/L	1.5537 ppb	08:00:39
3	Sc RADIAL	24765.7	24765.7	112 %		07:59:47
3	Al 396.153Radial†	-124.4	-16.9	-5.4558 µg/L	-5.4558 ppb	07:59:47
3	Ca 317.933Radial†	456.3	110.5	23.657 µg/L	23.657 ppb	07:59:47
3	Fe 238.204 Radial†	51.7	11.1	2.1561 µg/L	2.1561 ppb	07:59:47
3	K 766.490 Radial†	427.8	-40.3	-36.595 µg/L	-36.595 ppb	07:59:27
3	Mg 279.077 IEC†	64.7	1.6	2.5978 µg/L	2.5978 ppb	07:59:47
3	Na 589.592 Radial†	111.7	-28.0	-43.031 µg/L	-43.031 ppb	07:59:47
3	Sr 421.552†	225.6	-59.4	-0.3495 µg/L	-0.3495 ppb	07:59:27
3	Sc 361.383	407165.0	407165.0	111.18 %		08:00:44
3	Y 371.029	401357.4	401357.4	111.53 %		08:00:44
3	Ag 328.068†	-717.5	38.4	0.3837 µg/L	0.3837 ppb	08:00:44
3	As 188.979†	-13.1	1.0	0.4496 µg/L	0.4496 ppb	08:01:04
3	B 249.677†	263.9	64.1	2.1357 µg/L	2.1357 ppb	08:01:04
3	Ba 233.527†	9.2	23.8	0.2001 µg/L	0.2001 ppb	08:01:04
3	Be 313.107†	-3646.2	294.6	0.2471 µg/L	0.2471 ppb	08:00:44
3	Cd 226.502†	-312.3	42.2	0.4375 µg/L	0.4375 ppb	08:01:04
3	Co 228.616†	-200.5	42.1	0.9692 µg/L	0.9692 ppb	08:01:04
3	Cr 267.716†	132.3	-3.0	-0.0659 µg/L	-0.0659 ppb	08:01:04
3	Cu 324.752†	2101.6	-29.9	-0.2143 µg/L	-0.2143 ppb	08:00:44
3	Mn 257.610†	505.6	-2.1	-0.0031 µg/L	-0.0031 ppb	08:01:04
3	Mo 202.031†	40.8	3.7	0.2127 µg/L	0.2127 ppb	08:01:04
3	Ni 231.604†	-246.3	-17.6	-0.4866 µg/L	-0.4866 ppb	08:01:04
3	P 214.914†	130.2	-14.6	-9.7265 µg/L	-9.7265 ppb	08:01:04
3	Pb 220.353†	-80.9	-9.2	-1.1479 µg/L	-1.1479 ppb	08:01:04
3	S 181.975 Axial†	132.1	26.5	32.561 µg/L	32.561 ppb	08:01:04
3	Sb 206.836†	166.0	-5.3	-1.5199 µg/L	-1.5199 ppb	08:01:04
3	Se 196.026†	-21.1	4.8	2.2810 µg/L	2.2810 ppb	08:01:04
3	SiO2†	1251.1	60.0	10.132 µg/L	10.132 ppb	08:01:04
3	Si 251.611†	195.8	184.3	10.189 µg/L	10.189 ppb	08:01:04
3	Sn 189.927†	37.9	-13.5	-1.6707 µg/L	-1.6707 ppb	08:01:04
3	Ti 334.940†	-633.0	152.2	0.6452 µg/L	0.6452 ppb	08:00:44
3	Tl 190.801†	-81.9	4.7	1.0047 µg/L	1.0047 ppb	08:01:04
3	U 367.007†	1009.5	24.5	8.596 µg/L	8.596 ppb	08:00:44
3	V 292.402†	-167.5	-18.8	-0.2385 µg/L	-0.2385 ppb	08:01:04
3	Zn 213.857†	1229.3	207.8	1.5859 µg/L	1.5859 ppb	08:01:04

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	407093.2	111.17	%	0.612				0.55%
Sc RADIAL	24820.1	112	%	0.28				0.25%
Y 371.029	401465.3	111.56	%	0.624				0.56%
Ag 328.068†	30.8	0.3011	µg/L	0.62235	0.3011	ppb	0.62235	206.71%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-7.0	-2.2261	µg/L	7.38744	-2.2261	ppb	7.38744	331.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.2	-1.8419	µg/L	2.04440	-1.8419	ppb	2.04440	110.99%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	44.6	1.4856	µg/L	0.56567	1.4856	ppb	0.56567	38.08%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	12.2	0.1028	µg/L	0.09311	0.1028	ppb	0.09311	90.54%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	335.2	0.2833	µg/L	0.03144	0.2833	ppb	0.03144	11.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	117.9	25.241	µg/L	2.3771	25.241	ppb	2.3771	9.42%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	48.5	0.5032	µg/L	0.16748	0.5032	ppb	0.16748	33.28%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	43.7	1.0049 µg/L	0.03774	1.0049 ppb	0.03774	3.76%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-8.2	-0.1782 µg/L	0.12740	-0.1782 ppb	0.12740	71.49%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-79.5	-0.5719 µg/L	0.37996	-0.5719 ppb	0.37996	66.43%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	7.4	1.4358 µg/L	1.81552	1.4358 ppb	1.81552	126.45%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	28.7	26.054 µg/L	55.0547	26.054 ppb	55.0547	211.31%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-0.6	-1.0501 µg/L	18.84483	-1.0501 ppb	18.84483	>999.9%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-5.3	-0.0083 µg/L	0.00492	-0.0083 ppb	0.00492	59.54%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-4.0	-0.2293 µg/L	0.41342	-0.2293 ppb	0.41342	180.30%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-27.2	-41.783 µg/L	6.7040	-41.783 ppb	6.7040	16.04%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	10.3	0.2832 µg/L	0.89246	0.2832 ppb	0.89246	315.09%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-28.2	-18.756 µg/L	7.8228	-18.756 ppb	7.8228	41.71%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	5.1	0.6234 µg/L	1.78636	0.6234 ppb	1.78636	286.54%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	25.6	31.464 µg/L	2.5475	31.464 ppb	2.5475	8.10%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-9.7	-2.7790 µg/L	1.18946	-2.7790 ppb	1.18946	42.80%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	5.2	2.4805 µg/L	3.17064	2.4805 ppb	3.17064	127.82%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	60.2	10.179 µg/L	0.6739	10.179 ppb	0.6739	6.62%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	192.9	10.672 µg/L	0.4183	10.672 ppb	0.4183	3.92%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-8.9	-1.1012 µg/L	1.61589	-1.1012 ppb	1.61589	146.74%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-15.7	-0.0927 µg/L	0.30275	-0.0927 ppb	0.30275	326.54%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	118.1	0.4956 µg/L	0.18517	0.4956 ppb	0.18517	37.36%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.2	0.0586 µg/L	1.83777	0.0586 ppb	1.83777	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	51.4	18.05 µg/L	8.990	18.05 ppb	8.990	49.80%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	-5.7	-0.0661 µg/L	0.15082	-0.0661 ppb	0.15082	228.10%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	193.8	1.4760 µg/L	0.16329	1.4760 ppb	0.16329	11.06%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 13 **Autosampler Location: 309**
Sample ID: 1204069476|1782317|1| **Date Collected: 7/23/2018 08:01:13**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204069476|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24525.4	24525.4	111	%			08:02:07
1	Al 396.153Radial†	-105.5	-1.0	-0.3148	µg/L	-0.3148	ppb	08:02:07
1	Ca 317.933Radial†	357.8	25.8	5.5227	µg/L	5.5227	ppb	08:02:07
1	Fe 238.204 Radial†	68.9	27.0	5.2490	µg/L	5.2490	ppb	08:02:07
1	K 766.490 Radial†	537.3	62.1	56.392	µg/L	56.392	ppb	08:01:47
1	Mg 279.077 IEC†	56.9	-4.9	-7.9452	µg/L	-7.9452	ppb	08:02:07
1	Na 589.592 Radial†	103.0	-34.8	-53.561	µg/L	-53.561	ppb	08:02:07
1	Sr 421.552†	379.1	80.8	0.4750	µg/L	0.4750	ppb	08:01:47
1	Sc 361.383	403872.6	403872.6	110.29	%			08:03:03
1	Y 371.029	397809.0	397809.0	110.54	%			08:03:03
1	Ag 328.068†	-696.0	52.5	0.5336	µg/L	0.5336	ppb	08:03:03
1	As 188.979†	-18.2	-3.7	-1.6307	µg/L	-1.6307	ppb	08:03:24
1	B 249.677†	204.3	12.0	0.4167	µg/L	0.4167	ppb	08:03:24
1	Ba 233.527†	-23.6	-5.8	-0.0493	µg/L	-0.0493	ppb	08:03:24
1	Be 313.107†	-3629.8	282.6	0.2345	µg/L	0.2345	ppb	08:03:03
1	Cd 226.502†	-316.4	36.2	0.3755	µg/L	0.3755	ppb	08:03:24
1	Co 228.616†	-215.5	27.0	0.6223	µg/L	0.6223	ppb	08:03:24
1	Cr 267.716†	117.8	-15.2	-0.3009	µg/L	-0.3009	ppb	08:03:24
1	Cu 324.752†	2125.0	6.7	0.0488	µg/L	0.0488	ppb	08:03:03
1	Mn 257.610†	487.3	-15.0	-0.0232	µg/L	-0.0232	ppb	08:03:24
1	Mo 202.031†	37.5	1.1	0.0606	µg/L	0.0606	ppb	08:03:24
1	Ni 231.604†	-223.5	1.3	0.0363	µg/L	0.0363	ppb	08:03:24
1	P 214.914†	106.9	-34.8	-23.156	µg/L	-23.156	ppb	08:03:24
1	Pb 220.353†	-92.8	-20.6	-2.5460	µg/L	-2.5460	ppb	08:03:24
1	S 181.975 Axial†	146.9	40.9	50.207	µg/L	50.207	ppb	08:03:24
1	Sb 206.836†	165.3	-4.7	-1.3383	µg/L	-1.3383	ppb	08:03:24
1	Se 196.026†	-12.8	12.2	5.7485	µg/L	5.7485	ppb	08:03:24
1	SiO2†	1199.7	22.5	3.8046	µg/L	3.8046	ppb	08:03:24
1	Si 251.611†	135.4	131.0	7.2423	µg/L	7.2423	ppb	08:03:24
1	Sn 189.927†	31.8	-18.7	-2.3254	µg/L	-2.3254	ppb	08:03:24
1	Ti 334.940†	-712.8	75.3	0.3215	µg/L	0.3215	ppb	08:03:03
1	Tl 190.801†	-81.7	4.2	0.9075	µg/L	0.9075	ppb	08:03:24
1	U 367.007†	970.4	-3.6	-1.276	µg/L	-1.276	ppb	08:03:03
1	V 292.402†	-144.8	0.5	0.0074	µg/L	0.0074	ppb	08:03:24
1	Zn 213.857†	1338.1	315.5	2.4032	µg/L	2.4032	ppb	08:03:24
2	Sc RADIAL	24551.6	24551.6	111	%			08:02:32
2	Al 396.153Radial†	-93.9	9.5	3.0177	µg/L	3.0177	ppb	08:02:32
2	Ca 317.933Radial†	368.9	35.5	7.5921	µg/L	7.5921	ppb	08:02:32
2	Fe 238.204 Radial†	54.6	14.0	2.7280	µg/L	2.7280	ppb	08:02:32
2	K 766.490 Radial†	470.0	1.0	0.9389	µg/L	0.9389	ppb	08:02:12
2	Mg 279.077 IEC†	74.7	11.1	18.130	µg/L	18.130	ppb	08:02:32
2	Na 589.592 Radial†	115.2	-24.0	-36.842	µg/L	-36.842	ppb	08:02:32
2	Sr 421.552†	253.9	-32.2	-0.1895	µg/L	-0.1895	ppb	08:02:12
2	Sc 361.383	399345.8	399345.8	109.05	%			08:03:29
2	Y 371.029	392915.3	392915.3	109.18	%			08:03:29
2	Ag 328.068†	-626.7	109.0	1.0906	µg/L	1.0906	ppb	08:03:29
2	As 188.979†	-17.9	-3.6	-1.5754	µg/L	-1.5754	ppb	08:03:49
2	B 249.677†	240.7	47.5	1.5858	µg/L	1.5858	ppb	08:03:49
2	Ba 233.527†	2.5	17.8	0.1495	µg/L	0.1495	ppb	08:03:49
2	Be 313.107†	-3520.3	345.7	0.2929	µg/L	0.2929	ppb	08:03:29
2	Cd 226.502†	-327.0	23.2	0.2407	µg/L	0.2407	ppb	08:03:49
2	Co 228.616†	-206.6	33.0	0.7613	µg/L	0.7613	ppb	08:03:49
2	Cr 267.716†	109.7	-21.4	-0.4437	µg/L	-0.4437	ppb	08:03:49
2	Cu 324.752†	2090.0	-3.5	-0.0125	µg/L	-0.0125	ppb	08:03:29
2	Mn 257.610†	569.4	65.2	0.1026	µg/L	0.1026	ppb	08:03:49
2	Mo 202.031†	54.9	17.4	0.9867	µg/L	0.9867	ppb	08:03:49
2	Ni 231.604†	-208.6	12.7	0.3502	µg/L	0.3502	ppb	08:03:49
2	P 214.914†	95.6	-44.0	-29.294	µg/L	-29.294	ppb	08:03:49

2	Pb 220.353†	-78.0	-8.0	-1.0053 µg/L	-1.0053 ppb	08:03:49
2	S 181.975 Axial†	137.5	33.7	41.427 µg/L	41.427 ppb	08:03:49
2	Sb 206.836†	176.9	7.6	2.2051 µg/L	2.2051 ppb	08:03:49
2	Se 196.026†	-27.2	-1.2	-0.5515 µg/L	-0.5515 ppb	08:03:49
2	SiO2†	1195.2	30.8	5.1552 µg/L	5.1552 ppb	08:03:49
2	Si 251.611†	142.9	139.3	7.6855 µg/L	7.6855 ppb	08:03:49
2	Sn 189.927†	40.7	-10.2	-1.2643 µg/L	-1.2643 ppb	08:03:49
2	Ti 334.940†	-659.5	116.8	0.4872 µg/L	0.4872 ppb	08:03:29
2	Tl 190.801†	-78.5	6.3	1.3579 µg/L	1.3579 ppb	08:03:49
2	U 367.007†	1034.0	64.7	22.74 µg/L	22.74 ppb	08:03:29
2	V 292.402†	-157.5	-12.6	-0.1424 µg/L	-0.1424 ppb	08:03:49
2	Zn 213.857†	1355.7	345.4	2.6294 µg/L	2.6294 ppb	08:03:49
3	Sc RADIAL	24687.4	24687.4	112 %		08:02:57
3	Al 396.153Radial†	-115.9	-9.7	-3.0798 µg/L	-3.0798 ppb	08:02:57
3	Ca 317.933Radial†	376.9	40.7	8.7169 µg/L	8.7169 ppb	08:02:57
3	Fe 238.204 Radial†	88.2	43.8	8.5296 µg/L	8.5296 ppb	08:02:57
3	K 766.490 Radial†	498.7	24.4	22.136 µg/L	22.136 ppb	08:02:37
3	Mg 279.077 IEC†	59.5	-2.9	-4.6645 µg/L	-4.6645 ppb	08:02:57
3	Na 589.592 Radial†	96.3	-41.4	-63.742 µg/L	-63.742 ppb	08:02:57
3	Sr 421.552†	247.3	-39.3	-0.2312 µg/L	-0.2312 ppb	08:02:37
3	Sc 361.383	405197.8	405197.8	110.65 %		08:03:54
3	Y 371.029	398531.0	398531.0	110.75 %		08:03:54
3	Ag 328.068†	-716.9	35.7	0.3440 µg/L	0.3440 ppb	08:03:54
3	As 188.979†	-18.4	-3.8	-1.6795 µg/L	-1.6795 ppb	08:04:14
3	B 249.677†	220.4	25.9	0.8924 µg/L	0.8924 ppb	08:04:14
3	Ba 233.527†	10.3	24.8	0.2085 µg/L	0.2085 ppb	08:04:14
3	Be 313.107†	-3552.2	363.5	0.3103 µg/L	0.3103 ppb	08:03:54
3	Cd 226.502†	-312.4	40.8	0.4221 µg/L	0.4221 ppb	08:04:14
3	Co 228.616†	-207.6	34.8	0.8002 µg/L	0.8002 ppb	08:04:14
3	Cr 267.716†	119.7	-13.8	-0.3012 µg/L	-0.3012 ppb	08:04:14
3	Cu 324.752†	1954.8	-153.4	-1.1047 µg/L	-1.1047 ppb	08:03:54
3	Mn 257.610†	534.3	26.1	0.0415 µg/L	0.0415 ppb	08:04:14
3	Mo 202.031†	25.3	-10.1	-0.5708 µg/L	-0.5708 ppb	08:04:14
3	Ni 231.604†	-242.6	-15.3	-0.4237 µg/L	-0.4237 ppb	08:04:14
3	P 214.914†	114.7	-28.0	-18.636 µg/L	-18.636 ppb	08:04:14
3	Pb 220.353†	-79.3	-8.2	-1.0330 µg/L	-1.0330 ppb	08:04:14
3	S 181.975 Axial†	141.3	35.4	43.457 µg/L	43.457 ppb	08:04:14
3	Sb 206.836†	162.8	-7.4	-2.1307 µg/L	-2.1307 ppb	08:04:14
3	Se 196.026†	-22.8	3.2	1.5096 µg/L	1.5096 ppb	08:04:14
3	SiO2†	1183.0	3.9	0.6869 µg/L	0.6869 ppb	08:04:14
3	Si 251.611†	135.6	130.8	7.2424 µg/L	7.2424 ppb	08:04:14
3	Sn 189.927†	53.0	0.4	0.0513 µg/L	0.0513 ppb	08:04:14
3	Ti 334.940†	-602.9	176.6	0.7373 µg/L	0.7373 ppb	08:03:54
3	Tl 190.801†	-96.0	-8.5	-1.7986 µg/L	-1.7986 ppb	08:04:14
3	U 367.007†	1082.4	94.8	33.31 µg/L	33.31 ppb	08:03:54
3	V 292.402†	-139.9	5.4	0.0858 µg/L	0.0858 ppb	08:04:14
3	Zn 213.857†	1359.9	331.2	2.5265 µg/L	2.5265 ppb	08:04:14

Mean Data: 1204069476|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	402805.4	109.99	%	0.838				0.76%
Sc RADIAL	24588.2	111	%	0.39				0.35%
Y 371.029	396418.4	110.16	%	0.849				0.77%
Ag 328.068†	65.8	0.6561	µg/L	0.38807	0.6561	ppb	0.38807	59.15%
Al 396.153Radial†	-0.4	-0.1256	µg/L	3.05318	-0.1256	ppb	3.05318	>999.9%
As 188.979†	-3.7	-1.6285	µg/L	0.05205	-1.6285	ppb	0.05205	3.20%
B 249.677†	28.5	0.9650	µg/L	0.58789	0.9650	ppb	0.58789	60.92%
Ba 233.527†	12.2	0.1029	µg/L	0.13506	0.1029	ppb	0.13506	131.26%
Be 313.107†	330.6	0.2792	µg/L	0.03969	0.2792	ppb	0.03969	14.22%
Ca 317.933Radial†	34.0	7.2772	µg/L	1.62023	7.2772	ppb	1.62023	22.26%
Cd 226.502†	33.4	0.3461	µg/L	0.09422	0.3461	ppb	0.09422	27.23%
Co 228.616†	31.6	0.7279	µg/L	0.09353	0.7279	ppb	0.09353	12.85%
Cr 267.716†	-16.8	-0.3486	µg/L	0.08235	-0.3486	ppb	0.08235	23.62%
Cu 324.752†	-50.1	-0.3562	µg/L	0.64901	-0.3562	ppb	0.64901	182.22%
Fe 238.204 Radial†	28.3	5.5022	µg/L	2.90909	5.5022	ppb	2.90909	52.87%
K 766.490 Radial†	29.1	26.489	µg/L	27.9816	26.489	ppb	27.9816	105.63%
Mg 279.077 IEC†	1.1	1.8401	µg/L	14.20253	1.8401	ppb	14.20253	771.82%
Mn 257.610†	25.4	0.0403	µg/L	0.06290	0.0403	ppb	0.06290	156.01%
Mo 202.031†	2.8	0.1588	µg/L	0.78339	0.1588	ppb	0.78339	493.22%

Na 589.592 Radial†	-33.4	-51.382 µg/L	13.5816	-51.382 ppb	13.5816	26.43%
Ni 231.604†	-0.4	-0.0124 µg/L	0.38926	-0.0124 ppb	0.38926	>999.9%
P 214.914†	-35.6	-23.695 µg/L	5.3494	-23.695 ppb	5.3494	22.58%
Pb 220.353†	-12.3	-1.5281 µg/L	0.88165	-1.5281 ppb	0.88165	57.70%
S 181.975 Axial†	36.6	45.030 µg/L	4.5966	45.030 ppb	4.5966	10.21%
Sb 206.836†	-1.5	-0.4213 µg/L	2.30881	-0.4213 ppb	2.30881	548.00%
Se 196.026†	4.7	2.2355 µg/L	3.21210	2.2355 ppb	3.21210	143.68%
SiO2†	19.1	3.2156 µg/L	2.29164	3.2156 ppb	2.29164	71.27%
Si 251.611†	133.7	7.3901 µg/L	0.25582	7.3901 ppb	0.25582	3.46%
Sn 189.927†	-9.5	-1.1795 µg/L	1.19062	-1.1795 ppb	1.19062	100.94%
Sr 421.552†	3.1	0.0181 µg/L	0.39622	0.0181 ppb	0.39622	>999.9%
Ti 334.940†	122.9	0.5153 µg/L	0.20933	0.5153 ppb	0.20933	40.62%
Tl 190.801†	0.7	0.1556 µg/L	1.70731	0.1556 ppb	1.70731	>999.9%
U 367.007†	52.0	18.26 µg/L	17.722	18.26 ppb	17.722	97.07%
V 292.402†	-2.2	-0.0164 µg/L	0.11593	-0.0164 ppb	0.11593	708.13%
Zn 213.857†	330.7	2.5197 µg/L	0.11328	2.5197 ppb	0.11328	4.50%

Sequence No.: 14 **Autosampler Location: 310**
Sample ID: 1204069477|1782317|1| **Date Collected: 7/23/2018 08:04:23**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204069477|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24500.4	24500.4	111	%			08:04:59
1	Al 396.153Radial†	15993.6	14507.7	4644.7	µg/L	4644.7	ppb	08:04:59
1	Ca 317.933Radial†	25265.0	22472.8	4812.7	µg/L	4812.7	ppb	08:04:59
1	Fe 238.204 Radial†	27202.1	24479.9	4764.6	µg/L	4764.6	ppb	08:04:59
1	K 766.490 Radial†	6011.7	4996.2	4540.1	µg/L	4540.1	ppb	08:04:59
1	Mg 279.077 IEC†	3441.8	3045.7	4977.4	µg/L	4977.4	ppb	08:04:59
1	Na 589.592 Radial†	3382.2	2920.5	4484.7	µg/L	4484.7	ppb	08:04:59
1	Sr 421.552†	83916.3	75366.2	443.09	µg/L	443.09	ppb	08:04:54
1	Sc 361.383	403303.2	403303.2	110.13	%			08:05:26
1	Y 371.029	394336.2	394336.2	109.58	%			08:05:26
1	Ag 328.068†	9224.0	9059.2	93.051	µg/L	93.051	ppb	08:05:26
1	As 188.979†	1124.4	1033.8	458.57	µg/L	458.57	ppb	08:05:46
1	B 249.677†	15423.2	13831.3	476.53	µg/L	476.53	ppb	08:05:26
1	Ba 233.527†	59313.1	53872.7	453.33	µg/L	453.33	ppb	08:05:26
1	Be 313.107†	612960.1	560150.7	465.67	µg/L	465.67	ppb	08:05:26
1	Cd 226.502†	48944.5	44765.4	464.10	µg/L	464.10	ppb	08:05:26
1	Co 228.616†	21401.0	19654.9	452.94	µg/L	452.94	ppb	08:05:46
1	Cr 267.716†	24717.6	22322.1	444.40	µg/L	444.40	ppb	08:05:46
1	Cu 324.752†	68891.7	60634.6	445.39	µg/L	445.39	ppb	08:05:26
1	Mn 257.610†	319000.0	289199.8	454.50	µg/L	454.50	ppb	08:05:26
1	Mo 202.031†	8856.5	8008.9	454.39	µg/L	454.39	ppb	08:05:46
1	Ni 231.604†	17956.0	16508.2	456.39	µg/L	456.39	ppb	08:05:46
1	P 214.914†	865.2	653.9	422.81	µg/L	422.81	ppb	08:05:46
1	Pb 220.353†	3995.6	3691.6	456.68	µg/L	456.68	ppb	08:05:46
1	S 181.975 Axial†	4215.1	3735.0	4587.4	µg/L	4587.4	ppb	08:05:46
1	Sb 206.836†	1887.7	1559.5	443.71	µg/L	443.71	ppb	08:05:46
1	Se 196.026†	1057.8	984.3	467.34	µg/L	467.34	ppb	08:05:46
1	SiO2†	58346.1	51913.9	8751.6	µg/L	8751.6	ppb	08:05:26
1	Si 251.611†	81505.1	74016.0	4085.4	µg/L	4085.4	ppb	08:05:26
1	Sn 189.927†	4114.2	3688.2	459.84	µg/L	459.84	ppb	08:05:46
1	Ti 334.940†	115586.9	105676.2	449.89	µg/L	449.89	ppb	08:05:26
1	Tl 190.801†	2277.3	2146.2	460.38	µg/L	460.38	ppb	08:05:46
1	U 367.007†	2313.6	1217.3	407.2	µg/L	407.2	ppb	08:05:26
1	V 292.402†	37654.2	34322.5	453.74	µg/L	453.74	ppb	08:05:26
1	Zn 213.857†	66327.5	59328.5	448.80	µg/L	448.80	ppb	08:05:26
2	Sc RADIAL	24470.0	24470.0	111	%			08:05:09
2	Al 396.153Radial†	15824.3	14372.7	4601.4	µg/L	4601.4	ppb	08:05:09
2	Ca 317.933Radial†	25002.7	22264.4	4768.0	µg/L	4768.0	ppb	08:05:09
2	Fe 238.204 Radial†	26938.5	24272.5	4724.2	µg/L	4724.2	ppb	08:05:09
2	K 766.490 Radial†	5910.2	4911.3	4463.0	µg/L	4463.0	ppb	08:05:09
2	Mg 279.077 IEC†	3330.4	2949.1	4819.4	µg/L	4819.4	ppb	08:05:09
2	Na 589.592 Radial†	3372.7	2915.8	4477.5	µg/L	4477.5	ppb	08:05:09
2	Sr 421.552†	85134.3	76559.0	450.11	µg/L	450.11	ppb	08:05:04
2	Sc 361.383	406173.7	406173.7	110.91	%			08:05:52
2	Y 371.029	397065.3	397065.3	110.34	%			08:05:52
2	Ag 328.068†	9207.1	8984.8	92.298	µg/L	92.298	ppb	08:05:52
2	As 188.979†	1121.5	1024.0	454.25	µg/L	454.25	ppb	08:06:12
2	B 249.677†	15562.8	13858.2	477.28	µg/L	477.28	ppb	08:05:52
2	Ba 233.527†	59716.9	53856.2	453.19	µg/L	453.19	ppb	08:05:52
2	Be 313.107†	616660.4	559553.4	465.17	µg/L	465.17	ppb	08:05:52
2	Cd 226.502†	49019.4	44518.9	461.55	µg/L	461.55	ppb	08:05:52
2	Co 228.616†	21433.9	19547.2	450.46	µg/L	450.46	ppb	08:06:12
2	Cr 267.716†	24829.8	22264.5	443.26	µg/L	443.26	ppb	08:06:12
2	Cu 324.752†	69147.2	60422.8	443.83	µg/L	443.83	ppb	08:05:52
2	Mn 257.610†	320494.6	288500.3	453.40	µg/L	453.40	ppb	08:05:52
2	Mo 202.031†	8882.6	7975.6	452.50	µg/L	452.50	ppb	08:06:12
2	Ni 231.604†	18038.9	16467.8	455.27	µg/L	455.27	ppb	08:06:12
2	P 214.914†	871.7	654.2	423.08	µg/L	423.08	ppb	08:06:12

2	Pb 220.353†	4007.8	3676.9	454.86 µg/L	454.86 ppb	08:06:12
2	S 181.975 Axial†	4247.4	3737.1	4590.0 µg/L	4590.0 ppb	08:06:12
2	Sb 206.836†	1886.6	1546.3	439.94 µg/L	439.94 ppb	08:06:12
2	Se 196.026†	1085.1	1002.1	475.73 µg/L	475.73 ppb	08:06:12
2	SiO2†	58669.3	51830.9	8737.7 µg/L	8737.7 ppb	08:05:52
2	Si 251.611†	81937.1	73882.5	4078.0 µg/L	4078.0 ppb	08:05:52
2	Sn 189.927†	4122.5	3669.3	457.50 µg/L	457.50 ppb	08:06:12
2	Ti 334.940†	116347.4	105620.1	449.65 µg/L	449.65 ppb	08:05:52
2	Tl 190.801†	2287.5	2140.8	459.22 µg/L	459.22 ppb	08:06:12
2	U 367.007†	2290.2	1181.4	394.7 µg/L	394.7 ppb	08:05:52
2	V 292.402†	37878.9	34283.4	453.19 µg/L	453.19 ppb	08:05:52
2	Zn 213.857†	66533.6	59088.7	446.98 µg/L	446.98 ppb	08:05:52
3	Sc RADIAL	24847.1	24847.1	113 %		08:05:19
3	Al 396.153Radial†	16178.6	14470.9	4632.8 µg/L	4632.8 ppb	08:05:19
3	Ca 317.933Radial†	25490.8	22355.8	4787.6 µg/L	4787.6 ppb	08:05:19
3	Fe 238.204 Radial†	27407.8	24320.6	4733.6 µg/L	4733.6 ppb	08:05:19
3	K 766.490 Radial†	6027.1	4934.3	4483.8 µg/L	4483.8 ppb	08:05:19
3	Mg 279.077 IEC†	3449.2	3009.1	4917.5 µg/L	4917.5 ppb	08:05:19
3	Na 589.592 Radial†	3399.6	2893.4	4443.2 µg/L	4443.2 ppb	08:05:19
3	Sr 421.552†	85548.5	75761.4	445.42 µg/L	445.42 ppb	08:05:14
3	Sc 361.383	401754.1	401754.1	109.71 %		08:06:18
3	Y 371.029	392440.6	392440.6	109.05 %		08:06:18
3	Ag 328.068†	9190.7	9061.2	93.073 µg/L	93.073 ppb	08:06:18
3	As 188.979†	1118.2	1032.1	457.86 µg/L	457.86 ppb	08:06:38
3	B 249.677†	15479.3	13936.5	479.89 µg/L	479.89 ppb	08:06:18
3	Ba 233.527†	58974.3	53771.5	452.48 µg/L	452.48 ppb	08:06:18
3	Be 313.107†	609865.5	559476.0	465.11 µg/L	465.11 ppb	08:06:18
3	Cd 226.502†	48529.0	44558.0	461.96 µg/L	461.96 ppb	08:06:18
3	Co 228.616†	21455.5	19779.4	455.81 µg/L	455.81 ppb	08:06:38
3	Cr 267.716†	24768.8	22455.2	447.06 µg/L	447.06 ppb	08:06:38
3	Cu 324.752†	68578.8	60590.6	445.05 µg/L	445.05 ppb	08:06:18
3	Mn 257.610†	317368.3	288829.4	453.91 µg/L	453.91 ppb	08:06:18
3	Mo 202.031†	8884.6	8065.5	457.60 µg/L	457.60 ppb	08:06:38
3	Ni 231.604†	17978.3	16591.5	458.69 µg/L	458.69 ppb	08:06:38
3	P 214.914†	866.8	658.4	425.77 µg/L	425.77 ppb	08:06:38
3	Pb 220.353†	3993.5	3703.6	458.18 µg/L	458.18 ppb	08:06:38
3	S 181.975 Axial†	4219.1	3753.5	4610.1 µg/L	4610.1 ppb	08:06:38
3	Sb 206.836†	1898.5	1575.9	448.40 µg/L	448.40 ppb	08:06:38
3	Se 196.026†	1072.9	1001.7	475.56 µg/L	475.56 ppb	08:06:38
3	SiO2†	58135.7	51926.4	8753.6 µg/L	8753.6 ppb	08:06:18
3	Si 251.611†	81209.1	74031.6	4086.2 µg/L	4086.2 ppb	08:06:18
3	Sn 189.927†	4126.9	3714.2	463.08 µg/L	463.08 ppb	08:06:38
3	Ti 334.940†	115246.5	105770.5	450.30 µg/L	450.30 ppb	08:06:18
3	Tl 190.801†	2285.2	2161.3	463.61 µg/L	463.61 ppb	08:06:38
3	U 367.007†	2257.4	1174.2	392.1 µg/L	392.1 ppb	08:06:18
3	V 292.402†	37427.7	34247.8	452.78 µg/L	452.78 ppb	08:06:18
3	Zn 213.857†	65887.9	59160.0	447.51 µg/L	447.51 ppb	08:06:18

Mean Data: 1204069477|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	403743.7	110.25	%	0.612				0.56%
Sc RADIAL	24605.8	111	%	0.95				0.85%
Y 371.029	394614.0	109.66	%	0.646				0.59%
Ag 328.068†	9035.1	92.807	µg/L	0.4415	92.807	ppb	0.4415	0.48%
Al 396.153Radial†	14450.5	4626.3	µg/L	22.37	4626.3	ppb	22.37	0.48%
As 188.979†	1029.9	456.89	µg/L	2.317	456.89	ppb	2.317	0.51%
B 249.677†	13875.3	477.90	µg/L	1.766	477.90	ppb	1.766	0.37%
Ba 233.527†	53833.4	453.00	µg/L	0.457	453.00	ppb	0.457	0.10%
Be 313.107†	559726.7	465.32	µg/L	0.309	465.32	ppb	0.309	0.07%
Ca 317.933Radial†	22364.3	4789.5	µg/L	22.38	4789.5	ppb	22.38	0.47%
Cd 226.502†	44614.1	462.54	µg/L	1.373	462.54	ppb	1.373	0.30%
Co 228.616†	19660.5	453.07	µg/L	2.681	453.07	ppb	2.681	0.59%
Cr 267.716†	22347.3	444.91	µg/L	1.951	444.91	ppb	1.951	0.44%
Cu 324.752†	60549.3	444.76	µg/L	0.823	444.76	ppb	0.823	0.19%
Fe 238.204 Radial†	24357.7	4740.8	µg/L	21.13	4740.8	ppb	21.13	0.45%
K 766.490 Radial†	4947.3	4495.6	µg/L	39.88	4495.6	ppb	39.88	0.89%
Mg 279.077 IEC†	3001.3	4904.8	µg/L	79.74	4904.8	ppb	79.74	1.63%
Mn 257.610†	288843.2	453.94	µg/L	0.551	453.94	ppb	0.551	0.12%
Mo 202.031†	8016.6	454.83	µg/L	2.579	454.83	ppb	2.579	0.57%

Na 589.592 Radial†	2909.9	4468.4 µg/L	22.20	4468.4 ppb	22.20	0.50%
Ni 231.604†	16522.5	456.78 µg/L	1.743	456.78 ppb	1.743	0.38%
P 214.914†	655.5	423.88 µg/L	1.636	423.88 ppb	1.636	0.39%
Pb 220.353†	3690.7	456.57 µg/L	1.659	456.57 ppb	1.659	0.36%
S 181.975 Axial†	3741.9	4595.9 µg/L	12.42	4595.9 ppb	12.42	0.27%
Sb 206.836†	1560.6	444.02 µg/L	4.240	444.02 ppb	4.240	0.96%
Se 196.026†	996.0	472.88 µg/L	4.797	472.88 ppb	4.797	1.01%
SiO2†	51890.4	8747.6 µg/L	8.67	8747.6 ppb	8.67	0.10%
Si 251.611†	73976.7	4083.2 µg/L	4.50	4083.2 ppb	4.50	0.11%
Sn 189.927†	3690.6	460.14 µg/L	2.799	460.14 ppb	2.799	0.61%
Sr 421.552†	75895.5	446.21 µg/L	3.573	446.21 ppb	3.573	0.80%
Ti 334.940†	105688.9	449.95 µg/L	0.325	449.95 ppb	0.325	0.07%
Tl 190.801†	2149.4	461.07 µg/L	2.278	461.07 ppb	2.278	0.49%
U 367.007†	1191.0	398.0 µg/L	8.04	398.0 ppb	8.04	2.02%
V 292.402†	34284.6	453.24 µg/L	0.480	453.24 ppb	0.480	0.11%
Zn 213.857†	59192.4	447.76 µg/L	0.933	447.76 ppb	0.933	0.21%

Sequence No.: 15 **Autosampler Location: 311**
Sample ID: 454474001|1782317|1| **Date Collected: 7/23/2018 08:06:47**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474001|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25838.8	25838.8	117	%			08:07:23
1	Al 396.153Radial†	349732.4	298951.9	96147	µg/L	96147	ppb	08:07:18
1	Ca 317.933Radial†	911628.0	778720.0	166770	µg/L	166770	ppb	08:07:18
1	Fe 238.204 Radial†	1600814.0	1367913.7	266240	µg/L	266240	ppb	08:07:18
1	K 766.490 Radial†	12874.9	10580.3	9580.6	µg/L	9580.6	ppb	08:07:23
1	Mg 279.077 IEC†	67486.1	57613.1	94153	µg/L	94153	ppb	08:07:23
1	Na 589.592 Radial†	805.3	560.6	513.66	µg/L	513.66	ppb	08:07:23
1	Sr 421.552†	117396.1	100058.4	585.44	µg/L	585.44	ppb	08:07:23
1	Sc 361.383	411594.7	411594.7	112.39	%			08:07:52
1	Y 371.029	429554.8	429554.8	119.37	%			08:07:52
1	Ag 328.068†	-4288.9	-3132.3	7.6232	µg/L	7.6232	ppb	08:07:52
1	As 188.979†	151.9	147.9	79.496	µg/L	79.496	ppb	08:08:12
1	B 249.677†	-31113.4	-27855.5	110.95	µg/L	110.95	ppb	08:07:52
1	Ba 233.527†	69761.3	62083.8	516.00	µg/L	516.00	ppb	08:07:52
1	Be 313.107†	1126.5	4576.2	6.0876	µg/L	6.0876	ppb	08:08:12
1	Cd 226.502†	2773.5	2790.8	-0.1548	µg/L	-0.1548	ppb	08:08:12
1	Co 228.616†	5576.6	5184.0	117.24	µg/L	117.24	ppb	08:08:12
1	Cr 267.716†	8851.2	7753.1	157.04	µg/L	157.04	ppb	08:08:12
1	Cu 324.752†	48633.8	41350.5	320.06	µg/L	320.06	ppb	08:07:52
1	Mn 257.610†	3341191.7	2972277.5	4685.1	µg/L	4685.1	ppb	08:07:52
1	Mo 202.031†	75.1	33.9	6.9283	µg/L	6.9283	ppb	08:08:12
1	Ni 231.604†	10877.0	9881.4	278.42	µg/L	278.42	ppb	08:08:12
1	P 214.914†	7957.6	6948.4	4401.5	µg/L	4401.5	ppb	08:08:12
1	Pb 220.353†	1023.5	974.1	131.69	µg/L	131.69	ppb	08:08:12
1	S 181.975 Axial†	65660.7	58327.5	71588	µg/L	71588	ppb	08:07:52
1	Sb 206.836†	202.1	25.2	-31.908	µg/L	-31.908	ppb	08:08:12
1	Se 196.026†	-278.8	-224.3	12.388	µg/L	12.388	ppb	08:08:12
1	SiO2†	156369.0	138059.8	23272	µg/L	23272	ppb	08:07:52
1	Si 251.611†	221225.4	196837.5	10866	µg/L	10866	ppb	08:07:52
1	Sn 189.927†	45.0	-7.4	5.4562	µg/L	5.4562	ppb	08:08:12
1	Ti 334.940†	191639.8	171227.9	736.30	µg/L	736.30	ppb	08:07:52
1	Tl 190.801†	-171.3	-74.1	10.175	µg/L	10.175	ppb	08:08:12
1	U 367.007†	4238.1	2887.3	-100.6	µg/L	-100.6	ppb	08:07:52
1	V 292.402†	11549.7	10407.9	190.59	µg/L	190.59	ppb	08:08:12
1	Zn 213.857†	89819.0	79016.2	571.25	µg/L	571.25	ppb	08:07:52
2	Sc RADIAL	26041.6	26041.6	118	%			08:07:34
2	Al 396.153Radial†	353117.8	299494.7	96321	µg/L	96321	ppb	08:07:28
2	Ca 317.933Radial†	917169.1	777351.0	166470	µg/L	166470	ppb	08:07:28
2	Fe 238.204 Radial†	1613716.5	1368199.4	266300	µg/L	266300	ppb	08:07:28
2	K 766.490 Radial†	13007.6	10607.2	9605.0	µg/L	9605.0	ppb	08:07:34
2	Mg 279.077 IEC†	67956.0	57562.3	94070	µg/L	94070	ppb	08:07:34
2	Na 589.592 Radial†	805.6	555.5	505.77	µg/L	505.77	ppb	08:07:34
2	Sr 421.552†	118226.8	99981.4	584.99	µg/L	584.99	ppb	08:07:34
2	Sc 361.383	409702.5	409702.5	111.88	%			08:08:20
2	Y 371.029	428301.6	428301.6	119.02	%			08:08:20
2	Ag 328.068†	-4306.7	-3165.8	7.2772	µg/L	7.2772	ppb	08:08:20
2	As 188.979†	156.4	152.5	81.526	µg/L	81.526	ppb	08:08:40
2	B 249.677†	-31180.0	-28042.9	104.94	µg/L	104.94	ppb	08:08:20
2	Ba 233.527†	69715.1	62329.1	518.07	µg/L	518.07	ppb	08:08:20
2	Be 313.107†	1150.3	4602.1	6.1134	µg/L	6.1134	ppb	08:08:40
2	Cd 226.502†	2828.3	2851.1	0.4662	µg/L	0.4662	ppb	08:08:40
2	Co 228.616†	5636.2	5260.2	118.99	µg/L	118.99	ppb	08:08:40
2	Cr 267.716†	8882.8	7817.8	158.29	µg/L	158.29	ppb	08:08:40
2	Cu 324.752†	48723.9	41630.8	322.14	µg/L	322.14	ppb	08:08:20
2	Mn 257.610†	3339494.4	2984490.2	4704.2	µg/L	4704.2	ppb	08:08:20
2	Mo 202.031†	85.7	43.7	7.4843	µg/L	7.4843	ppb	08:08:40
2	Ni 231.604†	10922.1	9966.5	280.77	µg/L	280.77	ppb	08:08:40
2	P 214.914†	8022.1	7038.7	4461.6	µg/L	4461.6	ppb	08:08:40

2	Pb 220.353†	1048.3	1000.5	134.93 µg/L	134.93 ppb	08:08:40
2	S 181.975 Axial†	65611.2	58553.0	71865 µg/L	71865 ppb	08:08:20
2	Sb 206.836†	205.8	29.4	-30.738 µg/L	-30.738 ppb	08:08:40
2	Se 196.026†	-278.0	-224.7	12.235 µg/L	12.235 ppb	08:08:40
2	SiO2†	156096.9	138459.1	23339 µg/L	23339 ppb	08:08:20
2	Si 251.611†	220870.8	197429.6	10899 µg/L	10899 ppb	08:08:20
2	Sn 189.927†	28.9	-21.7	3.6971 µg/L	3.6971 ppb	08:08:40
2	Ti 334.940†	191483.5	171875.6	739.03 µg/L	739.03 ppb	08:08:20
2	Tl 190.801†	-148.3	-54.2	14.446 µg/L	14.446 ppb	08:08:40
2	U 367.007†	4315.5	2973.8	-70.25 µg/L	-70.25 ppb	08:08:20
2	V 292.402†	11616.0	10514.7	192.02 µg/L	192.02 ppb	08:08:40
2	Zn 213.857†	89922.7	79477.9	574.75 µg/L	574.75 ppb	08:08:20
3	Sc RADIAL	26070.2	26070.2	118 %		08:07:44
3	Al 396.153Radial†	354117.7	300013.3	96488 µg/L	96488 ppb	08:07:39
3	Ca 317.933Radial†	918817.6	777894.5	166590 µg/L	166590 ppb	08:07:39
3	Fe 238.204 Radial†	1616506.2	1369061.8	266460 µg/L	266460 ppb	08:07:39
3	K 766.490 Radial†	13026.1	10610.8	9608.2 µg/L	9608.2 ppb	08:07:44
3	Mg 279.077 IEC†	67978.0	57517.7	93998 µg/L	93998 ppb	08:07:44
3	Na 589.592 Radial†	800.2	550.2	497.39 µg/L	497.39 ppb	08:07:44
3	Sr 421.552†	118200.1	99848.8	584.21 µg/L	584.21 ppb	08:07:44
3	Sc 361.383	413559.7	413559.7	112.93 %		08:08:47
3	Y 371.029	431731.0	431731.0	119.97 %		08:08:47
3	Ag 328.068†	-4356.2	-3173.7	7.2277 µg/L	7.2277 ppb	08:08:47
3	As 188.979†	156.8	151.7	81.147 µg/L	81.147 ppb	08:09:07
3	B 249.677†	-31419.9	-27995.3	107.17 µg/L	107.17 ppb	08:08:47
3	Ba 233.527†	70409.1	62362.4	518.34 µg/L	518.34 ppb	08:08:47
3	Be 313.107†	1354.9	4773.7	6.2545 µg/L	6.2545 ppb	08:09:07
3	Cd 226.502†	2867.0	2861.8	0.5584 µg/L	0.5584 ppb	08:09:07
3	Co 228.616†	5644.1	5220.3	118.07 µg/L	118.07 ppb	08:09:07
3	Cr 267.716†	8945.3	7799.1	157.93 µg/L	157.93 ppb	08:09:07
3	Cu 324.752†	49013.6	41481.2	321.05 µg/L	321.05 ppb	08:08:47
3	Mn 257.610†	3369796.7	2983482.3	4702.7 µg/L	4702.7 ppb	08:08:47
3	Mo 202.031†	78.2	36.3	7.0697 µg/L	7.0697 ppb	08:09:07
3	Ni 231.604†	11019.3	9961.5	280.64 µg/L	280.64 ppb	08:09:07
3	P 214.914†	8085.2	7027.7	4454.1 µg/L	4454.1 ppb	08:09:07
3	Pb 220.353†	1057.9	1000.3	134.93 µg/L	134.93 ppb	08:09:07
3	S 181.975 Axial†	66526.5	58816.6	72189 µg/L	72189 ppb	08:08:47
3	Sb 206.836†	206.7	28.5	-31.020 µg/L	-31.020 ppb	08:09:07
3	Se 196.026†	-295.5	-237.9	6.0505 µg/L	6.0505 ppb	08:09:07
3	SiO2†	157903.5	138757.6	23390 µg/L	23390 ppb	08:08:47
3	Si 251.611†	223323.0	197759.7	10917 µg/L	10917 ppb	08:08:47
3	Sn 189.927†	59.0	4.7	6.9822 µg/L	6.9822 ppb	08:09:07
3	Ti 334.940†	193021.8	171641.5	738.05 µg/L	738.05 ppb	08:08:47
3	Tl 190.801†	-154.2	-58.3	13.594 µg/L	13.594 ppb	08:09:07
3	U 367.007†	4319.1	2941.1	-82.49 µg/L	-82.49 ppb	08:08:47
3	V 292.402†	11691.9	10485.0	191.65 µg/L	191.65 ppb	08:09:07
3	Zn 213.857†	90694.1	79411.4	574.22 µg/L	574.22 ppb	08:08:47

Mean Data: 454474001|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	411619.0	112.40	%	0.527				0.47%
Sc RADIAL	25983.6	118	%	0.57				0.49%
Y 371.029	429862.5	119.45	%	0.482				0.40%
Ag 328.068†	-3157.3	7.3760	µg/L	0.21549	7.3760	ppb	0.21549	2.92%
Al 396.153Radial†	299486.7	96319	µg/L	170.68	96319	ppb	170.68	0.18%
As 188.979†	150.7	80.723	µg/L	1.0796	80.723	ppb	1.0796	1.34%
B 249.677†	-27964.6	107.69	µg/L	3.041	107.69	ppb	3.041	2.82%
Ba 233.527†	62258.4	517.47	µg/L	1.279	517.47	ppb	1.279	0.25%
Be 313.107†	4650.7	6.1518	µg/L	0.08981	6.1518	ppb	0.08981	1.46%
Ca 317.933Radial†	777988.5	166610	µg/L	147.63	166610	ppb	147.63	0.09%
Cd 226.502†	2834.5	0.2899	µg/L	0.38789	0.2899	ppb	0.38789	133.78%
Co 228.616†	5221.5	118.10	µg/L	0.876	118.10	ppb	0.876	0.74%
Cr 267.716†	7790.0	157.76	µg/L	0.644	157.76	ppb	0.644	0.41%
Cu 324.752†	41487.5	321.08	µg/L	1.041	321.08	ppb	1.041	0.32%
Fe 238.204 Radial†	1368391.6	266330	µg/L	116.34	266330	ppb	116.34	0.04%
K 766.490 Radial†	10599.4	9597.9	µg/L	15.07	9597.9	ppb	15.07	0.16%
Mg 279.077 IEC†	57564.4	94074	µg/L	77.96	94074	ppb	77.96	0.08%
Mn 257.610†	2980083.3	4697.3	µg/L	10.65	4697.3	ppb	10.65	0.23%
Mo 202.031†	38.0	7.1608	µg/L	0.28898	7.1608	ppb	0.28898	4.04%

Na 589.592 Radial†	555.4	505.61 µg/L	8.135	505.61 ppb	8.135	1.61%
Ni 231.604†	9936.5	279.94 µg/L	1.321	279.94 ppb	1.321	0.47%
P 214.914†	7004.9	4439.1 µg/L	32.75	4439.1 ppb	32.75	0.74%
Pb 220.353†	991.6	133.85 µg/L	1.872	133.85 ppb	1.872	1.40%
S 181.975 Axial†	58565.7	71881 µg/L	300.75	71881 ppb	300.75	0.42%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	27.7	-31.222 µg/L	0.6105	-31.222 ppb	0.6105	1.96%
Concentration less than lower limit for Sb 206.836.						
Se 196.026†	-229.0	10.225 µg/L	3.6157	10.225 ppb	3.6157	35.36%
SiO2†	138425.5	23334 µg/L	59.14	23334 ppb	59.14	0.25%
Si 251.611†	197342.2	10894 µg/L	25.83	10894 ppb	25.83	0.24%
Sn 189.927†	-8.2	5.3785 µg/L	1.64392	5.3785 ppb	1.64392	30.56%
Sr 421.552†	99962.9	584.88 µg/L	0.622	584.88 ppb	0.622	0.11%
Ti 334.940†	171581.7	737.79 µg/L	1.383	737.79 ppb	1.383	0.19%
Tl 190.801†	-62.2	12.739 µg/L	2.2607	12.739 ppb	2.2607	17.75%
U 367.007†	2934.1	-84.46 µg/L	15.291	-84.46 ppb	15.291	18.10%
Concentration less than lower limit for U 367.007.						
V 292.402†	10469.2	191.42 µg/L	0.742	191.42 ppb	0.742	0.39%
Zn 213.857†	79301.8	573.41 µg/L	1.888	573.41 ppb	1.888	0.33%

Sequence No.: 16 **Autosampler Location: 312**
Sample ID: 1204070401|1782317|1| **Date Collected: 7/23/2018 08:09:15**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204070401|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	26075.3	26075.3	118	%			08:09:51
1	Al 396.153Radial†	430964.6	365027.0	117380	µg/L	117380	ppb	08:09:46
1	Ca 317.933Radial†	998580.2	845283.4	181020	µg/L	181020	ppb	08:09:46
1	Fe 238.204 Radial†	1782874.4	1509670.9	293830	µg/L	293830	ppb	08:09:46
1	K 766.490 Radial†	26217.2	21778.6	19753	µg/L	19753	ppb	08:09:51
1	Mg 279.077 IEC†	75688.1	64035.3	104650	µg/L	104650	ppb	08:09:51
1	Na 589.592 Radial†	4186.6	3417.6	4870.9	µg/L	4870.9	ppb	08:09:51
1	Sr 421.552†	217862.8	184221.8	1080.1	µg/L	1080.1	ppb	08:09:51
1	Sc 361.383	409109.8	409109.8	111.72	%			08:10:25
1	Y 371.029	430905.7	430905.7	119.74	%			08:10:25
1	Ag 328.068†	5154.3	5297.4	97.729	µg/L	97.729	ppb	08:10:25
1	As 188.979†	1353.9	1224.7	558.10	µg/L	558.10	ppb	08:10:45
1	B 249.677†	-18540.6	-16769.4	585.26	µg/L	585.26	ppb	08:10:25
1	Ba 233.527†	163336.0	146222.0	1223.5	µg/L	1223.5	ppb	08:10:25
1	Be 313.107†	595667.6	536772.0	448.67	µg/L	448.67	ppb	08:10:19
1	Cd 226.502†	49130.5	44301.1	427.62	µg/L	427.62	ppb	08:10:25
1	Co 228.616†	26394.0	23848.4	546.73	µg/L	546.73	ppb	08:10:45
1	Cr 267.716†	34857.1	31079.6	621.87	µg/L	621.87	ppb	08:10:25
1	Cu 324.752†	119607.3	105143.6	790.07	µg/L	790.07	ppb	08:10:25
1	Mn 257.610†	3663452.7	3278798.1	5168.2	µg/L	5168.2	ppb	08:10:19
1	Mo 202.031†	8669.8	7727.6	443.87	µg/L	443.87	ppb	08:10:45
1	Ni 231.604†	28812.7	25994.9	724.35	µg/L	724.35	ppb	08:10:45
1	P 214.914†	8908.6	7842.7	4967.1	µg/L	4967.1	ppb	08:10:45
1	Pb 220.353†	4914.5	4462.6	564.81	µg/L	564.81	ppb	08:10:45
1	S 181.975 Axial†	82879.2	74095.1	90953	µg/L	90953	ppb	08:10:25
1	Sb 206.836†	1584.2	1263.4	316.31	µg/L	316.31	ppb	08:10:45
1	Se 196.026†	694.9	645.8	435.89	µg/L	435.89	ppb	08:10:45
1	SiO2†	237904.6	211889.6	35723	µg/L	35723	ppb	08:10:25
1	Si 251.611†	337269.1	301906.8	16667	µg/L	16667	ppb	08:10:25
1	Sn 189.927†	3975.6	3511.1	445.87	µg/L	445.87	ppb	08:10:45
1	Ti 334.940†	397533.7	356564.6	1525.8	µg/L	1525.8	ppb	08:10:25
1	Tl 190.801†	1698.1	1598.3	372.27	µg/L	372.27	ppb	08:10:45
1	U 367.007†	5841.2	4345.1	298.2	µg/L	298.2	ppb	08:10:25
1	V 292.402†	53305.2	47846.8	689.39	µg/L	689.39	ppb	08:10:25
1	Zn 213.857†	151018.0	134282.4	986.83	µg/L	986.83	ppb	08:10:25
2	Sc RADIAL	26374.8	26374.8	119	%			08:10:02
2	Al 396.153Radial†	437845.7	366644.5	117900	µg/L	117900	ppb	08:09:56
2	Ca 317.933Radial†	1012386.7	847241.8	181440	µg/L	181440	ppb	08:09:56
2	Fe 238.204 Radial†	1807449.8	1513104.8	294500	µg/L	294500	ppb	08:09:56
2	K 766.490 Radial†	26334.8	21625.0	19613	µg/L	19613	ppb	08:10:02
2	Mg 279.077 IEC†	76088.5	63642.8	104010	µg/L	104010	ppb	08:10:02
2	Na 589.592 Radial†	4281.6	3456.8	4930.4	µg/L	4930.4	ppb	08:10:02
2	Sr 421.552†	219558.8	183547.2	1076.1	µg/L	1076.1	ppb	08:10:02
2	Sc 361.383	407203.4	407203.4	111.20	%			08:10:56
2	Y 371.029	428474.2	428474.2	119.07	%			08:10:56
2	Ag 328.068†	5165.5	5329.1	98.153	µg/L	98.153	ppb	08:10:56
2	As 188.979†	1348.5	1225.5	558.49	µg/L	558.49	ppb	08:11:16
2	B 249.677†	-18529.6	-16837.2	585.60	µg/L	585.60	ppb	08:10:56
2	Ba 233.527†	163667.4	147204.5	1231.8	µg/L	1231.8	ppb	08:10:56
2	Be 313.107†	600253.6	543392.6	454.18	µg/L	454.18	ppb	08:10:51
2	Cd 226.502†	49241.2	44606.6	430.72	µg/L	430.72	ppb	08:10:56
2	Co 228.616†	26330.7	23902.1	547.95	µg/L	547.95	ppb	08:11:16
2	Cr 267.716†	34928.3	31289.7	626.01	µg/L	626.01	ppb	08:10:56
2	Cu 324.752†	120054.2	106046.8	796.74	µg/L	796.74	ppb	08:10:56
2	Mn 257.610†	3690347.0	3318337.7	5230.4	µg/L	5230.4	ppb	08:10:51
2	Mo 202.031†	8645.8	7742.4	444.72	µg/L	444.72	ppb	08:11:16
2	Ni 231.604†	28738.6	26049.1	725.86	µg/L	725.86	ppb	08:11:16
2	P 214.914†	8887.7	7861.2	4978.9	µg/L	4978.9	ppb	08:11:16

2	Pb 220.353†	4952.4	4517.3	571.62 µg/L	571.62 ppb	08:11:16
2	S 181.975 Axial†	82908.8	74469.0	91413 µg/L	91413 ppb	08:10:56
2	Sb 206.836†	1628.4	1309.9	329.45 µg/L	329.45 ppb	08:11:16
2	Se 196.026†	701.5	654.6	440.36 µg/L	440.36 ppb	08:11:16
2	SiO2†	238316.5	213257.0	35954 µg/L	35954 ppb	08:10:56
2	Si 251.611†	338062.7	304034.0	16785 µg/L	16785 ppb	08:10:56
2	Sn 189.927†	3941.8	3497.4	444.21 µg/L	444.21 ppb	08:11:16
2	Ti 334.940†	398467.6	359070.5	1536.5 µg/L	1536.5 ppb	08:10:56
2	Tl 190.801†	1684.1	1592.8	371.20 µg/L	371.20 ppb	08:11:16
2	U 367.007†	5841.2	4369.6	304.0 µg/L	304.0 ppb	08:10:56
2	V 292.402†	53450.2	48200.6	694.15 µg/L	694.15 ppb	08:10:56
2	Zn 213.857†	151485.7	135335.9	994.79 µg/L	994.79 ppb	08:10:56
3	Sc RADIAL	26019.2	26019.2	118 %		08:10:12
3	Al 396.153Radial†	435304.8	369497.0	118810 µg/L	118810 ppb	08:10:07
3	Ca 317.933Radial†	1003131.6	850968.8	182240 µg/L	182240 ppb	08:10:07
3	Fe 238.204 Radial†	1793036.9	1521549.8	296140 µg/L	296140 ppb	08:10:07
3	K 766.490 Radial†	26191.8	21804.9	19777 µg/L	19777 ppb	08:10:12
3	Mg 279.077 IEC†	75239.0	63792.3	104250 µg/L	104250 ppb	08:10:12
3	Na 589.592 Radial†	4236.4	3467.5	4944.6 µg/L	4944.6 ppb	08:10:12
3	Sr 421.552†	218326.2	185012.7	1084.7 µg/L	1084.7 ppb	08:10:12
3	Sc 361.383	408789.4	408789.4	111.63 %		08:11:28
3	Y 371.029	430173.1	430173.1	119.54 %		08:11:28
3	Ag 328.068†	5145.4	5293.0	98.032 µg/L	98.032 ppb	08:11:28
3	As 188.979†	1342.4	1215.3	554.08 µg/L	554.08 ppb	08:11:48
3	B 249.677†	-18464.7	-16714.5	596.11 µg/L	596.11 ppb	08:11:28
3	Ba 233.527†	163387.3	146382.5	1224.8 µg/L	1224.8 ppb	08:11:28
3	Be 313.107†	595331.0	536888.4	448.78 µg/L	448.78 ppb	08:11:22
3	Cd 226.502†	48947.4	44171.5	426.02 µg/L	426.02 ppb	08:11:28
3	Co 228.616†	26157.0	23654.6	542.24 µg/L	542.24 ppb	08:11:48
3	Cr 267.716†	34741.7	31000.6	620.33 µg/L	620.33 ppb	08:11:28
3	Cu 324.752†	119845.8	105441.2	792.39 µg/L	792.39 ppb	08:11:28
3	Mn 257.610†	3662942.9	3280911.7	5171.7 µg/L	5171.7 ppb	08:11:22
3	Mo 202.031†	8599.6	7670.8	440.69 µg/L	440.69 ppb	08:11:48
3	Ni 231.604†	28547.9	25777.9	718.40 µg/L	718.40 ppb	08:11:48
3	P 214.914†	8814.7	7764.7	4913.5 µg/L	4913.5 ppb	08:11:48
3	Pb 220.353†	4916.6	4467.9	565.62 µg/L	565.62 ppb	08:11:48
3	S 181.975 Axial†	82796.5	74079.1	90933 µg/L	90933 ppb	08:11:28
3	Sb 206.836†	1605.6	1283.7	321.78 µg/L	321.78 ppb	08:11:48
3	Se 196.026†	694.5	645.9	436.99 µg/L	436.99 ppb	08:11:48
3	SiO2†	237590.9	211775.5	35704 µg/L	35704 ppb	08:11:28
3	Si 251.611†	336644.1	301583.6	16649 µg/L	16649 ppb	08:11:28
3	Sn 189.927†	3919.6	3463.8	440.04 µg/L	440.04 ppb	08:11:48
3	Ti 334.940†	398168.5	357412.2	1529.5 µg/L	1529.5 ppb	08:11:28
3	Tl 190.801†	1683.8	1586.7	370.01 µg/L	370.01 ppb	08:11:48
3	U 367.007†	5832.4	4341.4	287.3 µg/L	287.3 ppb	08:11:28
3	V 292.402†	53329.1	47905.6	690.59 µg/L	690.59 ppb	08:11:28
3	Zn 213.857†	150655.6	134063.7	984.96 µg/L	984.96 ppb	08:11:28

Mean Data: 1204070401|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	408367.5	111.51	%	0.279				0.25%
Sc RADIAL	26156.5	118	%	0.87				0.73%
Y 371.029	429851.0	119.45	%	0.347				0.29%
Ag 328.068†	5306.5	97.971	µg/L	0.2184	97.971	ppb	0.2184	0.22%
Al 396.153Radial†	367056.2	118030	µg/L	727.97	118030	ppb	727.97	0.62%
As 188.979†	1221.8	556.89	µg/L	2.440	556.89	ppb	2.440	0.44%
B 249.677†	-16773.7	588.99	µg/L	6.168	588.99	ppb	6.168	1.05%
Ba 233.527†	146603.0	1226.7	µg/L	4.44	1226.7	ppb	4.44	0.36%
Be 313.107†	539017.7	450.55	µg/L	3.149	450.55	ppb	3.149	0.70%
Ca 317.933Radial†	847831.4	181570	µg/L	618.52	181570	ppb	618.52	0.34%
Cd 226.502†	44359.7	428.12	µg/L	2.387	428.12	ppb	2.387	0.56%
Co 228.616†	23801.7	545.64	µg/L	3.005	545.64	ppb	3.005	0.55%
Cr 267.716†	31123.3	622.74	µg/L	2.939	622.74	ppb	2.939	0.47%
Cu 324.752†	105543.8	793.07	µg/L	3.389	793.07	ppb	3.389	0.43%
Fe 238.204 Radial†	1514775.2	294820	µg/L	1189.80	294820	ppb	1189.80	0.40%
K 766.490 Radial†	21736.2	19714	µg/L	88.22	19714	ppb	88.22	0.45%
Mg 279.077 IEC†	63823.5	104300	µg/L	323.72	104300	ppb	323.72	0.31%
Mn 257.610†	3292682.5	5190.1	µg/L	34.92	5190.1	ppb	34.92	0.67%
Mo 202.031†	7713.6	443.09	µg/L	2.123	443.09	ppb	2.123	0.48%

Na 589.592 Radial†	3447.3	4915.3 µg/L	39.12	4915.3 ppb	39.12	0.80%
Ni 231.604†	25940.7	722.87 µg/L	3.946	722.87 ppb	3.946	0.55%
P 214.914†	7822.9	4953.2 µg/L	34.85	4953.2 ppb	34.85	0.70%
Pb 220.353†	4482.6	567.35 µg/L	3.720	567.35 ppb	3.720	0.66%
S 181.975 Axial†	74214.4	91100 µg/L	271.23	91100 ppb	271.23	0.30%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	1285.7	322.51 µg/L	6.602	322.51 ppb	6.602	2.05%
Se 196.026†	648.8	437.75 µg/L	2.331	437.75 ppb	2.331	0.53%
SiO2†	212307.3	35794 µg/L	139.34	35794 ppb	139.34	0.39%
Si 251.611†	302508.2	16700 µg/L	73.63	16700 ppb	73.63	0.44%
Sn 189.927†	3490.8	443.37 µg/L	3.005	443.37 ppb	3.005	0.68%
Sr 421.552†	184260.6	1080.3 µg/L	4.31	1080.3 ppb	4.31	0.40%
Ti 334.940†	357682.5	1530.6 µg/L	5.43	1530.6 ppb	5.43	0.35%
Tl 190.801†	1592.6	371.16 µg/L	1.133	371.16 ppb	1.133	0.31%
U 367.007†	4352.0	296.5 µg/L	8.47	296.5 ppb	8.47	2.86%
V 292.402†	47984.3	691.38 µg/L	2.478	691.38 ppb	2.478	0.36%
Zn 213.857†	134560.7	988.86 µg/L	5.219	988.86 ppb	5.219	0.53%

Sequence No.: 17 **Autosampler Location: 313**
Sample ID: 1204070402|1782317|1| **Date Collected: 7/23/2018 08:11:56**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204070402|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25872.5	25872.5	117	%			08:12:32
1	Al 396.153Radial†	400334.0	341746.8	109890	µg/L	109890	ppb	08:12:27
1	Ca 317.933Radial†	1013744.0	864852.4	185210	µg/L	185210	ppb	08:12:27
1	Fe 238.204 Radial†	1651684.9	1409544.9	274340	µg/L	274340	ppb	08:12:27
1	K 766.490 Radial†	22735.5	18981.3	17217	µg/L	17217	ppb	08:12:32
1	Mg 279.077 IEC†	72145.2	61514.1	100530	µg/L	100530	ppb	08:12:32
1	Na 589.592 Radial†	3945.3	3239.4	4622.4	µg/L	4622.4	ppb	08:12:32
1	Sr 421.552†	214199.8	182541.7	1070.1	µg/L	1070.1	ppb	08:12:32
1	Sc 361.383	403382.6	403382.6	110.15	%			08:13:06
1	Y 371.029	426516.4	426516.4	118.52	%			08:13:06
1	Ag 328.068†	5321.4	5514.7	97.036	µg/L	97.036	ppb	08:13:06
1	As 188.979†	1307.6	1199.9	546.14	µg/L	546.14	ppb	08:13:26
1	B 249.677†	-16472.2	-15127.2	563.97	µg/L	563.97	ppb	08:13:06
1	Ba 233.527†	139738.0	126874.7	1061.1	µg/L	1061.1	ppb	08:13:06
1	Be 313.107†	589097.1	538377.4	450.04	µg/L	450.04	ppb	08:13:00
1	Cd 226.502†	48013.2	43911.2	425.71	µg/L	425.71	ppb	08:13:06
1	Co 228.616†	25425.6	23304.7	534.45	µg/L	534.45	ppb	08:13:26
1	Cr 267.716†	33479.9	30272.3	605.34	µg/L	605.34	ppb	08:13:06
1	Cu 324.752†	122730.1	109498.7	820.83	µg/L	820.83	ppb	08:13:06
1	Mn 257.610†	3721527.0	3378078.8	5322.9	µg/L	5322.9	ppb	08:13:00
1	Mo 202.031†	8600.6	7775.0	446.19	µg/L	446.19	ppb	08:13:26
1	Ni 231.604†	27289.7	24978.5	695.86	µg/L	695.86	ppb	08:13:26
1	P 214.914†	9317.0	8326.6	5304.7	µg/L	5304.7	ppb	08:13:26
1	Pb 220.353†	4661.3	4295.2	543.60	µg/L	543.60	ppb	08:13:26
1	S 181.975 Axial†	63143.6	57231.7	70236	µg/L	70236	ppb	08:13:06
1	Sb 206.836†	1700.0	1388.8	355.12	µg/L	355.12	ppb	08:13:26
1	Se 196.026†	701.8	660.9	434.37	µg/L	434.37	ppb	08:13:26
1	SiO2†	149639.9	134783.2	22696	µg/L	22696	ppb	08:13:06
1	Si 251.611†	212288.9	192731.7	10631	µg/L	10631	ppb	08:13:06
1	Sn 189.927†	3893.8	3487.4	441.90	µg/L	441.90	ppb	08:13:26
1	Ti 334.940†	355601.1	323549.0	1385.4	µg/L	1385.4	ppb	08:13:06
1	Tl 190.801†	1783.5	1697.4	391.33	µg/L	391.33	ppb	08:13:26
1	U 367.007†	5540.5	4146.4	300.7	µg/L	300.7	ppb	08:13:06
1	V 292.402†	51212.1	46624.1	669.49	µg/L	669.49	ppb	08:13:06
1	Zn 213.857†	151496.7	136636.3	1007.0	µg/L	1007.0	ppb	08:13:06
2	Sc RADIAL	25793.1	25793.1	117	%			08:12:43
2	Al 396.153Radial†	405839.0	347511.2	111740	µg/L	111740	ppb	08:12:38
2	Ca 317.933Radial†	1025582.6	877650.5	187950	µg/L	187950	ppb	08:12:38
2	Fe 238.204 Radial†	1668715.1	1428463.4	278020	µg/L	278020	ppb	08:12:38
2	K 766.490 Radial†	22698.9	19009.6	17242	µg/L	17242	ppb	08:12:43
2	Mg 279.077 IEC†	71209.5	60902.6	99529	µg/L	99529	ppb	08:12:43
2	Na 589.592 Radial†	3894.9	3206.7	4567.2	µg/L	4567.2	ppb	08:12:43
2	Sr 421.552†	212732.6	181848.6	1066.0	µg/L	1066.0	ppb	08:12:43
2	Sc 361.383	404962.5	404962.5	110.58	%			08:13:37
2	Y 371.029	428203.4	428203.4	118.99	%			08:13:37
2	Ag 328.068†	5366.7	5536.7	97.810	µg/L	97.810	ppb	08:13:37
2	As 188.979†	1282.4	1172.4	534.25	µg/L	534.25	ppb	08:13:58
2	B 249.677†	-16526.3	-15117.8	578.64	µg/L	578.64	ppb	08:13:37
2	Ba 233.527†	140866.1	127399.9	1065.5	µg/L	1065.5	ppb	08:13:37
2	Be 313.107†	590848.9	537875.1	449.65	µg/L	449.65	ppb	08:13:32
2	Cd 226.502†	48235.9	43942.6	425.64	µg/L	425.64	ppb	08:13:37
2	Co 228.616†	25376.3	23170.0	531.33	µg/L	531.33	ppb	08:13:58
2	Cr 267.716†	33702.5	30355.1	607.03	µg/L	607.03	ppb	08:13:37
2	Cu 324.752†	123589.9	109841.5	823.57	µg/L	823.57	ppb	08:13:37
2	Mn 257.610†	3731851.1	3374234.1	5317.1	µg/L	5317.1	ppb	08:13:32
2	Mo 202.031†	8579.9	7725.8	443.47	µg/L	443.47	ppb	08:13:58
2	Ni 231.604†	27278.6	24871.8	692.99	µg/L	692.99	ppb	08:13:58
2	P 214.914†	9318.4	8294.8	5280.6	µg/L	5280.6	ppb	08:13:58

2	Pb 220.353†	4673.6	4289.8	543.14 µg/L	543.14 ppb	08:13:58
2	S 181.975 Axial†	63273.2	57125.2	70104 µg/L	70104 ppb	08:13:37
2	Sb 206.836†	1696.9	1379.9	352.02 µg/L	352.02 ppb	08:13:58
2	Se 196.026†	708.2	664.2	437.58 µg/L	437.58 ppb	08:13:58
2	SiO2†	150418.1	134956.9	22725 µg/L	22725 ppb	08:13:37
2	Si 251.611†	213115.0	192726.8	10630 µg/L	10630 ppb	08:13:37
2	Sn 189.927†	3917.8	3495.3	442.96 µg/L	442.96 ppb	08:13:58
2	Ti 334.940†	357890.1	324359.4	1389.0 µg/L	1389.0 ppb	08:13:37
2	Tl 190.801†	1770.8	1679.7	387.87 µg/L	387.87 ppb	08:13:58
2	U 367.007†	5573.1	4156.2	288.5 µg/L	288.5 ppb	08:13:37
2	V 292.402†	51597.3	46791.0	672.40 µg/L	672.40 ppb	08:13:37
2	Zn 213.857†	152306.7	136832.2	1008.1 µg/L	1008.1 ppb	08:13:37
3	Sc RADIAL	25639.1	25639.1	116 %		08:12:53
3	Al 396.153Radial†	405213.7	349060.1	112240 µg/L	112240 ppb	08:12:48
3	Ca 317.933Radial†	1021824.6	879689.2	188390 µg/L	188390 ppb	08:12:48
3	Fe 238.204 Radial†	1663894.1	1432894.5	278890 µg/L	278890 ppb	08:12:48
3	K 766.490 Radial†	22659.2	19092.2	17317 µg/L	17317 ppb	08:12:53
3	Mg 279.077 IEC†	71316.2	61360.8	100280 µg/L	100280 ppb	08:12:53
3	Na 589.592 Radial†	3906.8	3236.9	4612.7 µg/L	4612.7 ppb	08:12:53
3	Sr 421.552†	212967.8	183145.3	1073.6 µg/L	1073.6 ppb	08:12:53
3	Sc 361.383	408502.7	408502.7	111.55 %		08:14:09
3	Y 371.029	431781.7	431781.7	119.99 %		08:14:09
3	Ag 328.068†	5490.4	5605.6	98.632 µg/L	98.632 ppb	08:14:09
3	As 188.979†	1298.4	1176.8	536.22 µg/L	536.22 ppb	08:14:29
3	B 249.677†	-16724.3	-15165.8	580.41 µg/L	580.41 ppb	08:14:09
3	Ba 233.527†	142927.6	128144.0	1071.7 µg/L	1071.7 ppb	08:14:09
3	Be 313.107†	592253.9	534504.2	446.86 µg/L	446.86 ppb	08:14:03
3	Cd 226.502†	49038.0	44283.5	429.08 µg/L	429.08 ppb	08:14:09
3	Co 228.616†	25515.9	23096.4	529.62 µg/L	529.62 ppb	08:14:29
3	Cr 267.716†	34227.0	30561.1	611.17 µg/L	611.17 ppb	08:14:09
3	Cu 324.752†	124975.5	110115.1	825.64 µg/L	825.64 ppb	08:14:09
3	Mn 257.610†	3744671.6	3356481.2	5289.3 µg/L	5289.3 ppb	08:14:03
3	Mo 202.031†	8620.9	7695.3	441.75 µg/L	441.75 ppb	08:14:29
3	Ni 231.604†	27447.0	24809.1	691.27 µg/L	691.27 ppb	08:14:29
3	P 214.914†	9396.6	8292.0	5278.0 µg/L	5278.0 ppb	08:14:29
3	Pb 220.353†	4689.5	4267.4	540.42 µg/L	540.42 ppb	08:14:29
3	S 181.975 Axial†	64688.6	57898.2	71054 µg/L	71054 ppb	08:14:09
3	Sb 206.836†	1727.7	1394.2	355.86 µg/L	355.86 ppb	08:14:29
3	Se 196.026†	718.7	668.0	439.76 µg/L	439.76 ppb	08:14:29
3	SiO2†	152363.1	135521.8	22820 µg/L	22820 ppb	08:14:09
3	Si 251.611†	215925.2	193575.9	10677 µg/L	10677 ppb	08:14:09
3	Sn 189.927†	3896.0	3445.1	436.74 µg/L	436.74 ppb	08:14:29
3	Ti 334.940†	362389.5	325588.3	1394.3 µg/L	1394.3 ppb	08:14:09
3	Tl 190.801†	1789.9	1682.9	388.66 µg/L	388.66 ppb	08:14:29
3	U 367.007†	5651.3	4182.7	294.3 µg/L	294.3 ppb	08:14:09
3	V 292.402†	52129.2	46863.5	673.51 µg/L	673.51 ppb	08:14:09
3	Zn 213.857†	154744.5	137824.0	1015.6 µg/L	1015.6 ppb	08:14:09

Mean Data: 1204070402|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	405615.9	110.76	%	0.716				0.65%
Sc RADIAL	25768.3	117	%	0.54				0.46%
Y 371.029	428833.8	119.17	%	0.747				0.63%
Ag 328.068†	5552.3	97.826	µg/L	0.7982	97.826	ppb	0.7982	0.82%
Al 396.153Radial†	346106.0	111290	µg/L	1239.55	111290	ppb	1239.55	1.11%
As 188.979†	1183.0	538.87	µg/L	6.372	538.87	ppb	6.372	1.18%
B 249.677†	-15136.9	574.34	µg/L	9.026	574.34	ppb	9.026	1.57%
Ba 233.527†	127472.9	1066.1	µg/L	5.31	1066.1	ppb	5.31	0.50%
Be 313.107†	536918.9	448.85	µg/L	1.733	448.85	ppb	1.733	0.39%
Ca 317.933Radial†	874064.0	187190	µg/L	1722.32	187190	ppb	1722.32	0.92%
Cd 226.502†	44045.8	426.81	µg/L	1.964	426.81	ppb	1.964	0.46%
Co 228.616†	23190.4	531.80	µg/L	2.454	531.80	ppb	2.454	0.46%
Cr 267.716†	30396.2	607.85	µg/L	3.002	607.85	ppb	3.002	0.49%
Cu 324.752†	109818.4	823.35	µg/L	2.411	823.35	ppb	2.411	0.29%
Fe 238.204 Radial†	1423634.3	277080	µg/L	2413.69	277080	ppb	2413.69	0.87%
K 766.490 Radial†	19027.7	17259	µg/L	52.16	17259	ppb	52.16	0.30%
Mg 279.077 IEC†	61259.1	100110	µg/L	519.95	100110	ppb	519.95	0.52%
Mn 257.610†	3369598.0	5309.8	µg/L	17.98	5309.8	ppb	17.98	0.34%
Mo 202.031†	7732.0	443.80	µg/L	2.237	443.80	ppb	2.237	0.50%

Na 589.592 Radial†	3227.7	4600.7 µg/L	29.42	4600.7 ppb	29.42	0.64%
Ni 231.604†	24886.5	693.37 µg/L	2.322	693.37 ppb	2.322	0.33%
P 214.914†	8304.5	5287.8 µg/L	14.71	5287.8 ppb	14.71	0.28%
Pb 220.353†	4284.2	542.39 µg/L	1.717	542.39 ppb	1.717	0.32%
S 181.975 Axial†	57418.4	70465 µg/L	514.42	70465 ppb	514.42	0.73%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	1387.6	354.33 µg/L	2.038	354.33 ppb	2.038	0.58%
Se 196.026†	664.4	437.24 µg/L	2.710	437.24 ppb	2.710	0.62%
SiO2†	135087.3	22747 µg/L	64.93	22747 ppb	64.93	0.29%
Si 251.611†	193011.5	10646 µg/L	26.95	10646 ppb	26.95	0.25%
Sn 189.927†	3475.9	440.53 µg/L	3.326	440.53 ppb	3.326	0.76%
Sr 421.552†	182511.9	1069.9 µg/L	3.81	1069.9 ppb	3.81	0.36%
Ti 334.940†	324498.9	1389.6 µg/L	4.44	1389.6 ppb	4.44	0.32%
Tl 190.801†	1686.7	389.29 µg/L	1.813	389.29 ppb	1.813	0.47%
U 367.007†	4161.8	294.5 µg/L	6.11	294.5 ppb	6.11	2.08%
V 292.402†	46759.5	671.80 µg/L	2.077	671.80 ppb	2.077	0.31%
Zn 213.857†	137097.5	1010.2 µg/L	4.67	1010.2 ppb	4.67	0.46%

Sequence No.: 18 **Autosampler Location: 314**
Sample ID: 1204069480|1782317|5| **Date Collected: 7/23/2018 08:14:38**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204069480|1782317|5|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25066.9	25066.9	114	%			08:15:14
1	Al 396.153Radial†	74070.5	65338.9	21014	µg/L	21014	ppb	08:15:14
1	Ca 317.933Radial†	188269.6	165540.6	35451	µg/L	35451	ppb	08:15:14
1	Fe 238.204 Radial†	336285.4	296181.5	57646	µg/L	57646	ppb	08:15:09
1	K 766.490 Radial†	2985.0	2207.7	1998.7	µg/L	1998.7	ppb	08:15:14
1	Mg 279.077 IEC†	14082.9	12348.8	20181	µg/L	20181	ppb	08:15:14
1	Na 589.592 Radial†	285.3	123.7	114.79	µg/L	114.79	ppb	08:15:14
1	Sr 421.552†	24349.8	21188.0	123.97	µg/L	123.97	ppb	08:15:14
1	Sc 361.383	409491.3	409491.3	111.82	%			08:15:41
1	Y 371.029	407828.1	407828.1	113.33	%			08:15:41
1	Ag 328.068†	-1406.5	-574.2	2.6848	µg/L	2.6848	ppb	08:16:01
1	As 188.979†	17.6	28.5	15.674	µg/L	15.674	ppb	08:16:01
1	B 249.677†	-6439.8	-5932.3	27.314	µg/L	27.314	ppb	08:15:41
1	Ba 233.527†	14628.6	13097.8	108.82	µg/L	108.82	ppb	08:16:01
1	Be 313.107†	-2481.8	1354.5	1.6199	µg/L	1.6199	ppb	08:16:01
1	Cd 226.502†	378.8	661.9	0.5656	µg/L	0.5656	ppb	08:16:01
1	Co 228.616†	1031.5	1144.9	25.908	µg/L	25.908	ppb	08:16:01
1	Cr 267.716†	1996.6	1663.6	33.663	µg/L	33.663	ppb	08:16:01
1	Cu 324.752†	10853.2	7785.8	60.749	µg/L	60.749	ppb	08:16:01
1	Mn 257.610†	731818.6	654003.4	1030.8	µg/L	1030.8	ppb	08:15:41
1	Mo 202.031†	43.2	5.7	1.4051	µg/L	1.4051	ppb	08:16:01
1	Ni 231.604†	2200.0	2171.4	61.165	µg/L	61.165	ppb	08:16:01
1	P 214.914†	1770.1	1451.3	917.78	µg/L	917.78	ppb	08:16:01
1	Pb 220.353†	162.6	208.9	28.245	µg/L	28.245	ppb	08:16:01
1	S 181.975 Axial†	13507.4	11987.2	14711	µg/L	14711	ppb	08:16:01
1	Sb 206.836†	175.3	2.2	-7.8535	µg/L	-7.8535	ppb	08:16:01
1	Se 196.026†	-69.7	-38.6	7.4124	µg/L	7.4124	ppb	08:16:01
1	SiO2†	34194.0	29514.2	4974.9	µg/L	4974.9	ppb	08:15:41
1	Si 251.611†	46907.9	41957.7	2316.1	µg/L	2316.1	ppb	08:15:41
1	Sn 189.927†	56.4	2.9	1.7418	µg/L	1.7418	ppb	08:16:01
1	Ti 334.940†	39583.1	36120.5	155.32	µg/L	155.32	ppb	08:15:41
1	Tl 190.801†	-100.3	-11.4	3.2018	µg/L	3.2018	ppb	08:16:01
1	U 367.007†	1784.6	712.5	9.307	µg/L	9.307	ppb	08:15:41
1	V 292.402†	2303.3	2191.7	40.478	µg/L	40.478	ppb	08:16:01
1	Zn 213.857†	19850.0	16853.8	121.75	µg/L	121.75	ppb	08:16:01
2	Sc RADIAL	25182.7	25182.7	114	%			08:15:24
2	Al 396.153Radial†	74545.4	65455.2	21051	µg/L	21051	ppb	08:15:24
2	Ca 317.933Radial†	189819.8	166137.4	35579	µg/L	35579	ppb	08:15:24
2	Fe 238.204 Radial†	337111.6	295544.0	57522	µg/L	57522	ppb	08:15:19
2	K 766.490 Radial†	3056.6	2258.4	2044.8	µg/L	2044.8	ppb	08:15:24
2	Mg 279.077 IEC†	14223.5	12415.0	20289	µg/L	20289	ppb	08:15:24
2	Na 589.592 Radial†	313.9	147.6	151.74	µg/L	151.74	ppb	08:15:24
2	Sr 421.552†	24550.0	21264.9	124.42	µg/L	124.42	ppb	08:15:24
2	Sc 361.383	406451.4	406451.4	110.99	%			08:16:07
2	Y 371.029	404062.9	404062.9	112.28	%			08:16:07
2	Ag 328.068†	-1364.2	-545.4	2.9638	µg/L	2.9638	ppb	08:16:27
2	As 188.979†	24.7	35.0	18.529	µg/L	18.529	ppb	08:16:27
2	B 249.677†	-6380.8	-5922.2	27.163	µg/L	27.163	ppb	08:16:07
2	Ba 233.527†	14532.7	13109.2	108.92	µg/L	108.92	ppb	08:16:27
2	Be 313.107†	-2395.7	1415.4	1.6693	µg/L	1.6693	ppb	08:16:27
2	Cd 226.502†	360.1	647.6	0.4302	µg/L	0.4302	ppb	08:16:27
2	Co 228.616†	1056.3	1174.1	26.577	µg/L	26.577	ppb	08:16:27
2	Cr 267.716†	2001.8	1681.7	34.027	µg/L	34.027	ppb	08:16:27
2	Cu 324.752†	10775.9	7788.8	60.756	µg/L	60.756	ppb	08:16:27
2	Mn 257.610†	732279.3	659313.3	1039.1	µg/L	1039.1	ppb	08:16:07
2	Mo 202.031†	48.5	10.7	1.6887	µg/L	1.6887	ppb	08:16:27
2	Ni 231.604†	2171.8	2160.7	60.865	µg/L	60.865	ppb	08:16:27
2	P 214.914†	1751.0	1446.0	914.33	µg/L	914.33	ppb	08:16:27

2	Pb 220.353†	162.4	209.8	28.370 µg/L	28.370 ppb	08:16:27
2	S 181.975 Axial†	13427.6	12005.7	14734 µg/L	14734 ppb	08:16:27
2	Sb 206.836†	172.7	1.0	-8.1782 µg/L	-8.1782 ppb	08:16:27
2	Se 196.026†	-64.6	-34.4	9.3117 µg/L	9.3117 ppb	08:16:27
2	SiO2†	34226.4	29772.1	5018.5 µg/L	5018.5 ppb	08:16:07
2	Si 251.611†	46961.4	42319.6	2336.1 µg/L	2336.1 ppb	08:16:07
2	Sn 189.927†	66.7	12.5	2.9383 µg/L	2.9383 ppb	08:16:27
2	Ti 334.940†	39874.8	36648.0	157.58 µg/L	157.58 ppb	08:16:07
2	Tl 190.801†	-100.0	-11.8	3.1101 µg/L	3.1101 ppb	08:16:27
2	U 367.007†	1735.7	680.4	-1.600 µg/L	-1.600 ppb	08:16:07
2	V 292.402†	2271.1	2178.1	40.271 µg/L	40.271 ppb	08:16:27
2	Zn 213.857†	19791.1	16933.6	122.37 µg/L	122.37 ppb	08:16:27
3	Sc RADIAL	25072.0	25072.0	114 %		08:15:34
3	Al 396.153Radial†	73984.4	65249.6	20985 µg/L	20985 ppb	08:15:34
3	Ca 317.933Radial†	188401.6	165622.8	35469 µg/L	35469 ppb	08:15:34
3	Fe 238.204 Radial†	337520.8	297208.4	57846 µg/L	57846 ppb	08:15:29
3	K 766.490 Radial†	3021.1	2238.9	2027.0 µg/L	2027.0 ppb	08:15:34
3	Mg 279.077 IEC†	14075.0	12339.3	20165 µg/L	20165 ppb	08:15:34
3	Na 589.592 Radial†	286.1	124.4	115.54 µg/L	115.54 ppb	08:15:34
3	Sr 421.552†	24413.4	21239.6	124.27 µg/L	124.27 ppb	08:15:34
3	Sc 361.383	409102.1	409102.1	111.71 %		08:16:33
3	Y 371.029	406713.1	406713.1	113.02 %		08:16:33
3	Ag 328.068†	-1354.2	-528.6	3.1827 µg/L	3.1827 ppb	08:16:53
3	As 188.979†	27.2	37.1	19.461 µg/L	19.461 ppb	08:16:53
3	B 249.677†	-6332.3	-5841.5	31.108 µg/L	31.108 ppb	08:16:33
3	Ba 233.527†	14560.4	13049.2	108.41 µg/L	108.41 ppb	08:16:53
3	Be 313.107†	-2455.1	1376.3	1.6356 µg/L	1.6356 ppb	08:16:53
3	Cd 226.502†	369.1	653.5	0.4567 µg/L	0.4567 ppb	08:16:53
3	Co 228.616†	1040.8	1154.1	26.117 µg/L	26.117 ppb	08:16:53
3	Cr 267.716†	2016.7	1683.3	34.065 µg/L	34.065 ppb	08:16:53
3	Cu 324.752†	10781.2	7730.6	60.349 µg/L	60.349 ppb	08:16:53
3	Mn 257.610†	733583.9	656206.2	1034.3 µg/L	1034.3 ppb	08:16:33
3	Mo 202.031†	52.8	14.3	1.8995 µg/L	1.8995 ppb	08:16:53
3	Ni 231.604†	2188.6	2163.1	60.937 µg/L	60.937 ppb	08:16:53
3	P 214.914†	1731.3	1418.1	895.49 µg/L	895.49 ppb	08:16:53
3	Pb 220.353†	157.0	204.1	27.652 µg/L	27.652 ppb	08:16:53
3	S 181.975 Axial†	13433.6	11932.7	14644 µg/L	14644 ppb	08:16:53
3	Sb 206.836†	154.7	-16.1	-13.109 µg/L	-13.109 ppb	08:16:53
3	Se 196.026†	-69.6	-38.5	7.5198 µg/L	7.5198 ppb	08:16:53
3	SiO2†	34373.0	29703.5	5006.8 µg/L	5006.8 ppb	08:16:33
3	Si 251.611†	47316.7	42363.5	2338.5 µg/L	2338.5 ppb	08:16:33
3	Sn 189.927†	42.0	-9.9	0.1560 µg/L	0.1560 ppb	08:16:53
3	Ti 334.940†	39871.6	36412.4	156.57 µg/L	156.57 ppb	08:16:33
3	Tl 190.801†	-105.9	-16.5	2.1320 µg/L	2.1320 ppb	08:16:53
3	U 367.007†	1747.9	681.2	-2.493 µg/L	-2.493 ppb	08:16:33
3	V 292.402†	2302.4	2192.8	40.531 µg/L	40.531 ppb	08:16:53
3	Zn 213.857†	19750.3	16781.6	121.18 µg/L	121.18 ppb	08:16:53

Mean Data: 1204069480|1782317|5|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	408348.3	111.51	%	0.452				0.41%
Sc RADIAL	25107.2	114	%	0.30				0.26%
Y 371.029	406201.4	112.88	%	0.537				0.48%
Ag 328.068†	-549.4	2.9437	µg/L	0.24957	2.9437	ppb	0.24957	8.48%
Al 396.153Radial†	65347.9	21017	µg/L	33.17	21017	ppb	33.17	0.16%
As 188.979†	33.6	17.888	µg/L	1.9732	17.888	ppb	1.9732	11.03%
B 249.677†	-5898.7	28.528	µg/L	2.2352	28.528	ppb	2.2352	7.84%
Ba 233.527†	13085.4	108.72	µg/L	0.272	108.72	ppb	0.272	0.25%
Be 313.107†	1382.1	1.6416	µg/L	0.02527	1.6416	ppb	0.02527	1.54%
Ca 317.933Radial†	165766.9	35500	µg/L	69.27	35500	ppb	69.27	0.20%
Cd 226.502†	654.3	0.4842	µg/L	0.07173	0.4842	ppb	0.07173	14.82%
Co 228.616†	1157.7	26.201	µg/L	0.3424	26.201	ppb	0.3424	1.31%
Cr 267.716†	1676.2	33.919	µg/L	0.2218	33.919	ppb	0.2218	0.65%
Cu 324.752†	7768.4	60.618	µg/L	0.2333	60.618	ppb	0.2333	0.38%
Fe 238.204 Radial†	296311.3	57672	µg/L	163.45	57672	ppb	163.45	0.28%
K 766.490 Radial†	2235.0	2023.5	µg/L	23.27	2023.5	ppb	23.27	1.15%
Mg 279.077 IEC†	12367.7	20212	µg/L	67.41	20212	ppb	67.41	0.33%
Mn 257.610†	656507.6	1034.7	µg/L	4.18	1034.7	ppb	4.18	0.40%
Mo 202.031†	10.2	1.6645	µg/L	0.24811	1.6645	ppb	0.24811	14.91%

Na 589.592 Radial†	131.9	127.36 µg/L	21.116	127.36 ppb	21.116	16.58%
Ni 231.604†	2165.1	60.989 µg/L	0.1567	60.989 ppb	0.1567	0.26%
P 214.914†	1438.4	909.20 µg/L	12.000	909.20 ppb	12.000	1.32%
Pb 220.353†	207.6	28.089 µg/L	0.3835	28.089 ppb	0.3835	1.37%
S 181.975 Axial†	11975.2	14697 µg/L	46.67	14697 ppb	46.67	0.32%
Sb 206.836†	-4.3	-9.7135 µg/L	2.94494	-9.7135 ppb	2.94494	30.32%
Se 196.026†	-37.2	8.0813 µg/L	1.06690	8.0813 ppb	1.06690	13.20%
SiO2†	29663.3	5000.1 µg/L	22.57	5000.1 ppb	22.57	0.45%
Si 251.611†	42213.6	2330.2 µg/L	12.31	2330.2 ppb	12.31	0.53%
Sn 189.927†	1.9	1.6120 µg/L	1.39569	1.6120 ppb	1.39569	86.58%
Sr 421.552†	21230.8	124.22 µg/L	0.229	124.22 ppb	0.229	0.18%
Ti 334.940†	36393.6	156.49 µg/L	1.131	156.49 ppb	1.131	0.72%
Tl 190.801†	-13.2	2.8147 µg/L	0.59296	2.8147 ppb	0.59296	21.07%
U 367.007†	691.4	1.738 µg/L	6.5698	1.738 ppb	6.5698	378.03%
V 292.402†	2187.5	40.427 µg/L	0.1377	40.427 ppb	0.1377	0.34%
Zn 213.857†	16856.3	121.77 µg/L	0.596	121.77 ppb	0.596	0.49%

Sequence No.: 19 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 08:17:01**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25144.4	25144.4	114	%			08:17:38
1	Al 396.153Radial†	17178.7	15179.2	4860.0	µg/L	4860.0	ppb	08:17:38
1	Ca 317.933Radial†	26834.8	23268.2	4983.0	µg/L	4983.0	ppb	08:17:38
1	Fe 238.204 Radial†	28698.9	25166.4	4898.2	µg/L	4898.2	ppb	08:17:38
1	K 766.490 Radial†	6397.2	5195.9	4721.6	µg/L	4721.6	ppb	08:17:38
1	Mg 279.077 IEC†	3546.0	3057.7	4997.1	µg/L	4997.1	ppb	08:17:38
1	Na 589.592 Radial†	7176.3	6174.2	9487.8	µg/L	9487.8	ppb	08:17:38
1	Sr 421.552†	91823.0	80372.2	472.53	µg/L	472.53	ppb	08:17:33
1	Sc 361.383	409136.6	409136.6	111.72	%			08:18:06
1	Y 371.029	399982.7	399982.7	111.15	%			08:18:06
1	Ag 328.068†	51309.5	46609.1	473.33	µg/L	473.33	ppb	08:18:06
1	As 188.979†	1235.1	1118.3	495.88	µg/L	495.88	ppb	08:18:26
1	B 249.677†	16241.4	14364.0	494.68	µg/L	494.68	ppb	08:18:06
1	Ba 233.527†	62997.9	56403.0	474.62	µg/L	474.62	ppb	08:18:06
1	Be 313.107†	637169.6	573884.2	477.10	µg/L	477.10	ppb	08:18:06
1	Cd 226.502†	51537.1	46452.3	481.60	µg/L	481.60	ppb	08:18:06
1	Co 228.616†	22679.0	20521.6	472.91	µg/L	472.91	ppb	08:18:26
1	Cr 267.716†	26412.5	23519.1	468.22	µg/L	468.22	ppb	08:18:26
1	Cu 324.752†	73472.9	63843.2	468.96	µg/L	468.96	ppb	08:18:06
1	Mn 257.610†	337872.3	301962.0	474.55	µg/L	474.55	ppb	08:18:06
1	Mo 202.031†	9268.9	8263.3	468.82	µg/L	468.82	ppb	08:18:26
1	Ni 231.604†	19172.6	17364.8	480.07	µg/L	480.07	ppb	08:18:26
1	P 214.914†	4093.8	3532.5	2337.9	µg/L	2337.9	ppb	08:18:26
1	Pb 220.353†	4232.9	3852.2	476.54	µg/L	476.54	ppb	08:18:26
1	S 181.975 Axial†	969.3	775.3	950.13	µg/L	950.13	ppb	08:18:26
1	Sb 206.836†	1981.1	1618.6	460.35	µg/L	460.35	ppb	08:18:26
1	Se 196.026†	1129.0	1034.3	491.02	µg/L	491.02	ppb	08:18:26
1	SiO2†	34732.4	30022.6	5051.2	µg/L	5051.2	ppb	08:18:06
1	Si 251.611†	48056.0	43021.6	2371.1	µg/L	2371.1	ppb	08:18:06
1	Sn 189.927†	4303.6	3804.5	474.35	µg/L	474.35	ppb	08:18:26
1	Ti 334.940†	121897.5	109828.1	467.56	µg/L	467.56	ppb	08:18:06
1	Tl 190.801†	2392.8	2220.0	476.23	µg/L	476.23	ppb	08:18:26
1	U 367.007†	2427.2	1289.1	431.8	µg/L	431.8	ppb	08:18:06
1	V 292.402†	40130.6	36051.5	476.50	µg/L	476.50	ppb	08:18:06
1	Zn 213.857†	70792.2	62466.1	472.55	µg/L	472.55	ppb	08:18:06
2	Sc RADIAL	25108.0	25108.0	114	%			08:17:49
2	Al 396.153Radial†	17293.0	15301.6	4899.3	µg/L	4899.3	ppb	08:17:49
2	Ca 317.933Radial†	26838.3	23305.4	4991.0	µg/L	4991.0	ppb	08:17:49
2	Fe 238.204 Radial†	28794.5	25287.0	4921.7	µg/L	4921.7	ppb	08:17:49
2	K 766.490 Radial†	6337.0	5151.1	4680.9	µg/L	4680.9	ppb	08:17:49
2	Mg 279.077 IEC†	3547.0	3063.2	5005.9	µg/L	5005.9	ppb	08:17:49
2	Na 589.592 Radial†	7161.3	6170.1	9481.6	µg/L	9481.6	ppb	08:17:49
2	Sr 421.552†	91581.1	80276.5	471.97	µg/L	471.97	ppb	08:17:44
2	Sc 361.383	406998.0	406998.0	111.14	%			08:18:32
2	Y 371.029	397801.3	397801.3	110.54	%			08:18:32
2	Ag 328.068†	51007.9	46579.1	473.03	µg/L	473.03	ppb	08:18:32
2	As 188.979†	1225.8	1115.7	494.75	µg/L	494.75	ppb	08:18:52
2	B 249.677†	16242.4	14441.3	497.33	µg/L	497.33	ppb	08:18:32
2	Ba 233.527†	63004.6	56705.3	477.17	µg/L	477.17	ppb	08:18:32
2	Be 313.107†	636845.2	576589.2	479.35	µg/L	479.35	ppb	08:18:32
2	Cd 226.502†	51570.8	46725.0	484.43	µg/L	484.43	ppb	08:18:32
2	Co 228.616†	22648.0	20600.5	474.73	µg/L	474.73	ppb	08:18:52
2	Cr 267.716†	26360.7	23596.7	469.77	µg/L	469.77	ppb	08:18:52
2	Cu 324.752†	73192.8	63936.6	469.65	µg/L	469.65	ppb	08:18:32
2	Mn 257.610†	337782.2	303470.0	476.92	µg/L	476.92	ppb	08:18:32
2	Mo 202.031†	9252.9	8292.5	470.48	µg/L	470.48	ppb	08:18:52
2	Ni 231.604†	19146.8	17431.7	481.92	µg/L	481.92	ppb	08:18:52
2	P 214.914†	4086.8	3545.5	2346.5	µg/L	2346.5	ppb	08:18:52

2	Pb 220.353†	4248.8	3886.5	480.78 µg/L	480.78 ppb	08:18:52
2	S 181.975 Axial†	974.2	784.3	961.16 µg/L	961.16 ppb	08:18:52
2	Sb 206.836†	1978.7	1625.7	462.38 µg/L	462.38 ppb	08:18:52
2	Se 196.026†	1105.4	1018.4	483.53 µg/L	483.53 ppb	08:18:52
2	SiO2†	34707.3	30163.4	5074.9 µg/L	5074.9 ppb	08:18:32
2	Si 251.611†	47969.2	43169.5	2379.2 µg/L	2379.2 ppb	08:18:32
2	Sn 189.927†	4312.2	3832.5	477.84 µg/L	477.84 ppb	08:18:52
2	Ti 334.940†	121809.2	110322.0	469.66 µg/L	469.66 ppb	08:18:32
2	Tl 190.801†	2394.3	2232.7	478.94 µg/L	478.94 ppb	08:18:52
2	U 367.007†	2417.1	1291.4	432.5 µg/L	432.5 ppb	08:18:32
2	V 292.402†	39987.0	36111.0	477.30 µg/L	477.30 ppb	08:18:32
2	Zn 213.857†	70758.0	62768.2	474.84 µg/L	474.84 ppb	08:18:32
3	Sc RADIAL	25060.8	25060.8	113 %		08:17:59
3	Al 396.153Radial†	17218.9	15264.9	4887.6 µg/L	4887.6 ppb	08:17:59
3	Ca 317.933Radial†	26926.0	23427.1	5017.0 µg/L	5017.0 ppb	08:17:59
3	Fe 238.204 Radial†	28747.2	25293.0	4922.8 µg/L	4922.8 ppb	08:17:59
3	K 766.490 Radial†	6421.8	5236.3	4758.3 µg/L	4758.3 ppb	08:17:59
3	Mg 279.077 IEC†	3572.9	3091.9	5052.9 µg/L	5052.9 ppb	08:17:59
3	Na 589.592 Radial†	7123.8	6148.9	9449.0 µg/L	9449.0 ppb	08:17:59
3	Sr 421.552†	91314.0	80192.8	471.47 µg/L	471.47 ppb	08:17:54
3	Sc 361.383	408456.0	408456.0	111.54 %		08:18:58
3	Y 371.029	398874.9	398874.9	110.84 %		08:18:58
3	Ag 328.068†	51373.6	46743.2	474.69 µg/L	474.69 ppb	08:18:58
3	As 188.979†	1233.4	1118.6	496.00 µg/L	496.00 ppb	08:19:18
3	B 249.677†	16394.2	14525.2	500.13 µg/L	500.13 ppb	08:18:58
3	Ba 233.527†	63062.0	56554.4	475.90 µg/L	475.90 ppb	08:18:58
3	Be 313.107†	637831.3	575427.8	478.38 µg/L	478.38 ppb	08:18:58
3	Cd 226.502†	51594.3	46580.5	482.93 µg/L	482.93 ppb	08:18:58
3	Co 228.616†	22604.4	20488.6	472.15 µg/L	472.15 ppb	08:19:18
3	Cr 267.716†	26265.3	23426.5	466.38 µg/L	466.38 ppb	08:19:18
3	Cu 324.752†	73483.6	63962.3	469.83 µg/L	469.83 ppb	08:18:58
3	Mn 257.610†	338306.6	302855.2	475.95 µg/L	475.95 ppb	08:18:58
3	Mo 202.031†	9263.8	8272.6	469.35 µg/L	469.35 ppb	08:19:18
3	Ni 231.604†	19102.3	17330.3	479.12 µg/L	479.12 ppb	08:19:18
3	P 214.914†	4055.5	3504.3	2319.1 µg/L	2319.1 ppb	08:19:18
3	Pb 220.353†	4229.1	3855.2	476.91 µg/L	476.91 ppb	08:19:18
3	S 181.975 Axial†	973.2	780.2	956.18 µg/L	956.18 ppb	08:19:18
3	Sb 206.836†	1963.5	1605.8	456.74 µg/L	456.74 ppb	08:19:18
3	Se 196.026†	1114.9	1023.3	485.85 µg/L	485.85 ppb	08:19:18
3	SiO2†	34755.0	30094.6	5063.3 µg/L	5063.3 ppb	08:18:58
3	Si 251.611†	47927.4	42978.0	2368.6 µg/L	2368.6 ppb	08:18:58
3	Sn 189.927†	4302.0	3809.4	474.98 µg/L	474.98 ppb	08:19:18
3	Ti 334.940†	122200.1	110281.3	469.49 µg/L	469.49 ppb	08:18:58
3	Tl 190.801†	2400.9	2230.8	478.55 µg/L	478.55 ppb	08:19:18
3	U 367.007†	2422.8	1288.7	431.6 µg/L	431.6 ppb	08:18:58
3	V 292.402†	40227.5	36198.2	478.43 µg/L	478.43 ppb	08:18:58
3	Zn 213.857†	70947.9	62711.2	474.42 µg/L	474.42 ppb	08:18:58

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	408196.9	111.47	%	0.298				0.27%
Sc RADIAL	25104.4	114	%	0.19				0.17%
Y 371.029	398886.3	110.84	%	0.303				0.27%
Ag 328.068†	46643.8	473.68	µg/L	0.887	473.68	ppb	0.887	0.19%
QC value within limits for Ag 328.068 Recovery = 94.74%								
Al 396.153Radial†	15248.6	4882.3	µg/L	20.16	4882.3	ppb	20.16	0.41%
QC value within limits for Al 396.153Radial Recovery = 97.65%								
As 188.979†	1117.5	495.54	µg/L	0.692	495.54	ppb	0.692	0.14%
QC value within limits for As 188.979 Recovery = 99.11%								
B 249.677†	14443.5	497.38	µg/L	2.729	497.38	ppb	2.729	0.55%
QC value within limits for B 249.677 Recovery = 99.48%								
Ba 233.527†	56554.2	475.90	µg/L	1.272	475.90	ppb	1.272	0.27%
QC value within limits for Ba 233.527 Recovery = 95.18%								
Be 313.107†	575300.4	478.27	µg/L	1.128	478.27	ppb	1.128	0.24%
QC value within limits for Be 313.107 Recovery = 95.65%								
Ca 317.933Radial†	23333.6	4997.0	µg/L	17.80	4997.0	ppb	17.80	0.36%
QC value within limits for Ca 317.933Radial Recovery = 99.94%								
Cd 226.502†	46585.9	482.99	µg/L	1.415	482.99	ppb	1.415	0.29%
QC value within limits for Cd 226.502 Recovery = 96.60%								

Co 228.616†	20536.9	473.26 µg/L	1.325	473.26 ppb	1.325	0.28%
QC value within limits for Co 228.616 Recovery = 94.65%						
Cr 267.716†	23514.1	468.12 µg/L	1.696	468.12 ppb	1.696	0.36%
QC value within limits for Cr 267.716 Recovery = 93.62%						
Cu 324.752†	63914.0	469.48 µg/L	0.461	469.48 ppb	0.461	0.10%
QC value within limits for Cu 324.752 Recovery = 93.90%						
Fe 238.204 Radial†	25248.8	4914.2 µg/L	13.90	4914.2 ppb	13.90	0.28%
QC value within limits for Fe 238.204 Radial Recovery = 98.28%						
K 766.490 Radial†	5194.5	4720.2 µg/L	38.73	4720.2 ppb	38.73	0.82%
QC value within limits for K 766.490 Radial Recovery = 94.40%						
Mg 279.077 IEC†	3070.9	5018.6 µg/L	30.00	5018.6 ppb	30.00	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 100.37%						
Mn 257.610†	302762.4	475.81 µg/L	1.192	475.81 ppb	1.192	0.25%
QC value within limits for Mn 257.610 Recovery = 95.16%						
Mo 202.031†	8276.2	469.55 µg/L	0.846	469.55 ppb	0.846	0.18%
QC value within limits for Mo 202.031 Recovery = 93.91%						
Na 589.592 Radial†	6164.4	9472.8 µg/L	20.87	9472.8 ppb	20.87	0.22%
QC value within limits for Na 589.592 Radial Recovery = 94.73%						
Ni 231.604†	17375.6	480.37 µg/L	1.424	480.37 ppb	1.424	0.30%
QC value within limits for Ni 231.604 Recovery = 96.07%						
P 214.914†	3527.4	2334.5 µg/L	14.01	2334.5 ppb	14.01	0.60%
QC value within limits for P 214.914 Recovery = 93.38%						
Pb 220.353†	3864.6	478.08 µg/L	2.346	478.08 ppb	2.346	0.49%
QC value within limits for Pb 220.353 Recovery = 95.62%						
S 181.975 Axial†	779.9	955.82 µg/L	5.525	955.82 ppb	5.525	0.58%
QC value within limits for S 181.975 Axial Recovery = 95.58%						
Sb 206.836†	1616.7	459.83 µg/L	2.859	459.83 ppb	2.859	0.62%
QC value within limits for Sb 206.836 Recovery = 91.97%						
Se 196.026†	1025.3	486.80 µg/L	3.834	486.80 ppb	3.834	0.79%
QC value within limits for Se 196.026 Recovery = 97.36%						
SiO2†	30093.5	5063.1 µg/L	11.86	5063.1 ppb	11.86	0.23%
QC value within limits for SiO2 Recovery = 94.68%						
Si 251.611†	43056.4	2373.0 µg/L	5.54	2373.0 ppb	5.54	0.23%
QC value within limits for Si 251.611 Recovery = 94.92%						
Sn 189.927†	3815.5	475.73 µg/L	1.861	475.73 ppb	1.861	0.39%
QC value within limits for Sn 189.927 Recovery = 95.15%						
Sr 421.552†	80280.5	471.99 µg/L	0.528	471.99 ppb	0.528	0.11%
QC value within limits for Sr 421.552 Recovery = 94.40%						
Ti 334.940†	110143.8	468.90 µg/L	1.168	468.90 ppb	1.168	0.25%
QC value within limits for Ti 334.940 Recovery = 93.78%						
Tl 190.801†	2227.8	477.90 µg/L	1.467	477.90 ppb	1.467	0.31%
QC value within limits for Tl 190.801 Recovery = 95.58%						
U 367.007†	1289.7	432.0 µg/L	0.50	432.0 ppb	0.50	0.12%
QC value less than the lower limit for U 367.007 Recovery = 86.39%						
V 292.402†	36120.2	477.41 µg/L	0.965	477.41 ppb	0.965	0.20%
QC value within limits for V 292.402 Recovery = 95.48%						
Zn 213.857†	62648.5	473.93 µg/L	1.219	473.93 ppb	1.219	0.26%
QC value within limits for Zn 213.857 Recovery = 94.79%						

QC Failed. Continue with analysis.

Sequence No.: 20 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 08:19:27**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24734.8	24734.8	112	%			08:20:18
1	Al 396.153Radial†	-130.0	-22.0	-7.0886	µg/L	-7.0886	ppb	08:20:18
1	Ca 317.933Radial†	471.1	124.2	26.605	µg/L	26.605	ppb	08:20:18
1	Fe 238.204 Radial†	44.9	5.0	0.9808	µg/L	0.9808	ppb	08:20:18
1	K 766.490 Radial†	574.0	90.7	82.436	µg/L	82.436	ppb	08:19:58
1	Mg 279.077 IEC†	55.1	-6.9	-11.231	µg/L	-11.231	ppb	08:20:18
1	Na 589.592 Radial†	108.8	-30.4	-46.780	µg/L	-46.780	ppb	08:20:18
1	Sr 421.552†	235.6	-50.2	-0.2958	µg/L	-0.2958	ppb	08:19:58
1	Sc 361.383	407032.3	407032.3	111.15	%			08:21:14
1	Y 371.029	401074.6	401074.6	111.45	%			08:21:14
1	Ag 328.068†	-678.2	73.5	0.7481	µg/L	0.7481	ppb	08:21:14
1	As 188.979†	-8.5	5.2	2.2745	µg/L	2.2745	ppb	08:21:34
1	B 249.677†	255.5	56.7	1.8837	µg/L	1.8837	ppb	08:21:34
1	Ba 233.527†	4.5	19.5	0.1643	µg/L	0.1643	ppb	08:21:34
1	Be 313.107†	-3087.1	796.5	0.6600	µg/L	0.6600	ppb	08:21:14
1	Cd 226.502†	-297.9	55.1	0.5713	µg/L	0.5713	ppb	08:21:34
1	Co 228.616†	-202.7	40.0	0.9202	µg/L	0.9202	ppb	08:21:34
1	Cr 267.716†	125.4	-9.1	-0.1748	µg/L	-0.1748	ppb	08:21:34
1	Cu 324.752†	2116.8	-15.7	-0.1202	µg/L	-0.1202	ppb	08:21:14
1	Mn 257.610†	518.5	9.7	0.0153	µg/L	0.0153	ppb	08:21:34
1	Mo 202.031†	36.1	-0.5	-0.0277	µg/L	-0.0277	ppb	08:21:34
1	Ni 231.604†	-220.2	5.8	0.1609	µg/L	0.1609	ppb	08:21:34
1	P 214.914†	106.4	-36.0	-23.956	µg/L	-23.956	ppb	08:21:34
1	Pb 220.353†	-71.0	-0.4	-0.0405	µg/L	-0.0405	ppb	08:21:34
1	S 181.975 Axial†	115.6	11.6	14.317	µg/L	14.317	ppb	08:21:34
1	Sb 206.836†	152.1	-17.7	-5.0810	µg/L	-5.0810	ppb	08:21:34
1	Se 196.026†	-11.7	13.2	6.2568	µg/L	6.2568	ppb	08:21:34
1	SiO2†	1244.3	54.2	9.1663	µg/L	9.1663	ppb	08:21:34
1	Si 251.611†	252.1	235.0	12.997	µg/L	12.997	ppb	08:21:34
1	Sn 189.927†	43.4	-8.5	-1.0538	µg/L	-1.0538	ppb	08:21:34
1	Ti 334.940†	-442.6	323.3	1.3821	µg/L	1.3821	ppb	08:21:14
1	Tl 190.801†	-86.1	0.8	0.1755	µg/L	0.1755	ppb	08:21:34
1	U 367.007†	955.6	-23.7	-8.349	µg/L	-8.349	ppb	08:21:14
1	V 292.402†	-177.3	-27.6	-0.3668	µg/L	-0.3668	ppb	08:21:34
1	Zn 213.857†	1203.2	184.6	1.4069	µg/L	1.4069	ppb	08:21:34
2	Sc RADIAL	24700.3	24700.3	112	%			08:20:43
2	Al 396.153Radial†	-80.2	22.3	7.1471	µg/L	7.1471	ppb	08:20:43
2	Ca 317.933Radial†	469.9	123.7	26.492	µg/L	26.492	ppb	08:20:43
2	Fe 238.204 Radial†	39.7	0.4	0.0860	µg/L	0.0860	ppb	08:20:43
2	K 766.490 Radial†	578.8	95.7	87.000	µg/L	87.000	ppb	08:20:23
2	Mg 279.077 IEC†	61.8	-0.8	-1.3026	µg/L	-1.3026	ppb	08:20:43
2	Na 589.592 Radial†	105.5	-33.3	-51.186	µg/L	-51.186	ppb	08:20:43
2	Sr 421.552†	240.5	-45.5	-0.2680	µg/L	-0.2680	ppb	08:20:23
2	Sc 361.383	406176.9	406176.9	110.92	%			08:21:40
2	Y 371.029	400192.4	400192.4	111.21	%			08:21:40
2	Ag 328.068†	-659.9	88.7	0.8973	µg/L	0.8973	ppb	08:21:40
2	As 188.979†	-28.5	-12.9	-5.6542	µg/L	-5.6542	ppb	08:22:00
2	B 249.677†	242.5	45.4	1.5065	µg/L	1.5065	ppb	08:22:00
2	Ba 233.527†	-6.4	9.8	0.0824	µg/L	0.0824	ppb	08:22:00
2	Be 313.107†	-3500.8	417.6	0.3478	µg/L	0.3478	ppb	08:21:40
2	Cd 226.502†	-294.6	57.5	0.5963	µg/L	0.5963	ppb	08:22:00
2	Co 228.616†	-212.7	30.7	0.7072	µg/L	0.7072	ppb	08:22:00
2	Cr 267.716†	125.5	-8.7	-0.1759	µg/L	-0.1759	ppb	08:22:00
2	Cu 324.752†	2058.0	-64.7	-0.4737	µg/L	-0.4737	ppb	08:21:40
2	Mn 257.610†	517.0	9.2	0.0145	µg/L	0.0145	ppb	08:22:00
2	Mo 202.031†	44.5	7.2	0.4082	µg/L	0.4082	ppb	08:22:00
2	Ni 231.604†	-250.9	-22.3	-0.6163	µg/L	-0.6163	ppb	08:22:00
2	P 214.914†	92.8	-48.1	-31.985	µg/L	-31.985	ppb	08:22:00

2	Pb 220.353†	-55.1	13.9	1.7151 µg/L	1.7151 ppb	08:22:00
2	S 181.975 Axial†	120.7	16.5	20.228 µg/L	20.228 ppb	08:22:00
2	Sb 206.836†	155.1	-14.8	-4.2279 µg/L	-4.2279 ppb	08:22:00
2	Se 196.026†	-3.7	20.4	9.6581 µg/L	9.6581 ppb	08:22:00
2	SiO2†	1246.0	58.1	9.8064 µg/L	9.8064 ppb	08:22:00
2	Si 251.611†	239.4	224.1	12.385 µg/L	12.385 ppb	08:22:00
2	Sn 189.927†	52.4	-0.3	-0.0363 µg/L	-0.0363 ppb	08:22:00
2	Ti 334.940†	-742.7	51.9	0.2213 µg/L	0.2213 ppb	08:21:40
2	Tl 190.801†	-78.1	7.9	1.7000 µg/L	1.7000 ppb	08:22:00
2	U 367.007†	986.7	6.1	2.137 µg/L	2.137 ppb	08:21:40
2	V 292.402†	-140.5	5.2	0.0723 µg/L	0.0723 ppb	08:22:00
2	Zn 213.857†	1192.5	177.3	1.3552 µg/L	1.3552 ppb	08:22:00
3	Sc RADIAL	24808.4	24808.4	112 %		08:21:08
3	Al 396.153Radial†	-105.5	0.0	-0.0071 µg/L	-0.0071 ppb	08:21:08
3	Ca 317.933Radial†	479.7	130.6	27.965 µg/L	27.965 ppb	08:21:08
3	Fe 238.204 Radial†	69.7	27.0	5.2472 µg/L	5.2472 ppb	08:21:08
3	K 766.490 Radial†	441.7	-28.6	-25.943 µg/L	-25.943 ppb	08:20:48
3	Mg 279.077 IEC†	79.8	14.9	24.414 µg/L	24.414 ppb	08:21:08
3	Na 589.592 Radial†	113.4	-26.7	-41.018 µg/L	-41.018 ppb	08:21:08
3	Sr 421.552†	245.7	-41.8	-0.2465 µg/L	-0.2465 ppb	08:20:48
3	Sc 361.383	408867.4	408867.4	111.65 %		08:22:05
3	Y 371.029	402117.4	402117.4	111.74 %		08:22:05
3	Ag 328.068†	-664.5	88.5	0.8867 µg/L	0.8867 ppb	08:22:05
3	As 188.979†	-29.5	-13.7	-5.9967 µg/L	-5.9967 ppb	08:22:25
3	B 249.677†	258.8	58.6	1.9635 µg/L	1.9635 ppb	08:22:25
3	Ba 233.527†	2.9	18.1	0.1525 µg/L	0.1525 ppb	08:22:25
3	Be 313.107†	-3439.6	493.2	0.4145 µg/L	0.4145 ppb	08:22:05
3	Cd 226.502†	-278.7	73.5	0.7618 µg/L	0.7618 ppb	08:22:25
3	Co 228.616†	-195.2	47.6	1.0964 µg/L	1.0964 ppb	08:22:25
3	Cr 267.716†	112.9	-20.8	-0.4288 µg/L	-0.4288 ppb	08:22:25
3	Cu 324.752†	1983.3	-143.8	-1.0444 µg/L	-1.0444 ppb	08:22:05
3	Mn 257.610†	494.6	-13.9	-0.0215 µg/L	-0.0215 ppb	08:22:25
3	Mo 202.031†	46.0	8.2	0.4670 µg/L	0.4670 ppb	08:22:25
3	Ni 231.604†	-226.5	1.1	0.0294 µg/L	0.0294 ppb	08:22:25
3	P 214.914†	83.2	-57.2	-38.066 µg/L	-38.066 ppb	08:22:25
3	Pb 220.353†	-73.5	-2.3	-0.2945 µg/L	-0.2945 ppb	08:22:25
3	S 181.975 Axial†	124.1	18.8	23.122 µg/L	23.122 ppb	08:22:25
3	Sb 206.836†	160.7	-10.7	-3.0481 µg/L	-3.0481 ppb	08:22:25
3	Se 196.026†	-20.8	5.1	2.4105 µg/L	2.4105 ppb	08:22:25
3	SiO2†	1248.6	53.1	8.9467 µg/L	8.9467 ppb	08:22:25
3	Si 251.611†	247.3	229.7	12.693 µg/L	12.693 ppb	08:22:25
3	Sn 189.927†	34.7	-16.4	-2.0400 µg/L	-2.0400 ppb	08:22:25
3	Ti 334.940†	-637.5	150.6	0.6344 µg/L	0.6344 ppb	08:22:05
3	Tl 190.801†	-89.4	-1.8	-0.3728 µg/L	-0.3728 ppb	08:22:25
3	U 367.007†	1043.7	51.4	18.04 µg/L	18.04 ppb	08:22:05
3	V 292.402†	-158.3	-9.9	-0.1140 µg/L	-0.1140 ppb	08:22:25
3	Zn 213.857†	1193.0	170.7	1.3011 µg/L	1.3011 ppb	08:22:25

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	407358.9	111.24	%	0.375				0.34%
Sc RADIAL	24747.9	112	%	0.25				0.22%
Y 371.029	401128.1	111.47	%	0.268				0.24%
Ag 328.068†	83.6	0.8441	µg/L	0.08325	0.8441	ppb	0.08325	9.86%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	0.1	0.0171	µg/L	7.11790	0.0171	ppb	7.11790	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-7.1	-3.1255	µg/L	4.67967	-3.1255	ppb	4.67967	149.73%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	53.5	1.7845	µg/L	0.24409	1.7845	ppb	0.24409	13.68%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	15.8	0.1331	µg/L	0.04427	0.1331	ppb	0.04427	33.27%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	569.1	0.4741	µg/L	0.16440	0.4741	ppb	0.16440	34.68%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	126.2	27.021	µg/L	0.8197	27.021	ppb	0.8197	3.03%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	62.0	0.6432	µg/L	0.10351	0.6432	ppb	0.10351	16.09%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	39.4	0.9079 µg/L	0.19490	0.9079 ppb	0.19490	21.47%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-12.9	-0.2598 µg/L	0.14632	-0.2598 ppb	0.14632	56.32%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-74.7	-0.5461 µg/L	0.46632	-0.5461 ppb	0.46632	85.39%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	10.8	2.1047 µg/L	2.75801	2.1047 ppb	2.75801	131.04%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	52.6	47.831 µg/L	63.9309	47.831 ppb	63.9309	133.66%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	2.4	3.9601 µg/L	18.39567	3.9601 ppb	18.39567	464.52%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	1.7	0.0028 µg/L	0.02103	0.0028 ppb	0.02103	764.06%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	5.0	0.2825 µg/L	0.27021	0.2825 ppb	0.27021	95.65%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-30.1	-46.328 µg/L	5.0989	-46.328 ppb	5.0989	11.01%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-5.1	-0.1420 µg/L	0.41598	-0.1420 ppb	0.41598	292.95%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-47.1	-31.335 µg/L	7.0776	-31.335 ppb	7.0776	22.59%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	3.7	0.4600 µg/L	1.09427	0.4600 ppb	1.09427	237.87%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	15.6	19.222 µg/L	4.4880	19.222 ppb	4.4880	23.35%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-14.4	-4.1190 µg/L	1.02082	-4.1190 ppb	1.02082	24.78%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	12.9	6.1085 µg/L	3.62604	6.1085 ppb	3.62604	59.36%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	55.2	9.3065 µg/L	0.44663	9.3065 ppb	0.44663	4.80%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	229.6	12.692 µg/L	0.3060	12.692 ppb	0.3060	2.41%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-8.4	-1.0434 µg/L	1.00185	-1.0434 ppb	1.00185	96.02%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-45.9	-0.2701 µg/L	0.02471	-0.2701 ppb	0.02471	9.15%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	175.3	0.7459 µg/L	0.58841	0.7459 ppb	0.58841	78.88%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	2.3	0.5009 µg/L	1.07407	0.5009 ppb	1.07407	214.43%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	11.3	3.941 µg/L	13.2844	3.941 ppb	13.2844	337.08%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	-10.8	-0.1362 µg/L	0.22035	-0.1362 ppb	0.22035	161.83%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	177.6	1.3544 µg/L	0.05288	1.3544 ppb	0.05288	3.90%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 21 **Autosampler Location: 315**
Sample ID: 454474002|1782317|1| **Date Collected: 7/23/2018 08:22:34**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474002|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25846.7	25846.7	117	%			08:23:12
1	Al 396.153Radial†	352153.1	300928.7	96782	µg/L	96782	ppb	08:23:07
1	Ca 317.933Radial†	1166173.5	995933.9	213290	µg/L	213290	ppb	08:23:07
1	Fe 238.204 Radial†	1642050.0	1402723.4	273010	µg/L	273010	ppb	08:23:07
1	K 766.490 Radial†	16088.3	13322.1	12080	µg/L	12080	ppb	08:23:12
1	Mg 279.077 IEC†	70838.6	60459.4	98805	µg/L	98805	ppb	08:23:12
1	Na 589.592 Radial†	931.6	668.2	670.32	µg/L	670.32	ppb	08:23:12
1	Sr 421.552†	148896.6	126937.8	742.68	µg/L	742.68	ppb	08:23:12
1	Sc 361.383	402985.3	402985.3	110.04	%			08:23:46
1	Y 371.029	426733.5	426733.5	118.58	%			08:23:46
1	Ag 328.068†	-4429.7	-3341.7	6.5186	µg/L	6.5186	ppb	08:23:46
1	As 188.979†	163.0	160.9	85.587	µg/L	85.587	ppb	08:24:06
1	B 249.677†	-30926.5	-28277.1	123.29	µg/L	123.29	ppb	08:23:46
1	Ba 233.527†	94235.3	85650.0	714.19	µg/L	714.19	ppb	08:23:46
1	Be 313.107†	1272.0	4729.8	6.7847	µg/L	6.7847	ppb	08:23:46
1	Cd 226.502†	2762.7	2833.7	-0.4841	µg/L	-0.4841	ppb	08:24:06
1	Co 228.616†	6072.0	5740.2	129.59	µg/L	129.59	ppb	08:24:06
1	Cr 267.716†	9011.3	8067.0	163.22	µg/L	163.22	ppb	08:24:06
1	Cu 324.752†	48215.6	41894.9	324.49	µg/L	324.49	ppb	08:23:46
1	Mn 257.610†	3560936.4	3235476.4	5098.9	µg/L	5098.9	ppb	08:23:40
1	Mo 202.031†	107.0	64.2	8.7775	µg/L	8.7775	ppb	08:24:06
1	Ni 231.604†	11770.8	10900.5	306.73	µg/L	306.73	ppb	08:24:06
1	P 214.914†	7873.5	7023.2	4445.2	µg/L	4445.2	ppb	08:24:06
1	Pb 220.353†	1021.8	992.1	134.94	µg/L	134.94	ppb	08:24:06
1	S 181.975 Axial†	65242.4	59195.4	72652	µg/L	72652	ppb	08:23:46
1	Sb 206.836†	211.9	38.0	-28.991	µg/L	-28.991	ppb	08:24:06
1	Se 196.026†	-286.7	-236.7	9.5206	µg/L	9.5206	ppb	08:24:06
1	SiO2†	208515.2	188419.0	31781	µg/L	31781	ppb	08:23:46
1	Si 251.611†	295327.7	268381.6	14822	µg/L	14822	ppb	08:23:46
1	Sn 189.927†	36.9	-14.0	5.2403	µg/L	5.2403	ppb	08:24:06
1	Ti 334.940†	263426.0	240104.9	1031.7	µg/L	1031.7	ppb	08:23:46
1	Tl 190.801†	-162.4	-69.2	12.638	µg/L	12.638	ppb	08:24:06
1	U 367.007†	4280.4	3006.2	-111.0	µg/L	-111.0	ppb	08:23:46
1	V 292.402†	12656.4	11633.2	207.84	µg/L	207.84	ppb	08:24:06
1	Zn 213.857†	87811.0	78898.7	569.71	µg/L	569.71	ppb	08:23:46
2	Sc RADIAL	25959.9	25959.9	118	%			08:23:23
2	Al 396.153Radial†	355279.4	302275.8	97216	µg/L	97216	ppb	08:23:18
2	Ca 317.933Radial†	1172834.8	997254.7	213570	µg/L	213570	ppb	08:23:18
2	Fe 238.204 Radial†	1651665.3	1404783.8	273420	µg/L	273420	ppb	08:23:18
2	K 766.490 Radial†	16264.3	13411.9	12161	µg/L	12161	ppb	08:23:23
2	Mg 279.077 IEC†	70942.4	60283.8	98518	µg/L	98518	ppb	08:23:23
2	Na 589.592 Radial†	895.6	634.1	617.40	µg/L	617.40	ppb	08:23:23
2	Sr 421.552†	149783.2	127137.1	743.84	µg/L	743.84	ppb	08:23:23
2	Sc 361.383	409562.5	409562.5	111.84	%			08:24:17
2	Y 371.029	433788.0	433788.0	120.54	%			08:24:17
2	Ag 328.068†	-4381.1	-3233.6	7.6567	µg/L	7.6567	ppb	08:24:17
2	As 188.979†	151.9	148.6	80.179	µg/L	80.179	ppb	08:24:37
2	B 249.677†	-31342.6	-28197.8	127.50	µg/L	127.50	ppb	08:24:17
2	Ba 233.527†	96035.3	85884.3	716.16	µg/L	716.16	ppb	08:24:17
2	Be 313.107†	1226.8	4670.8	6.7436	µg/L	6.7436	ppb	08:24:17
2	Cd 226.502†	2844.7	2866.6	-0.1883	µg/L	-0.1883	ppb	08:24:37
2	Co 228.616†	6062.0	5642.7	127.34	µg/L	127.34	ppb	08:24:37
2	Cr 267.716†	8989.4	7915.9	160.22	µg/L	160.22	ppb	08:24:37
2	Cu 324.752†	48890.5	41794.7	323.79	µg/L	323.79	ppb	08:24:17
2	Mn 257.610†	3586878.4	3206705.7	5053.7	µg/L	5053.7	ppb	08:24:11
2	Mo 202.031†	121.1	75.3	9.4119	µg/L	9.4119	ppb	08:24:37
2	Ni 231.604†	11739.6	10700.7	301.21	µg/L	301.21	ppb	08:24:37
2	P 214.914†	7895.7	6928.1	4381.7	µg/L	4381.7	ppb	08:24:37

2	Pb 220.353†	1018.7	974.4	132.78 µg/L	132.78 ppb	08:24:37
2	S 181.975 Axial†	66516.5	59382.5	72882 µg/L	72882 ppb	08:24:17
2	Sb 206.836†	218.7	40.9	-28.132 µg/L	-28.132 ppb	08:24:37
2	Se 196.026†	-294.3	-239.4	8.4443 µg/L	8.4443 ppb	08:24:37
2	SiO2†	212412.6	188860.8	31856 µg/L	31856 ppb	08:24:17
2	Si 251.611†	300767.1	268935.3	14852 µg/L	14852 ppb	08:24:17
2	Sn 189.927†	51.7	-1.3	6.8132 µg/L	6.8132 ppb	08:24:37
2	Ti 334.940†	267539.9	239939.0	1031.0 µg/L	1031.0 ppb	08:24:17
2	Tl 190.801†	-167.1	-71.1	12.289 µg/L	12.289 ppb	08:24:37
2	U 367.007†	4418.7	3067.4	-91.15 µg/L	-91.15 ppb	08:24:17
2	V 292.402†	12702.7	11489.9	206.07 µg/L	206.07 ppb	08:24:37
2	Zn 213.857†	89437.3	79071.4	571.02 µg/L	571.02 ppb	08:24:17
3	Sc RADIAL	26186.5	26186.5	119 %		08:23:33
3	Al 396.153Radial†	358488.7	302366.8	97245 µg/L	97245 ppb	08:23:28
3	Ca 317.933Radial†	1181815.5	996194.3	213340 µg/L	213340 ppb	08:23:28
3	Fe 238.204 Radial†	1663244.6	1402390.1	272950 µg/L	272950 ppb	08:23:28
3	K 766.490 Radial†	16417.2	13421.1	12170 µg/L	12170 ppb	08:23:33
3	Mg 279.077 IEC†	71215.2	59991.6	98040 µg/L	98040 ppb	08:23:33
3	Na 589.592 Radial†	929.5	656.2	651.89 µg/L	651.89 ppb	08:23:33
3	Sr 421.552†	150881.8	126961.0	742.81 µg/L	742.81 ppb	08:23:33
3	Sc 361.383	404630.1	404630.1	110.49 %		08:24:48
3	Y 371.029	428456.6	428456.6	119.06 %		08:24:48
3	Ag 328.068†	-4401.0	-3299.4	6.9284 µg/L	6.9284 ppb	08:24:48
3	As 188.979†	152.8	151.1	81.264 µg/L	81.264 ppb	08:25:08
3	B 249.677†	-31331.1	-28529.0	114.66 µg/L	114.66 ppb	08:24:48
3	Ba 233.527†	94993.3	85987.9	717.04 µg/L	717.04 ppb	08:24:48
3	Be 313.107†	1275.0	4727.9	6.7884 µg/L	6.7884 ppb	08:24:48
3	Cd 226.502†	2843.2	2896.2	0.1723 µg/L	0.1723 ppb	08:25:08
3	Co 228.616†	6097.3	5740.7	129.59 µg/L	129.59 ppb	08:25:08
3	Cr 267.716†	9072.8	8089.3	163.66 µg/L	163.66 ppb	08:25:08
3	Cu 324.752†	48515.6	41988.3	325.18 µg/L	325.18 ppb	08:24:48
3	Mn 257.610†	3544292.4	3207259.1	5054.5 µg/L	5054.5 ppb	08:24:42
3	Mo 202.031†	110.4	67.0	8.9333 µg/L	8.9333 ppb	08:25:08
3	Ni 231.604†	11872.5	10949.0	308.07 µg/L	308.07 ppb	08:25:08
3	P 214.914†	7936.1	7050.7	4463.7 µg/L	4463.7 ppb	08:25:08
3	Pb 220.353†	1012.5	979.9	133.46 µg/L	133.46 ppb	08:25:08
3	S 181.975 Axial†	65880.6	59532.0	73066 µg/L	73066 ppb	08:24:48
3	Sb 206.836†	210.6	36.0	-29.547 µg/L	-29.547 ppb	08:25:08
3	Se 196.026†	-283.8	-233.1	11.228 µg/L	11.228 ppb	08:25:08
3	SiO2†	209944.6	188942.4	31870 µg/L	31870 ppb	08:24:48
3	Si 251.611†	297555.4	269306.9	14873 µg/L	14873 ppb	08:24:48
3	Sn 189.927†	35.1	-15.8	5.0292 µg/L	5.0292 ppb	08:25:08
3	Ti 334.940†	265600.0	241099.4	1036.0 µg/L	1036.0 ppb	08:24:48
3	Tl 190.801†	-170.2	-75.8	11.261 µg/L	11.261 ppb	08:25:08
3	U 367.007†	4356.2	3059.1	-92.16 µg/L	-92.16 ppb	08:24:48
3	V 292.402†	12777.5	11696.0	208.66 µg/L	208.66 ppb	08:25:08
3	Zn 213.857†	88771.5	79443.7	573.88 µg/L	573.88 ppb	08:24:48

Mean Data: 454474002|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	405726.0	110.79	%	0.935				0.84%
Sc RADIAL	25997.7	118	%	0.78				0.67%
Y 371.029	429659.4	119.40	%	1.022				0.86%
Ag 328.068†	-3291.6	7.0346	µg/L	0.57642	7.0346	ppb	0.57642	8.19%
Al 396.153Radial†	301857.1	97081	µg/L	258.98	97081	ppb	258.98	0.27%
As 188.979†	153.5	82.343	µg/L	2.8610	82.343	ppb	2.8610	3.47%
B 249.677†	-28334.6	121.82	µg/L	6.543	121.82	ppb	6.543	5.37%
Ba 233.527†	85840.8	715.80	µg/L	1.457	715.80	ppb	1.457	0.20%
Be 313.107†	4709.5	6.7722	µg/L	0.02484	6.7722	ppb	0.02484	0.37%
Ca 317.933Radial†	996461.0	213400	µg/L	149.83	213400	ppb	149.83	0.07%
Cd 226.502†	2865.5	-0.1667	µg/L	0.32875	-0.1667	ppb	0.32875	197.20%
Co 228.616†	5707.9	128.84	µg/L	1.297	128.84	ppb	1.297	1.01%
Cr 267.716†	8024.0	162.36	µg/L	1.872	162.36	ppb	1.872	1.15%
Cu 324.752†	41892.6	324.49	µg/L	0.696	324.49	ppb	0.696	0.21%
Fe 238.204 Radial†	1403299.1	273130	µg/L	252.35	273130	ppb	252.35	0.09%
K 766.490 Radial†	13385.0	12137	µg/L	49.68	12137	ppb	49.68	0.41%
Mg 279.077 IEC†	60244.9	98454	µg/L	386.16	98454	ppb	386.16	0.39%
Mn 257.610†	3216480.4	5069.0	µg/L	25.83	5069.0	ppb	25.83	0.51%
Mo 202.031†	68.8	9.0409	µg/L	0.33063	9.0409	ppb	0.33063	3.66%

Na 589.592 Radial†	652.8	646.53 µg/L	26.863	646.53 ppb	26.863	4.15%
Ni 231.604†	10850.1	305.33 µg/L	3.633	305.33 ppb	3.633	1.19%
P 214.914†	7000.7	4430.2 µg/L	43.02	4430.2 ppb	43.02	0.97%
Pb 220.353†	982.1	133.73 µg/L	1.105	133.73 ppb	1.105	0.83%
S 181.975 Axial†	59370.0	72867 µg/L	207.24	72867 ppb	207.24	0.28%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	38.3	-28.890 µg/L	0.7125	-28.890 ppb	0.7125	2.47%
Concentration less than lower limit for Sb 206.836.						
Se 196.026†	-236.4	9.7308 µg/L	1.40354	9.7308 ppb	1.40354	14.42%
SiO2†	188740.7	31836 µg/L	47.57	31836 ppb	47.57	0.15%
Si 251.611†	268874.6	14849 µg/L	25.75	14849 ppb	25.75	0.17%
Sn 189.927†	-10.4	5.6943 µg/L	0.97478	5.6943 ppb	0.97478	17.12%
Sr 421.552†	127012.0	743.11 µg/L	0.638	743.11 ppb	0.638	0.09%
Ti 334.940†	240381.1	1032.9 µg/L	2.67	1032.9 ppb	2.67	0.26%
Tl 190.801†	-72.0	12.063 µg/L	0.7161	12.063 ppb	0.7161	5.94%
U 367.007†	3044.3	-98.09 µg/L	11.162	-98.09 ppb	11.162	11.38%
Concentration less than lower limit for U 367.007.						
V 292.402†	11606.3	207.52 µg/L	1.325	207.52 ppb	1.325	0.64%
Zn 213.857†	79137.9	571.54 µg/L	2.129	571.54 ppb	2.129	0.37%

Sequence No.: 22 **Autosampler Location: 316**
Sample ID: 454474003|1782317|1| **Date Collected: 7/23/2018 08:25:16**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474003|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25747.0	25747.0	117	%			08:25:52
1	Al 396.153Radial†	185350.8	159047.3	51151	µg/L	51151	ppb	08:25:47
1	Ca 317.933Radial†	772860.8	662494.4	141880	µg/L	141880	ppb	08:25:47
1	Fe 238.204 Radial†	1043036.6	894453.3	174090	µg/L	174090	ppb	08:25:47
1	K 766.490 Radial†	7784.9	6254.5	5667.8	µg/L	5667.8	ppb	08:25:52
1	Mg 279.077 IEC†	42388.0	36295.1	59315	µg/L	59315	ppb	08:25:52
1	Na 589.592 Radial†	1028.2	754.2	931.91	µg/L	931.91	ppb	08:25:52
1	Sr 421.552†	79837.6	68206.7	398.58	µg/L	398.58	ppb	08:25:52
1	Sc 361.383	407123.2	407123.2	111.17	%			08:26:21
1	Y 371.029	424498.5	424498.5	117.96	%			08:26:21
1	Ag 328.068†	-3068.6	-2076.5	4.6246	µg/L	4.6246	ppb	08:26:21
1	As 188.979†	193.5	186.9	91.560	µg/L	91.560	ppb	08:26:41
1	B 249.677†	-19984.2	-18148.9	74.449	µg/L	74.449	ppb	08:26:21
1	Ba 233.527†	26725.1	24054.7	198.18	µg/L	198.18	ppb	08:26:41
1	Be 313.107†	-1188.3	2505.0	3.9769	µg/L	3.9769	ppb	08:26:41
1	Cd 226.502†	1849.0	1986.2	1.6381	µg/L	1.6381	ppb	08:26:41
1	Co 228.616†	6900.4	6429.3	146.79	µg/L	146.79	ppb	08:26:41
1	Cr 267.716†	4876.8	4264.7	86.220	µg/L	86.220	ppb	08:26:41
1	Cu 324.752†	34038.6	28697.4	221.49	µg/L	221.49	ppb	08:26:21
1	Mn 257.610†	2557688.5	2300171.0	3623.6	µg/L	3623.6	ppb	08:26:21
1	Mo 202.031†	143.3	96.0	8.7169	µg/L	8.7169	ppb	08:26:41
1	Ni 231.604†	11342.8	10406.7	291.13	µg/L	291.13	ppb	08:26:41
1	P 214.914†	6779.8	5966.7	3822.5	µg/L	3822.5	ppb	08:26:41
1	Pb 220.353†	2123.0	1973.1	250.98	µg/L	250.98	ppb	08:26:41
1	S 181.975 Axial†	56076.6	50348.3	61815	µg/L	61815	ppb	08:26:21
1	Sb 206.836†	191.7	17.8	-20.192	µg/L	-20.192	ppb	08:26:41
1	Se 196.026†	-203.4	-159.2	2.1691	µg/L	2.1691	ppb	08:26:41
1	SiO2†	99345.8	88295.8	14882	µg/L	14882	ppb	08:26:21
1	Si 251.611†	139734.1	125698.3	6938.4	µg/L	6938.4	ppb	08:26:21
1	Sn 189.927†	48.7	-3.7	2.9826	µg/L	2.9826	ppb	08:26:41
1	Ti 334.940†	101986.5	92457.8	399.88	µg/L	399.88	ppb	08:26:21
1	Tl 190.801†	-136.6	-44.6	7.1963	µg/L	7.1963	ppb	08:26:41
1	U 367.007†	3226.4	2018.7	-38.28	µg/L	-38.28	ppb	08:26:21
1	V 292.402†	5335.9	4931.5	100.25	µg/L	100.25	ppb	08:26:41
1	Zn 213.857†	65744.3	58238.8	423.06	µg/L	423.06	ppb	08:26:21
2	Sc RADIAL	25711.3	25711.3	116	%			08:26:02
2	Al 396.153Radial†	187594.3	161194.7	51842	µg/L	51842	ppb	08:25:57
2	Ca 317.933Radial†	778506.2	668263.1	143110	µg/L	143110	ppb	08:25:57
2	Fe 238.204 Radial†	1051294.7	902787.6	175710	µg/L	175710	ppb	08:25:57
2	K 766.490 Radial†	7944.9	6401.2	5801.0	µg/L	5801.0	ppb	08:26:02
2	Mg 279.077 IEC†	42418.3	36371.6	59440	µg/L	59440	ppb	08:26:02
2	Na 589.592 Radial†	1017.6	746.3	917.68	µg/L	917.68	ppb	08:26:02
2	Sr 421.552†	79770.6	68244.2	398.78	µg/L	398.78	ppb	08:26:02
2	Sc 361.383	409109.6	409109.6	111.72	%			08:26:48
2	Y 371.029	425910.6	425910.6	118.35	%			08:26:48
2	Ag 328.068†	-3104.1	-2094.9	4.6715	µg/L	4.6715	ppb	08:26:48
2	As 188.979†	206.7	197.8	96.422	µg/L	96.422	ppb	08:27:08
2	B 249.677†	-20181.9	-18238.6	77.789	µg/L	77.789	ppb	08:26:48
2	Ba 233.527†	26667.1	23886.0	196.72	µg/L	196.72	ppb	08:27:08
2	Be 313.107†	-1147.0	2547.2	4.0298	µg/L	4.0298	ppb	08:27:08
2	Cd 226.502†	1829.9	1961.1	1.1992	µg/L	1.1992	ppb	08:27:08
2	Co 228.616†	6879.2	6380.2	145.64	µg/L	145.64	ppb	08:27:08
2	Cr 267.716†	4866.1	4233.9	85.618	µg/L	85.618	ppb	08:27:08
2	Cu 324.752†	34257.6	28744.8	221.94	µg/L	221.94	ppb	08:26:48
2	Mn 257.610†	2577367.0	2306615.0	3633.8	µg/L	3633.8	ppb	08:26:48
2	Mo 202.031†	116.5	71.4	7.3516	µg/L	7.3516	ppb	08:27:08
2	Ni 231.604†	11311.1	10328.8	289.00	µg/L	289.00	ppb	08:27:08
2	P 214.914†	6760.3	5919.6	3789.9	µg/L	3789.9	ppb	08:27:08

2	Pb 220.353†	2142.7	1981.5	252.09 µg/L	252.09 ppb	08:27:08
2	S 181.975 Axial†	56436.3	50425.4	61909 µg/L	61909 ppb	08:26:48
2	Sb 206.836†	198.4	23.0	-18.921 µg/L	-18.921 ppb	08:27:08
2	Se 196.026†	-185.4	-142.2	10.949 µg/L	10.949 ppb	08:27:08
2	SiO2†	100226.8	88650.5	14942 µg/L	14942 ppb	08:26:48
2	Si 251.611†	140874.6	126108.9	6961.0 µg/L	6961.0 ppb	08:26:48
2	Sn 189.927†	54.2	1.0	3.5970 µg/L	3.5970 ppb	08:27:08
2	Ti 334.940†	102765.4	92709.7	401.00 µg/L	401.00 ppb	08:26:48
2	Tl 190.801†	-133.7	-41.4	8.0310 µg/L	8.0310 ppb	08:27:08
2	U 367.007†	3283.8	2055.9	-32.10 µg/L	-32.10 ppb	08:26:48
2	V 292.402†	5324.3	4897.8	100.13 µg/L	100.13 ppb	08:27:08
2	Zn 213.857†	66271.0	58423.1	424.31 µg/L	424.31 ppb	08:26:48
3	Sc RADIAL	25801.7	25801.7	117 %		08:26:12
3	Al 396.153Radial†	187857.4	160855.4	51733 µg/L	51733 ppb	08:26:07
3	Ca 317.933Radial†	779548.3	666812.4	142800 µg/L	142800 ppb	08:26:07
3	Fe 238.204 Radial†	1052608.2	900748.3	175310 µg/L	175310 ppb	08:26:07
3	K 766.490 Radial†	7966.6	6395.9	5796.2 µg/L	5796.2 ppb	08:26:12
3	Mg 279.077 IEC†	42495.0	36309.6	59338 µg/L	59338 ppb	08:26:12
3	Na 589.592 Radial†	1045.0	766.7	949.56 µg/L	949.56 ppb	08:26:12
3	Sr 421.552†	80050.2	68243.5	398.78 µg/L	398.78 ppb	08:26:12
3	Sc 361.383	409509.4	409509.4	111.83 %		08:27:15
3	Y 371.029	426760.2	426760.2	118.59 %		08:27:15
3	Ag 328.068†	-3145.7	-2129.3	4.2636 µg/L	4.2636 ppb	08:27:15
3	As 188.979†	205.4	196.5	95.840 µg/L	95.840 ppb	08:27:35
3	B 249.677†	-20185.6	-18224.2	76.720 µg/L	76.720 ppb	08:27:15
3	Ba 233.527†	26718.9	23909.0	196.93 µg/L	196.93 ppb	08:27:35
3	Be 313.107†	-1159.3	2537.2	4.0179 µg/L	4.0179 ppb	08:27:35
3	Cd 226.502†	1827.6	1957.4	1.2039 µg/L	1.2039 ppb	08:27:35
3	Co 228.616†	6895.9	6389.1	145.85 µg/L	145.85 ppb	08:27:35
3	Cr 267.716†	4849.8	4215.0	85.234 µg/L	85.234 ppb	08:27:35
3	Cu 324.752†	34328.9	28778.6	222.17 µg/L	222.17 ppb	08:27:15
3	Mn 257.610†	2578006.7	2304934.4	3631.2 µg/L	3631.2 ppb	08:27:15
3	Mo 202.031†	121.4	75.6	7.5868 µg/L	7.5868 ppb	08:27:35
3	Ni 231.604†	11305.8	10314.2	288.59 µg/L	288.59 ppb	08:27:35
3	P 214.914†	6754.5	5908.6	3782.9 µg/L	3782.9 ppb	08:27:35
3	Pb 220.353†	2122.7	1961.8	249.63 µg/L	249.63 ppb	08:27:35
3	S 181.975 Axial†	56256.0	50214.8	61650 µg/L	61650 ppb	08:27:15
3	Sb 206.836†	198.1	22.5	-18.991 µg/L	-18.991 ppb	08:27:35
3	Se 196.026†	-197.4	-152.8	5.7554 µg/L	5.7554 ppb	08:27:35
3	SiO2†	100211.7	88549.4	14925 µg/L	14925 ppb	08:27:15
3	Si 251.611†	141074.8	126164.8	6964.1 µg/L	6964.1 ppb	08:27:15
3	Sn 189.927†	72.9	17.7	5.6635 µg/L	5.6635 ppb	08:27:35
3	Ti 334.940†	102740.6	92597.6	400.51 µg/L	400.51 ppb	08:27:15
3	Tl 190.801†	-123.0	-31.6	10.076 µg/L	10.076 ppb	08:27:35
3	U 367.007†	3289.8	2058.4	-29.53 µg/L	-29.53 ppb	08:27:15
3	V 292.402†	5362.8	4927.5	100.44 µg/L	100.44 ppb	08:27:35
3	Zn 213.857†	66136.7	58245.1	423.00 µg/L	423.00 ppb	08:27:15

Mean Data: 454474003|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	408580.7	111.57	%	0.349				0.31%
Sc RADIAL	25753.3	117	%	0.21				0.18%
Y 371.029	425723.1	118.30	%	0.317				0.27%
Ag 328.068†	-2100.2	4.5199	µg/L	0.22319	4.5199	ppb	0.22319	4.94%
Al 396.153Radial†	160365.8	51575	µg/L	371.30	51575	ppb	371.30	0.72%
As 188.979†	193.7	94.607	µg/L	2.6550	94.607	ppb	2.6550	2.81%
B 249.677†	-18203.9	76.319	µg/L	1.7061	76.319	ppb	1.7061	2.24%
Ba 233.527†	23949.9	197.28	µg/L	0.790	197.28	ppb	0.790	0.40%
Be 313.107†	2529.8	4.0082	µg/L	0.02775	4.0082	ppb	0.02775	0.69%
Ca 317.933Radial†	665856.6	142600	µg/L	642.63	142600	ppb	642.63	0.45%
Cd 226.502†	1968.2	1.3471	µg/L	0.25209	1.3471	ppb	0.25209	18.71%
Co 228.616†	6399.5	146.10	µg/L	0.609	146.10	ppb	0.609	0.42%
Cr 267.716†	4237.8	85.691	µg/L	0.4967	85.691	ppb	0.4967	0.58%
Cu 324.752†	28740.3	221.87	µg/L	0.346	221.87	ppb	0.346	0.16%
Fe 238.204 Radial†	899329.7	175040	µg/L	845.57	175040	ppb	845.57	0.48%
K 766.490 Radial†	6350.5	5755.0	µg/L	75.53	5755.0	ppb	75.53	1.31%
Mg 279.077 IEC†	36325.4	59364	µg/L	66.39	59364	ppb	66.39	0.11%
Mn 257.610†	2303906.8	3629.5	µg/L	5.30	3629.5	ppb	5.30	0.15%
Mo 202.031†	81.0	7.8851	µg/L	0.72994	7.8851	ppb	0.72994	9.26%

Na 589.592 Radial†	755.7	933.05 µg/L	15.974	933.05 ppb	15.974	1.71%
Ni 231.604†	10349.9	289.57 µg/L	1.361	289.57 ppb	1.361	0.47%
P 214.914†	5931.6	3798.5 µg/L	21.15	3798.5 ppb	21.15	0.56%
Pb 220.353†	1972.1	250.90 µg/L	1.228	250.90 ppb	1.228	0.49%
S 181.975 Axial†	50329.5	61791 µg/L	130.89	61791 ppb	130.89	0.21%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	21.1	-19.368 µg/L	0.7146	-19.368 ppb	0.7146	3.69%
Concentration less than lower limit for Sb 206.836.						
Se 196.026†	-151.4	6.2912 µg/L	4.41449	6.2912 ppb	4.41449	70.17%
SiO2†	88498.6	14917 µg/L	30.72	14917 ppb	30.72	0.21%
Si 251.611†	125990.7	6954.5 µg/L	14.04	6954.5 ppb	14.04	0.20%
Sn 189.927†	5.0	4.0810 µg/L	1.40445	4.0810 ppb	1.40445	34.41%
Sr 421.552†	68231.5	398.71 µg/L	0.115	398.71 ppb	0.115	0.03%
Ti 334.940†	92588.4	400.47 µg/L	0.563	400.47 ppb	0.563	0.14%
Tl 190.801†	-39.2	8.4345 µg/L	1.48171	8.4345 ppb	1.48171	17.57%
U 367.007†	2044.3	-33.30 µg/L	4.499	-33.30 ppb	4.499	13.51%
V 292.402†	4918.9	100.27 µg/L	0.157	100.27 ppb	0.157	0.16%
Zn 213.857†	58302.4	423.46 µg/L	0.738	423.46 ppb	0.738	0.17%

Sequence No.: 23 **Autosampler Location: 317**
Sample ID: 454474004|1782317|1| **Date Collected: 7/23/2018 08:27:43**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474004|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25972.6	25972.6	118	%			08:28:19
1	Al 396.153Radial†	362755.7	308484.4	99212	µg/L	99212	ppb	08:28:14
1	Ca 317.933Radial†	568390.3	482910.9	103420	µg/L	103420	ppb	08:28:14
1	Fe 238.204 Radial†	1725345.2	1466737.4	285470	µg/L	285470	ppb	08:28:14
1	K 766.490 Radial†	10631.2	8616.3	7778.5	µg/L	7778.5	ppb	08:28:19
1	Mg 279.077 IEC†	52028.5	44175.0	72192	µg/L	72192	ppb	08:28:19
1	Na 589.592 Radial†	1476.3	1127.4	1360.2	µg/L	1360.2	ppb	08:28:19
1	Sr 421.552†	62121.9	52551.4	307.20	µg/L	307.20	ppb	08:28:19
1	Sc 361.383	414119.9	414119.9	113.08	%			08:28:52
1	Y 371.029	440013.9	440013.9	122.27	%			08:28:52
1	Ag 328.068†	-4462.2	-3262.2	9.1753	µg/L	9.1753	ppb	08:28:52
1	As 188.979†	169.8	163.0	87.123	µg/L	87.123	ppb	08:29:12
1	B 249.677†	-33583.6	-29871.1	118.89	µg/L	118.89	ppb	08:28:52
1	Ba 233.527†	69999.5	61915.9	514.12	µg/L	514.12	ppb	08:28:52
1	Be 313.107†	3273.6	6468.7	6.9088	µg/L	6.9088	ppb	08:29:12
1	Cd 226.502†	3024.0	2997.2	-0.1409	µg/L	-0.1409	ppb	08:29:12
1	Co 228.616†	5744.2	5302.0	119.44	µg/L	119.44	ppb	08:29:12
1	Cr 267.716†	9185.0	8000.4	161.61	µg/L	161.61	ppb	08:29:12
1	Cu 324.752†	52130.5	44178.7	341.99	µg/L	341.99	ppb	08:28:52
1	Mn 257.610†	3641946.2	3220106.9	5075.6	µg/L	5075.6	ppb	08:28:47
1	Mo 202.031†	77.6	35.7	7.3907	µg/L	7.3907	ppb	08:29:12
1	Ni 231.604†	11960.6	10780.7	303.66	µg/L	303.66	ppb	08:29:12
1	P 214.914†	8849.0	7693.4	4880.4	µg/L	4880.4	ppb	08:29:12
1	Pb 220.353†	1062.4	1003.0	134.15	µg/L	134.15	ppb	08:29:12
1	S 181.975 Axial†	2287.9	1930.9	2275.9	µg/L	2275.9	ppb	08:29:12
1	Sb 206.836†	198.0	20.5	-35.801	µg/L	-35.801	ppb	08:29:12
1	Se 196.026†	-329.8	-267.8	0.3655	µg/L	0.3655	ppb	08:29:12
1	SiO2†	206537.6	181575.4	30622	µg/L	30622	ppb	08:28:52
1	Si 251.611†	292359.6	258541.1	14277	µg/L	14277	ppb	08:28:52
1	Sn 189.927†	21.5	-28.5	5.0884	µg/L	5.0884	ppb	08:29:12
1	Ti 334.940†	251928.2	223501.0	955.99	µg/L	955.99	ppb	08:28:52
1	Tl 190.801†	-166.1	-68.5	13.711	µg/L	13.711	ppb	08:29:12
1	U 367.007†	4356.1	2968.7	-110.3	µg/L	-110.3	ppb	08:28:52
1	V 292.402†	12459.4	11149.7	204.09	µg/L	204.09	ppb	08:29:12
1	Zn 213.857†	108378.7	94941.2	690.60	µg/L	690.60	ppb	08:28:52
2	Sc RADIAL	26335.7	26335.7	119	%			08:28:30
2	Al 396.153Radial†	365674.6	306679.7	98632	µg/L	98632	ppb	08:28:24
2	Ca 317.933Radial†	570401.1	477934.5	102350	µg/L	102350	ppb	08:28:24
2	Fe 238.204 Radial†	1735902.9	1455365.8	283260	µg/L	283260	ppb	08:28:24
2	K 766.490 Radial†	10732.2	8576.4	7742.6	µg/L	7742.6	ppb	08:28:30
2	Mg 279.077 IEC†	52598.0	44042.7	71976	µg/L	71976	ppb	08:28:30
2	Na 589.592 Radial†	1516.8	1144.1	1388.7	µg/L	1388.7	ppb	08:28:30
2	Sr 421.552†	62754.1	52353.3	306.05	µg/L	306.05	ppb	08:28:30
2	Sc 361.383	412303.3	412303.3	112.59	%			08:29:23
2	Y 371.029	438321.3	438321.3	121.80	%			08:29:23
2	Ag 328.068†	-4452.2	-3270.7	8.7658	µg/L	8.7658	ppb	08:29:23
2	As 188.979†	168.2	162.2	86.660	µg/L	86.660	ppb	08:29:44
2	B 249.677†	-33458.6	-29891.0	109.61	µg/L	109.61	ppb	08:29:23
2	Ba 233.527†	70097.6	62275.8	517.20	µg/L	517.20	ppb	08:29:23
2	Be 313.107†	3199.5	6415.7	6.8497	µg/L	6.8497	ppb	08:29:44
2	Cd 226.502†	3021.9	3007.1	0.2030	µg/L	0.2030	ppb	08:29:44
2	Co 228.616†	5714.6	5298.1	119.34	µg/L	119.34	ppb	08:29:44
2	Cr 267.716†	9104.6	7964.7	160.83	µg/L	160.83	ppb	08:29:44
2	Cu 324.752†	52221.0	44462.3	343.94	µg/L	343.94	ppb	08:29:23
2	Mn 257.610†	3673801.0	3262590.0	5142.2	µg/L	5142.2	ppb	08:29:18
2	Mo 202.031†	42.9	5.2	5.6210	µg/L	5.6210	ppb	08:29:44
2	Ni 231.604†	11900.9	10774.2	303.44	µg/L	303.44	ppb	08:29:44
2	P 214.914†	8779.5	7666.2	4864.2	µg/L	4864.2	ppb	08:29:44

2	Pb 220.353†	1041.4	988.5	132.28 µg/L	132.28 ppb	08:29:44
2	S 181.975 Axial†	2232.7	1890.8	2227.2 µg/L	2227.2 ppb	08:29:44
2	Sb 206.836†	220.1	40.9	-29.639 µg/L	-29.639 ppb	08:29:44
2	Se 196.026†	-290.6	-234.4	15.196 µg/L	15.196 ppb	08:29:44
2	SiO2†	206450.5	182302.8	30746 µg/L	30746 ppb	08:29:23
2	Si 251.611†	292428.4	259741.2	14343 µg/L	14343 ppb	08:29:23
2	Sn 189.927†	25.7	-24.7	5.5401 µg/L	5.5401 ppb	08:29:44
2	Ti 334.940†	252247.6	224766.2	961.33 µg/L	961.33 ppb	08:29:23
2	Tl 190.801†	-168.1	-71.0	13.001 µg/L	13.001 ppb	08:29:44
2	U 367.007†	4308.7	2943.5	-110.0 µg/L	-110.0 ppb	08:29:23
2	V 292.402†	12476.0	11212.9	204.44 µg/L	204.44 ppb	08:29:44
2	Zn 213.857†	108384.8	95368.8	694.09 µg/L	694.09 ppb	08:29:23
3	Sc RADIAL	26162.3	26162.3	118 %		08:28:40
3	Al 396.153Radial†	366508.3	309415.2	99512 µg/L	99512 ppb	08:28:35
3	Ca 317.933Radial†	569967.5	480737.9	102950 µg/L	102950 ppb	08:28:35
3	Fe 238.204 Radial†	1735047.7	1464289.4	285000 µg/L	285000 ppb	08:28:35
3	K 766.490 Radial†	10685.1	8596.2	7760.3 µg/L	7760.3 ppb	08:28:40
3	Mg 279.077 IEC†	52232.0	44026.1	71949 µg/L	71949 ppb	08:28:40
3	Na 589.592 Radial†	1478.0	1119.8	1349.1 µg/L	1349.1 ppb	08:28:40
3	Sr 421.552†	62232.3	52261.5	305.50 µg/L	305.50 ppb	08:28:40
3	Sc 361.383	414084.6	414084.6	113.07 %		08:29:55
3	Y 371.029	440199.2	440199.2	122.32 %		08:29:55
3	Ag 328.068†	-4567.8	-3355.9	8.1436 µg/L	8.1436 ppb	08:29:55
3	As 188.979†	170.8	163.8	87.474 µg/L	87.474 ppb	08:30:15
3	B 249.677†	-33525.1	-29821.9	118.67 µg/L	118.67 ppb	08:29:55
3	Ba 233.527†	70715.5	62554.4	519.50 µg/L	519.50 ppb	08:29:55
3	Be 313.107†	3217.1	6419.0	6.8680 µg/L	6.8680 ppb	08:30:15
3	Cd 226.502†	3036.7	3008.7	0.0294 µg/L	0.0294 ppb	08:30:15
3	Co 228.616†	5752.1	5309.4	119.60 µg/L	119.60 ppb	08:30:15
3	Cr 267.716†	9193.8	8008.8	161.75 µg/L	161.75 ppb	08:30:15
3	Cu 324.752†	52516.1	44523.7	344.51 µg/L	344.51 ppb	08:29:55
3	Mn 257.610†	3642742.8	3221086.4	5077.1 µg/L	5077.1 ppb	08:29:49
3	Mo 202.031†	68.1	27.3	6.9069 µg/L	6.9069 ppb	08:30:15
3	Ni 231.604†	12051.1	10861.6	305.89 µg/L	305.89 ppb	08:30:15
3	P 214.914†	8896.6	7736.2	4909.3 µg/L	4909.3 ppb	08:30:15
3	Pb 220.353†	1085.0	1023.1	136.62 µg/L	136.62 ppb	08:30:15
3	S 181.975 Axial†	2266.2	1911.8	2252.5 µg/L	2252.5 ppb	08:30:15
3	Sb 206.836†	206.6	28.1	-33.542 µg/L	-33.542 ppb	08:30:15
3	Se 196.026†	-304.7	-245.7	10.628 µg/L	10.628 ppb	08:30:15
3	SiO2†	207668.5	182591.2	30794 µg/L	30794 ppb	08:29:55
3	Si 251.611†	293958.3	259976.9	14356 µg/L	14356 ppb	08:29:55
3	Sn 189.927†	18.9	-30.8	4.8286 µg/L	4.8286 ppb	08:30:15
3	Ti 334.940†	253956.7	225314.0	963.68 µg/L	963.68 ppb	08:29:55
3	Tl 190.801†	-162.0	-65.0	14.459 µg/L	14.459 ppb	08:30:15
3	U 367.007†	4434.3	3038.1	-83.78 µg/L	-83.78 ppb	08:29:55
3	V 292.402†	12567.2	11246.0	205.25 µg/L	205.25 ppb	08:30:15
3	Zn 213.857†	108972.8	95474.7	694.70 µg/L	694.70 ppb	08:29:55

Mean Data: 454474004|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	413502.6	112.92	%	0.284				0.25%
Sc RADIAL	26156.8	118	%	0.82				0.69%
Y 371.029	439511.4	122.13	%	0.288				0.24%
Ag 328.068†	-3296.3	8.6949	µg/L	0.51951	8.6949	ppb	0.51951	5.97%
Al 396.153Radial†	308193.1	99119	µg/L	447.27	99119	ppb	447.27	0.45%
As 188.979†	163.0	87.086	µg/L	0.4082	87.086	ppb	0.4082	0.47%
B 249.677†	-29861.3	115.72	µg/L	5.297	115.72	ppb	5.297	4.58%
Ba 233.527†	62248.7	516.94	µg/L	2.703	516.94	ppb	2.703	0.52%
Be 313.107†	6434.5	6.8755	µg/L	0.03029	6.8755	ppb	0.03029	0.44%
Ca 317.933Radial†	480527.7	102910	µg/L	534.28	102910	ppb	534.28	0.52%
Cd 226.502†	3004.3	0.0305	µg/L	0.17192	0.0305	ppb	0.17192	563.92%
Co 228.616†	5303.2	119.46	µg/L	0.128	119.46	ppb	0.128	0.11%
Cr 267.716†	7991.3	161.40	µg/L	0.497	161.40	ppb	0.497	0.31%
Cu 324.752†	44388.2	343.48	µg/L	1.320	343.48	ppb	1.320	0.38%
Fe 238.204 Radial†	1462130.9	284580	µg/L	1164.92	284580	ppb	1164.92	0.41%
K 766.490 Radial†	8596.3	7760.5	µg/L	17.96	7760.5	ppb	17.96	0.23%
Mg 279.077 IEC†	44081.3	72039	µg/L	133.38	72039	ppb	133.38	0.19%
Mn 257.610†	3234594.4	5098.3	µg/L	38.01	5098.3	ppb	38.01	0.75%
Mo 202.031†	22.7	6.6395	µg/L	0.91463	6.6395	ppb	0.91463	13.78%

Na 589.592 Radial†	1130.5	1366.0	µg/L	20.41	1366.0	ppb	20.41	1.49%
Ni 231.604†	10805.5	304.33	µg/L	1.355	304.33	ppb	1.355	0.45%
P 214.914†	7698.6	4884.6	µg/L	22.89	4884.6	ppb	22.89	0.47%
Pb 220.353†	1004.9	134.35	µg/L	2.177	134.35	ppb	2.177	1.62%
S 181.975 Axial†	1911.2	2251.9	µg/L	24.35	2251.9	ppb	24.35	1.08%
Sb 206.836†	29.8	-32.994	µg/L	3.1171	-32.994	ppb	3.1171	9.45%
Concentration less than lower limit for Sb 206.836.								
Se 196.026†	-249.3	8.7296	µg/L	7.59520	8.7296	ppb	7.59520	87.00%
SiO2†	182156.5	30720	µg/L	88.60	30720	ppb	88.60	0.29%
Si 251.611†	259419.7	14325	µg/L	42.64	14325	ppb	42.64	0.30%
Sn 189.927†	-28.0	5.1524	µg/L	0.36001	5.1524	ppb	0.36001	6.99%
Sr 421.552†	52388.7	306.25	µg/L	0.865	306.25	ppb	0.865	0.28%
Ti 334.940†	224527.1	960.33	µg/L	3.940	960.33	ppb	3.940	0.41%
Tl 190.801†	-68.2	13.723	µg/L	0.7291	13.723	ppb	0.7291	5.31%
U 367.007†	2983.4	-101.4	µg/L	15.24	-101.4	ppb	15.24	15.03%
Concentration less than lower limit for U 367.007.								
V 292.402†	11202.9	204.59	µg/L	0.598	204.59	ppb	0.598	0.29%
Zn 213.857†	95261.6	693.13	µg/L	2.217	693.13	ppb	2.217	0.32%

Sequence No.: 24 **Autosampler Location: 318**
Sample ID: 454474005|1782317|1| **Date Collected: 7/23/2018 08:30:23**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474005|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	26197.8	26197.8	119	%			08:30:59
1	Al 396.153Radial†	339319.1	286080.4	92007	µg/L	92007	ppb	08:30:54
1	Ca 317.933Radial†	1723249.3	1452100.5	310980	µg/L	310980	ppb	08:30:54
1	Fe 238.204 Radial†	1558971.1	1313904.1	255730	µg/L	255730	ppb	08:30:54
1	K 766.490 Radial†	15469.8	12616.7	11462	µg/L	11462	ppb	08:30:59
1	Mg 279.077 IEC†	69043.1	58135.2	95007	µg/L	95007	ppb	08:30:59
1	Na 589.592 Radial†	1243.6	920.5	1080.9	µg/L	1080.9	ppb	08:30:59
1	Sr 421.552†	196329.6	165210.9	966.01	µg/L	966.01	ppb	08:30:59
1	Sc 361.383	407646.0	407646.0	111.32	%			08:31:29
1	Y 371.029	430512.4	430512.4	119.63	%			08:31:29
1	Ag 328.068†	-4352.2	-3226.0	5.0923	µg/L	5.0923	ppb	08:31:29
1	As 188.979†	144.6	142.7	76.629	µg/L	76.629	ppb	08:31:49
1	B 249.677†	-29797.6	-26941.6	100.35	µg/L	100.35	ppb	08:31:29
1	Ba 233.527†	106400.9	95599.9	798.37	µg/L	798.37	ppb	08:31:29
1	Be 313.107†	-462.2	3158.7	6.6449	µg/L	6.6449	ppb	08:31:29
1	Cd 226.502†	2691.6	2741.1	0.4501	µg/L	0.4501	ppb	08:31:49
1	Co 228.616†	5842.4	5470.9	123.66	µg/L	123.66	ppb	08:31:49
1	Cr 267.716†	8691.6	7686.1	155.32	µg/L	155.32	ppb	08:31:49
1	Cu 324.752†	52041.3	44830.7	345.00	µg/L	345.00	ppb	08:31:29
1	Mn 257.610†	3548880.0	3187648.2	5022.6	µg/L	5022.6	ppb	08:31:29
1	Mo 202.031†	124.3	78.7	9.2717	µg/L	9.2717	ppb	08:31:49
1	Ni 231.604†	11206.0	10270.8	288.98	µg/L	288.98	ppb	08:31:49
1	P 214.914†	8098.2	7143.3	4539.4	µg/L	4539.4	ppb	08:31:49
1	Pb 220.353†	960.6	926.4	128.52	µg/L	128.52	ppb	08:31:49
1	S 181.975 Axial†	62244.5	55824.5	68515	µg/L	68515	ppb	08:31:29
1	Sb 206.836†	205.3	29.9	-28.852	µg/L	-28.852	ppb	08:31:49
1	Se 196.026†	-268.6	-217.5	10.908	µg/L	10.908	ppb	08:31:49
1	SiO2†	156368.4	139407.0	23502	µg/L	23502	ppb	08:31:29
1	Si 251.611†	221706.6	199176.4	10996	µg/L	10996	ppb	08:31:29
1	Sn 189.927†	48.2	-4.3	4.4826	µg/L	4.4826	ppb	08:31:49
1	Ti 334.940†	247461.9	223026.7	963.49	µg/L	963.49	ppb	08:31:29
1	Tl 190.801†	-158.9	-64.4	11.932	µg/L	11.932	ppb	08:31:49
1	U 367.007†	4281.6	2962.9	-114.7	µg/L	-114.7	ppb	08:31:29
1	V 292.402†	11442.3	10411.0	188.39	µg/L	188.39	ppb	08:31:49
1	Zn 213.857†	92127.5	81864.1	594.52	µg/L	594.52	ppb	08:31:29
2	Sc RADIAL	26288.2	26288.2	119	%			08:31:10
2	Al 396.153Radial†	344943.9	289821.6	93210	µg/L	93210	ppb	08:31:04
2	Ca 317.933Radial†	1747247.9	1467263.8	314220	µg/L	314220	ppb	08:31:04
2	Fe 238.204 Radial†	1580159.7	1327183.3	258310	µg/L	258310	ppb	08:31:04
2	K 766.490 Radial†	15557.3	12645.4	11488	µg/L	11488	ppb	08:31:10
2	Mg 279.077 IEC†	69247.9	58107.1	94961	µg/L	94961	ppb	08:31:10
2	Na 589.592 Radial†	1185.9	868.5	997.47	µg/L	997.47	ppb	08:31:10
2	Sr 421.552†	197466.1	165596.5	968.22	µg/L	968.22	ppb	08:31:10
2	Sc 361.383	406322.1	406322.1	110.95	%			08:31:56
2	Y 371.029	428768.7	428768.7	119.15	%			08:31:56
2	Ag 328.068†	-4405.0	-3286.5	4.8558	µg/L	4.8558	ppb	08:31:56
2	As 188.979†	152.9	150.6	80.237	µg/L	80.237	ppb	08:32:16
2	B 249.677†	-29912.3	-27132.2	104.09	µg/L	104.09	ppb	08:31:56
2	Ba 233.527†	106507.6	96007.5	801.73	µg/L	801.73	ppb	08:31:56
2	Be 313.107†	-351.7	3256.9	6.7690	µg/L	6.7690	ppb	08:31:56
2	Cd 226.502†	2667.4	2727.2	0.0223	µg/L	0.0223	ppb	08:32:16
2	Co 228.616†	5791.2	5441.9	122.97	µg/L	122.97	ppb	08:32:16
2	Cr 267.716†	8669.7	7691.8	155.46	µg/L	155.46	ppb	08:32:16
2	Cu 324.752†	52011.2	44955.9	346.08	µg/L	346.08	ppb	08:31:56
2	Mn 257.610†	3546840.1	3196197.6	5036.2	µg/L	5036.2	ppb	08:31:56
2	Mo 202.031†	122.0	77.0	9.2264	µg/L	9.2264	ppb	08:32:16
2	Ni 231.604†	11196.4	10294.9	289.69	µg/L	289.69	ppb	08:32:16
2	P 214.914†	8024.2	7100.2	4508.7	µg/L	4508.7	ppb	08:32:16

2	Pb 220.353†	969.8	937.5	130.05 µg/L	130.05 ppb	08:32:16
2	S 181.975 Axial†	62215.8	55980.8	68706 µg/L	68706 ppb	08:31:56
2	Sb 206.836†	199.6	25.3	-30.512 µg/L	-30.512 ppb	08:32:16
2	Se 196.026†	-273.4	-222.6	9.6569 µg/L	9.6569 ppb	08:32:16
2	SiO2†	156171.4	139687.0	23549 µg/L	23549 ppb	08:31:56
2	Si 251.611†	221125.2	199301.3	11003 µg/L	11003 ppb	08:31:56
2	Sn 189.927†	42.0	-9.7	3.8393 µg/L	3.8393 ppb	08:32:16
2	Ti 334.940†	247706.3	223971.4	967.65 µg/L	967.65 ppb	08:31:56
2	Tl 190.801†	-144.3	-51.7	14.892 µg/L	14.892 ppb	08:32:16
2	U 367.007†	4313.0	3003.7	-112.1 µg/L	-112.1 ppb	08:31:56
2	V 292.402†	11332.0	10345.0	188.06 µg/L	188.06 ppb	08:32:16
2	Zn 213.857†	92078.9	82089.9	595.97 µg/L	595.97 ppb	08:31:56
3	Sc RADIAL	26433.5	26433.5	120 %		08:31:20
3	Al 396.153Radial†	346440.5	289478.2	93100 µg/L	93100 ppb	08:31:15
3	Ca 317.933Radial†	1758048.3	1468213.9	314430 µg/L	314430 ppb	08:31:15
3	Fe 238.204 Radial†	1590252.8	1328314.4	258530 µg/L	258530 ppb	08:31:15
3	K 766.490 Radial†	15467.6	12498.5	11354 µg/L	11354 ppb	08:31:20
3	Mg 279.077 IEC†	69221.6	57765.2	94402 µg/L	94402 ppb	08:31:20
3	Na 589.592 Radial†	1202.7	877.1	1010.4 µg/L	1010.4 ppb	08:31:20
3	Sr 421.552†	197303.3	164548.3	962.05 µg/L	962.05 ppb	08:31:20
3	Sc 361.383	407530.9	407530.9	111.28 %		08:32:23
3	Y 371.029	429707.4	429707.4	119.41 %		08:32:23
3	Ag 328.068†	-4210.9	-3100.2	6.7848 µg/L	6.7848 ppb	08:32:23
3	As 188.979†	145.7	143.7	77.248 µg/L	77.248 ppb	08:32:43
3	B 249.677†	-29839.2	-26986.5	109.79 µg/L	109.79 ppb	08:32:23
3	Ba 233.527†	106617.6	95821.6	800.16 µg/L	800.16 ppb	08:32:23
3	Be 313.107†	-509.8	3115.8	6.6489 µg/L	6.6489 ppb	08:32:23
3	Cd 226.502†	2670.7	2723.0	-0.0455 µg/L	-0.0455 ppb	08:32:43
3	Co 228.616†	5802.8	5436.8	122.85 µg/L	122.85 ppb	08:32:43
3	Cr 267.716†	8606.7	7612.0	153.88 µg/L	153.88 ppb	08:32:43
3	Cu 324.752†	52126.1	44920.2	345.82 µg/L	345.82 ppb	08:32:23
3	Mn 257.610†	3553588.6	3192779.9	5030.9 µg/L	5030.9 ppb	08:32:23
3	Mo 202.031†	118.2	73.3	9.0174 µg/L	9.0174 ppb	08:32:43
3	Ni 231.604†	11168.6	10240.0	288.18 µg/L	288.18 ppb	08:32:43
3	P 214.914†	7987.0	7045.4	4472.0 µg/L	4472.0 ppb	08:32:43
3	Pb 220.353†	982.7	946.6	131.18 µg/L	131.18 ppb	08:32:43
3	S 181.975 Axial†	62021.2	55639.6	68287 µg/L	68287 ppb	08:32:23
3	Sb 206.836†	196.5	22.0	-31.473 µg/L	-31.473 ppb	08:32:43
3	Se 196.026†	-285.6	-232.9	4.8998 µg/L	4.8998 ppb	08:32:43
3	SiO2†	156562.5	139621.1	23538 µg/L	23538 ppb	08:32:23
3	Si 251.611†	221599.6	199136.5	10993 µg/L	10993 ppb	08:32:23
3	Sn 189.927†	46.5	-5.7	4.3334 µg/L	4.3334 ppb	08:32:43
3	Ti 334.940†	248119.4	223680.3	966.43 µg/L	966.43 ppb	08:32:23
3	Tl 190.801†	-170.1	-74.5	10.028 µg/L	10.028 ppb	08:32:43
3	U 367.007†	4263.0	2947.2	-133.0 µg/L	-133.0 ppb	08:32:23
3	V 292.402†	11321.9	10305.6	187.57 µg/L	187.57 ppb	08:32:43
3	Zn 213.857†	92195.3	81948.4	594.89 µg/L	594.89 ppb	08:32:23

Mean Data: 454474005|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	407166.3	111.19	%	0.200				0.18%
Sc RADIAL	26306.5	119	%	0.54				0.45%
Y 371.029	429662.8	119.40	%	0.243				0.20%
Ag 328.068†	-3204.2	5.5777	µg/L	1.05212	5.5777	ppb	1.05212	18.86%
Al 396.153Radial†	288460.1	92772	µg/L	665.09	92772	ppb	665.09	0.72%
As 188.979†	145.7	78.038	µg/L	1.9297	78.038	ppb	1.9297	2.47%
B 249.677†	-27020.1	104.74	µg/L	4.752	104.74	ppb	4.752	4.54%
Ba 233.527†	95809.6	800.09	µg/L	1.685	800.09	ppb	1.685	0.21%
Be 313.107†	3177.2	6.6876	µg/L	0.07052	6.6876	ppb	0.07052	1.05%
Ca 317.933Radial†	1462526.0	313210	µg/L	1936.25	313210	ppb	1936.25	0.62%
Cd 226.502†	2730.4	0.1423	µg/L	0.26874	0.1423	ppb	0.26874	188.85%
Co 228.616†	5449.9	123.16	µg/L	0.433	123.16	ppb	0.433	0.35%
Cr 267.716†	7663.3	154.89	µg/L	0.874	154.89	ppb	0.874	0.56%
Cu 324.752†	44902.3	345.64	µg/L	0.565	345.64	ppb	0.565	0.16%
Fe 238.204 Radial†	1323133.9	257520	µg/L	1559.63	257520	ppb	1559.63	0.61%
K 766.490 Radial†	12586.9	11435	µg/L	70.76	11435	ppb	70.76	0.62%
Mg 279.077 IEC†	58002.5	94790	µg/L	336.58	94790	ppb	336.58	0.36%
Mn 257.610†	3192208.6	5029.9	µg/L	6.85	5029.9	ppb	6.85	0.14%
Mo 202.031†	76.3	9.1718	µg/L	0.13565	9.1718	ppb	0.13565	1.48%

Na 589.592 Radial†	888.7	1029.6	µg/L	44.90	1029.6	ppb	44.90	4.36%
Ni 231.604†	10268.6	288.95	µg/L	0.757	288.95	ppb	0.757	0.26%
P 214.914†	7096.3	4506.7	µg/L	33.75	4506.7	ppb	33.75	0.75%
Pb 220.353†	936.9	129.92	µg/L	1.338	129.92	ppb	1.338	1.03%
S 181.975 Axial†	55815.0	68503	µg/L	209.96	68503	ppb	209.96	0.31%
Concentration greater than upper limit for S 181.975 Axial.								
Sb 206.836†	25.7	-30.279	µg/L	1.3261	-30.279	ppb	1.3261	4.38%
Concentration less than lower limit for Sb 206.836.								
Se 196.026†	-224.4	8.4883	µg/L	3.17007	8.4883	ppb	3.17007	37.35%
SiO2†	139571.7	23529	µg/L	24.41	23529	ppb	24.41	0.10%
Si 251.611†	199204.7	10997	µg/L	4.73	10997	ppb	4.73	0.04%
Sn 189.927†	-6.6	4.2184	µg/L	0.33670	4.2184	ppb	0.33670	7.98%
Sr 421.552†	165118.6	965.43	µg/L	3.125	965.43	ppb	3.125	0.32%
Ti 334.940†	223559.5	965.86	µg/L	2.141	965.86	ppb	2.141	0.22%
Tl 190.801†	-63.5	12.284	µg/L	2.4509	12.284	ppb	2.4509	19.95%
U 367.007†	2971.3	-119.9	µg/L	11.35	-119.9	ppb	11.35	9.46%
Concentration less than lower limit for U 367.007.								
V 292.402†	10353.9	188.01	µg/L	0.409	188.01	ppb	0.409	0.22%
Zn 213.857†	81967.5	595.13	µg/L	0.754	595.13	ppb	0.754	0.13%

Sequence No.: 25 **Autosampler Location: 319**
Sample ID: 454474006|1782317|1| **Date Collected: 7/23/2018 08:32:52**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474006|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	26431.3	26431.3	120	%			08:33:28
1	Al 396.153Radial†	376688.9	314771.5	101230	µg/L	101230	ppb	08:33:23
1	Ca 317.933Radial†	715386.7	597321.7	127920	µg/L	127920	ppb	08:33:23
1	Fe 238.204 Radial†	1699056.4	1419318.8	276240	µg/L	276240	ppb	08:33:23
1	K 766.490 Radial†	12233.1	9797.6	8859.1	µg/L	8859.1	ppb	08:33:28
1	Mg 279.077 IEC†	52616.5	43898.6	71741	µg/L	71741	ppb	08:33:28
1	Na 589.592 Radial†	934.2	652.8	642.44	µg/L	642.44	ppb	08:33:28
1	Sr 421.552†	82317.4	68505.6	400.58	µg/L	400.58	ppb	08:33:28
1	Sc 361.383	415554.7	415554.7	113.48	%			08:34:01
1	Y 371.029	442089.1	442089.1	122.85	%			08:34:01
1	Ag 328.068†	-4474.0	-3259.0	7.8273	µg/L	7.8273	ppb	08:34:01
1	As 188.979†	150.2	145.1	78.800	µg/L	78.800	ppb	08:34:21
1	B 249.677†	-32931.8	-29194.2	105.40	µg/L	105.40	ppb	08:34:01
1	Ba 233.527†	98685.9	86981.9	725.32	µg/L	725.32	ppb	08:34:01
1	Be 313.107†	3235.2	6424.9	7.1708	µg/L	7.1708	ppb	08:34:01
1	Cd 226.502†	2892.8	2872.4	-0.4597	µg/L	-0.4597	ppb	08:34:21
1	Co 228.616†	6145.3	5637.9	126.94	µg/L	126.94	ppb	08:34:21
1	Cr 267.716†	9247.2	8027.1	161.93	µg/L	161.93	ppb	08:34:21
1	Cu 324.752†	48890.5	41164.4	319.32	µg/L	319.32	ppb	08:34:01
1	Mn 257.610†	3704762.4	3264344.0	5144.5	µg/L	5144.5	ppb	08:33:56
1	Mo 202.031†	82.3	39.5	7.4372	µg/L	7.4372	ppb	08:34:21
1	Ni 231.604†	12025.5	10801.4	304.05	µg/L	304.05	ppb	08:34:21
1	P 214.914†	8063.9	6974.6	4411.0	µg/L	4411.0	ppb	08:34:21
1	Pb 220.353†	1102.7	1035.3	138.82	µg/L	138.82	ppb	08:34:21
1	S 181.975 Axial†	4641.1	3997.6	4817.7	µg/L	4817.7	ppb	08:34:21
1	Sb 206.836†	196.5	18.6	-34.866	µg/L	-34.866	ppb	08:34:21
1	Se 196.026†	-291.0	-232.7	12.869	µg/L	12.869	ppb	08:34:21
1	SiO2†	201053.3	176111.8	29701	µg/L	29701	ppb	08:34:01
1	Si 251.611†	284541.3	250758.6	13847	µg/L	13847	ppb	08:34:01
1	Sn 189.927†	17.3	-32.3	4.8543	µg/L	4.8543	ppb	08:34:21
1	Ti 334.940†	310165.6	274053.2	1172.4	µg/L	1172.4	ppb	08:34:01
1	Tl 190.801†	-178.1	-78.7	11.316	µg/L	11.316	ppb	08:34:21
1	U 367.007†	4430.6	3021.0	-70.21	µg/L	-70.21	ppb	08:34:01
1	V 292.402†	12753.4	11370.8	204.98	µg/L	204.98	ppb	08:34:21
1	Zn 213.857†	110099.2	96126.5	700.84	µg/L	700.84	ppb	08:34:01
2	Sc RADIAL	26615.9	26615.9	121	%			08:33:38
2	Al 396.153Radial†	377621.7	313363.3	100780	µg/L	100780	ppb	08:33:33
2	Ca 317.933Radial†	712849.8	591073.3	126580	µg/L	126580	ppb	08:33:33
2	Fe 238.204 Radial†	1696255.2	1407153.2	273880	µg/L	273880	ppb	08:33:33
2	K 766.490 Radial†	12347.9	9821.9	8881.5	µg/L	8881.5	ppb	08:33:38
2	Mg 279.077 IEC†	53005.5	43916.5	71770	µg/L	71770	ppb	08:33:38
2	Na 589.592 Radial†	958.7	667.7	668.43	µg/L	668.43	ppb	08:33:38
2	Sr 421.552†	83157.8	68726.0	401.90	µg/L	401.90	ppb	08:33:38
2	Sc 361.383	409712.2	409712.2	111.88	%			08:34:32
2	Y 371.029	436399.3	436399.3	121.27	%			08:34:32
2	Ag 328.068†	-4509.0	-3346.5	6.5893	µg/L	6.5893	ppb	08:34:32
2	As 188.979†	158.9	154.8	82.929	µg/L	82.929	ppb	08:34:53
2	B 249.677†	-32602.2	-29313.4	92.202	µg/L	92.202	ppb	08:34:32
2	Ba 233.527†	97720.1	87358.8	728.56	µg/L	728.56	ppb	08:34:32
2	Be 313.107†	3194.7	6429.4	7.1612	µg/L	7.1612	ppb	08:34:32
2	Cd 226.502†	2919.9	2933.0	0.4293	µg/L	0.4293	ppb	08:34:53
2	Co 228.616†	6160.2	5728.4	129.03	µg/L	129.03	ppb	08:34:53
2	Cr 267.716†	9235.7	8133.0	163.97	µg/L	163.97	ppb	08:34:53
2	Cu 324.752†	48376.2	41319.0	320.32	µg/L	320.32	ppb	08:34:32
2	Mn 257.610†	3682533.0	3291031.1	5186.2	µg/L	5186.2	ppb	08:34:27
2	Mo 202.031†	89.7	47.2	7.8293	µg/L	7.8293	ppb	08:34:53
2	Ni 231.604†	12042.1	10967.4	308.59	µg/L	308.59	ppb	08:34:53
2	P 214.914†	8084.1	7094.0	4492.5	µg/L	4492.5	ppb	08:34:53

2	Pb 220.353†	1111.0	1056.6	141.37 µg/L	141.37 ppb	08:34:53
2	S 181.975 Axial†	4619.8	4036.9	4866.6 µg/L	4866.6 ppb	08:34:53
2	Sb 206.836†	228.5	49.6	-25.680 µg/L	-25.680 ppb	08:34:53
2	Se 196.026†	-303.3	-247.3	4.8983 µg/L	4.8983 ppb	08:34:53
2	SiO2†	198722.9	176555.5	29776 µg/L	29776 ppb	08:34:32
2	Si 251.611†	281229.5	251374.2	13881 µg/L	13881 ppb	08:34:32
2	Sn 189.927†	29.6	-21.0	6.2291 µg/L	6.2291 ppb	08:34:53
2	Ti 334.940†	306818.9	274959.6	1176.2 µg/L	1176.2 ppb	08:34:32
2	Tl 190.801†	-163.5	-67.9	13.430 µg/L	13.430 ppb	08:34:53
2	U 367.007†	4396.8	3046.4	-51.41 µg/L	-51.41 ppb	08:34:32
2	V 292.402†	12823.3	11593.5	207.41 µg/L	207.41 ppb	08:34:53
2	Zn 213.857†	108736.4	96291.9	702.33 µg/L	702.33 ppb	08:34:32
3	Sc RADIAL	26414.5	26414.5	120 %		08:33:49
3	Al 396.153Radial†	382159.8	319544.6	102770 µg/L	102770 ppb	08:33:44
3	Ca 317.933Radial†	722716.2	603828.3	129310 µg/L	129310 ppb	08:33:44
3	Fe 238.204 Radial†	1718302.9	1436309.1	279550 µg/L	279550 ppb	08:33:44
3	K 766.490 Radial†	12284.0	9846.6	8903.1 µg/L	8903.1 ppb	08:33:49
3	Mg 279.077 IEC†	52399.6	43745.2	71490 µg/L	71490 ppb	08:33:49
3	Na 589.592 Radial†	924.6	645.3	626.50 µg/L	626.50 ppb	08:33:49
3	Sr 421.552†	82336.6	68565.3	400.91 µg/L	400.91 ppb	08:33:49
3	Sc 361.383	412528.5	412528.5	112.65 %		08:35:04
3	Y 371.029	438940.0	438940.0	121.97 %		08:35:04
3	Ag 328.068†	-4474.7	-3288.5	8.0406 µg/L	8.0406 ppb	08:35:04
3	As 188.979†	167.9	161.8	86.308 µg/L	86.308 ppb	08:35:24
3	B 249.677†	-32685.9	-29188.7	118.46 µg/L	118.46 ppb	08:35:04
3	Ba 233.527†	98050.8	87056.1	725.87 µg/L	725.87 ppb	08:35:04
3	Be 313.107†	3103.8	6329.2	7.1021 µg/L	7.1021 ppb	08:35:04
3	Cd 226.502†	2939.3	2932.4	-0.1974 µg/L	-0.1974 ppb	08:35:24
3	Co 228.616†	6154.6	5685.9	128.03 µg/L	128.03 ppb	08:35:24
3	Cr 267.716†	9237.9	8078.6	162.98 µg/L	162.98 ppb	08:35:24
3	Cu 324.752†	48682.6	41295.8	320.47 µg/L	320.47 ppb	08:35:04
3	Mn 257.610†	3724334.7	3305668.5	5209.6 µg/L	5209.6 ppb	08:34:58
3	Mo 202.031†	84.0	41.6	7.6189 µg/L	7.6189 ppb	08:35:24
3	Ni 231.604†	12073.7	10921.9	307.45 µg/L	307.45 ppb	08:35:24
3	P 214.914†	8045.6	7010.5	4432.3 µg/L	4432.3 ppb	08:35:24
3	Pb 220.353†	1098.1	1038.3	139.37 µg/L	139.37 ppb	08:35:24
3	S 181.975 Axial†	4638.2	4025.0	4850.2 µg/L	4850.2 ppb	08:35:24
3	Sb 206.836†	191.7	15.6	-36.195 µg/L	-36.195 ppb	08:35:24
3	Se 196.026†	-303.7	-245.9	8.1160 µg/L	8.1160 ppb	08:35:24
3	SiO2†	199270.3	175828.8	29652 µg/L	29652 ppb	08:35:04
3	Si 251.611†	282117.9	250446.8	13829 µg/L	13829 ppb	08:35:04
3	Sn 189.927†	28.6	-22.1	6.1764 µg/L	6.1764 ppb	08:35:24
3	Ti 334.940†	307762.8	273925.3	1171.9 µg/L	1171.9 ppb	08:35:04
3	Tl 190.801†	-165.7	-68.7	13.722 µg/L	13.722 ppb	08:35:24
3	U 367.007†	4318.2	2949.8	-108.7 µg/L	-108.7 ppb	08:35:04
3	V 292.402†	12876.1	11562.1	208.14 µg/L	208.14 ppb	08:35:24
3	Zn 213.857†	109072.3	95926.7	698.95 µg/L	698.95 ppb	08:35:04

Mean Data: 454474006|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	412598.4	112.67	%	0.798				0.71%
Sc RADIAL	26487.2	120	%	0.51				0.42%
Y 371.029	439142.8	122.03	%	0.792				0.65%
Ag 328.068†	-3298.0	7.4857	µg/L	0.78364	7.4857	ppb	0.78364	10.47%
Al 396.153Radial†	315893.2	101600	µg/L	1041.94	101600	ppb	1041.94	1.03%
As 188.979†	153.9	82.679	µg/L	3.7601	82.679	ppb	3.7601	4.55%
B 249.677†	-29232.1	105.35	µg/L	13.129	105.35	ppb	13.129	12.46%
Ba 233.527†	87132.3	726.58	µg/L	1.730	726.58	ppb	1.730	0.24%
Be 313.107†	6394.5	7.1447	µg/L	0.03721	7.1447	ppb	0.03721	0.52%
Ca 317.933Radial†	597407.8	127940	µg/L	1365.87	127940	ppb	1365.87	1.07%
Cd 226.502†	2912.6	-0.0759	µg/L	0.45678	-0.0759	ppb	0.45678	601.50%
Co 228.616†	5684.1	128.00	µg/L	1.046	128.00	ppb	1.046	0.82%
Cr 267.716†	8079.6	162.96	µg/L	1.020	162.96	ppb	1.020	0.63%
Cu 324.752†	41259.8	320.04	µg/L	0.624	320.04	ppb	0.624	0.19%
Fe 238.204 Radial†	1420927.0	276560	µg/L	2850.25	276560	ppb	2850.25	1.03%
K 766.490 Radial†	9822.1	8881.2	µg/L	22.00	8881.2	ppb	22.00	0.25%
Mg 279.077 IEC†	43853.4	71667	µg/L	153.88	71667	ppb	153.88	0.21%
Mn 257.610†	3287014.5	5180.1	µg/L	32.99	5180.1	ppb	32.99	0.64%
Mo 202.031†	42.8	7.6285	µg/L	0.19619	7.6285	ppb	0.19619	2.57%

Na 589.592 Radial†	655.3	645.79	µg/L	21.166	645.79	ppb	21.166	3.28%
Ni 231.604†	10896.9	306.70	µg/L	2.363	306.70	ppb	2.363	0.77%
P 214.914†	7026.3	4445.3	µg/L	42.27	4445.3	ppb	42.27	0.95%
Pb 220.353†	1043.4	139.85	µg/L	1.345	139.85	ppb	1.345	0.96%
S 181.975 Axial†	4019.8	4844.8	µg/L	24.91	4844.8	ppb	24.91	0.51%
Sb 206.836†	27.9	-32.247	µg/L	5.7263	-32.247	ppb	5.7263	17.76%
Concentration less than lower limit for Sb 206.836.								
Se 196.026†	-242.0	8.6278	µg/L	4.00990	8.6278	ppb	4.00990	46.48%
SiO2†	176165.4	29710	µg/L	62.54	29710	ppb	62.54	0.21%
Si 251.611†	250859.9	13853	µg/L	26.30	13853	ppb	26.30	0.19%
Sn 189.927†	-25.2	5.7533	µg/L	0.77900	5.7533	ppb	0.77900	13.54%
Sr 421.552†	68599.0	401.13	µg/L	0.687	401.13	ppb	0.687	0.17%
Ti 334.940†	274312.7	1173.5	µg/L	2.34	1173.5	ppb	2.34	0.20%
Tl 190.801†	-71.8	12.823	µg/L	1.3130	12.823	ppb	1.3130	10.24%
U 367.007†	3005.8	-76.78	µg/L	29.212	-76.78	ppb	29.212	38.05%
Concentration less than lower limit for U 367.007.								
V 292.402†	11508.8	206.84	µg/L	1.656	206.84	ppb	1.656	0.80%
Zn 213.857†	96115.0	700.71	µg/L	1.693	700.71	ppb	1.693	0.24%

Sequence No.: 26 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 08:35:32**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25477.5	25477.5	115	%			08:36:10
1	Al 396.153Radial†	17696.8	15431.0	4940.6	µg/L	4940.6	ppb	08:36:10
1	Ca 317.933Radial†	27849.5	23839.5	5105.4	µg/L	5105.4	ppb	08:36:10
1	Fe 238.204 Radial†	29813.3	25802.7	5022.0	µg/L	5022.0	ppb	08:36:10
1	K 766.490 Radial†	6491.7	5204.4	4729.3	µg/L	4729.3	ppb	08:36:10
1	Mg 279.077 IEC†	3694.7	3145.9	5141.2	µg/L	5141.2	ppb	08:36:10
1	Na 589.592 Radial†	7286.1	6186.9	9507.3	µg/L	9507.3	ppb	08:36:10
1	Sr 421.552†	94138.2	81324.6	478.13	µg/L	478.13	ppb	08:36:05
1	Sc 361.383	417172.9	417172.9	113.92	%			08:36:38
1	Y 371.029	407198.9	407198.9	113.15	%			08:36:38
1	Ag 328.068†	52978.2	47189.4	479.24	µg/L	479.24	ppb	08:36:38
1	As 188.979†	1283.9	1139.8	505.40	µg/L	505.40	ppb	08:36:58
1	B 249.677†	16983.0	14734.9	507.46	µg/L	507.46	ppb	08:36:38
1	Ba 233.527†	65605.0	57605.3	484.74	µg/L	484.74	ppb	08:36:38
1	Be 313.107†	664874.5	587218.1	488.18	µg/L	488.18	ppb	08:36:38
1	Cd 226.502†	54352.0	48034.7	498.01	µg/L	498.01	ppb	08:36:38
1	Co 228.616†	23552.8	20897.7	481.58	µg/L	481.58	ppb	08:36:58
1	Cr 267.716†	27311.0	23852.3	474.88	µg/L	474.88	ppb	08:36:58
1	Cu 324.752†	75800.9	64619.9	474.66	µg/L	474.66	ppb	08:36:38
1	Mn 257.610†	351573.9	308163.9	484.30	µg/L	484.30	ppb	08:36:38
1	Mo 202.031†	9605.8	8399.3	476.54	µg/L	476.54	ppb	08:36:58
1	Ni 231.604†	19890.8	17664.6	488.36	µg/L	488.36	ppb	08:36:58
1	P 214.914†	4261.8	3609.4	2388.9	µg/L	2388.9	ppb	08:36:58
1	Pb 220.353†	4418.0	3941.8	487.63	µg/L	487.63	ppb	08:36:58
1	S 181.975 Axial†	1009.0	793.4	972.32	µg/L	972.32	ppb	08:36:58
1	Sb 206.836†	2042.8	1638.6	466.05	µg/L	466.05	ppb	08:36:58
1	Se 196.026†	1163.9	1045.5	496.37	µg/L	496.37	ppb	08:36:58
1	SiO2†	36061.5	30590.5	5146.8	µg/L	5146.8	ppb	08:36:38
1	Si 251.611†	49874.4	43789.2	2413.4	µg/L	2413.4	ppb	08:36:38
1	Sn 189.927†	4502.6	3904.9	486.86	µg/L	486.86	ppb	08:36:58
1	Ti 334.940†	126113.8	111427.5	474.38	µg/L	474.38	ppb	08:36:38
1	Tl 190.801†	2502.3	2274.9	487.97	µg/L	487.97	ppb	08:36:58
1	U 367.007†	2435.3	1254.3	419.0	µg/L	419.0	ppb	08:36:38
1	V 292.402†	41637.9	36682.8	484.84	µg/L	484.84	ppb	08:36:38
1	Zn 213.857†	74009.6	64069.7	484.70	µg/L	484.70	ppb	08:36:38
2	Sc RADIAL	25583.7	25583.7	116	%			08:36:21
2	Al 396.153Radial†	17860.1	15508.2	4965.2	µg/L	4965.2	ppb	08:36:21
2	Ca 317.933Radial†	28302.2	24130.0	5167.6	µg/L	5167.6	ppb	08:36:21
2	Fe 238.204 Radial†	30281.9	26099.9	5079.9	µg/L	5079.9	ppb	08:36:21
2	K 766.490 Radial†	6578.1	5255.6	4775.8	µg/L	4775.8	ppb	08:36:21
2	Mg 279.077 IEC†	3776.2	3203.0	5234.5	µg/L	5234.5	ppb	08:36:21
2	Na 589.592 Radial†	7380.9	6242.5	9592.7	µg/L	9592.7	ppb	08:36:21
2	Sr 421.552†	94620.5	81402.1	478.58	µg/L	478.58	ppb	08:36:15
2	Sc 361.383	411869.7	411869.7	112.47	%			08:37:04
2	Y 371.029	402148.9	402148.9	111.75	%			08:37:04
2	Ag 328.068†	52472.9	47338.8	480.75	µg/L	480.75	ppb	08:37:04
2	As 188.979†	1285.8	1156.0	512.57	µg/L	512.57	ppb	08:37:24
2	B 249.677†	16764.8	14732.9	507.59	µg/L	507.59	ppb	08:37:04
2	Ba 233.527†	64655.2	57502.3	483.87	µg/L	483.87	ppb	08:37:04
2	Be 313.107†	655253.1	586178.3	487.32	µg/L	487.32	ppb	08:37:04
2	Cd 226.502†	53337.6	47747.0	495.02	µg/L	495.02	ppb	08:37:04
2	Co 228.616†	23587.9	21195.1	488.44	µg/L	488.44	ppb	08:37:24
2	Cr 267.716†	27359.0	24203.8	481.86	µg/L	481.86	ppb	08:37:24
2	Cu 324.752†	74902.2	64677.6	475.09	µg/L	475.09	ppb	08:37:04
2	Mn 257.610†	346578.0	307695.6	483.57	µg/L	483.57	ppb	08:37:04
2	Mo 202.031†	9609.7	8511.3	482.89	µg/L	482.89	ppb	08:37:24
2	Ni 231.604†	19932.0	17926.0	495.58	µg/L	495.58	ppb	08:37:24
2	P 214.914†	4270.4	3665.2	2425.9	µg/L	2425.9	ppb	08:37:24

2	Pb 220.353†	4460.7	4029.7	498.49 µg/L	498.49 ppb	08:37:24
2	S 181.975 Axial†	1023.8	818.0	1002.5 µg/L	1002.5 ppb	08:37:24
2	Sb 206.836†	2069.1	1685.1	479.29 µg/L	479.29 ppb	08:37:24
2	Se 196.026†	1159.1	1054.4	500.62 µg/L	500.62 ppb	08:37:24
2	SiO2†	35670.9	30650.8	5156.6 µg/L	5156.6 ppb	08:37:04
2	Si 251.611†	49157.5	43715.6	2409.2 µg/L	2409.2 ppb	08:37:04
2	Sn 189.927†	4519.0	3970.5	495.00 µg/L	495.00 ppb	08:37:24
2	Ti 334.940†	124461.5	111383.9	474.18 µg/L	474.18 ppb	08:37:04
2	Tl 190.801†	2499.4	2300.6	493.48 µg/L	493.48 ppb	08:37:24
2	U 367.007†	2476.1	1318.1	441.2 µg/L	441.2 ppb	08:37:04
2	V 292.402†	41143.3	36713.6	485.33 µg/L	485.33 ppb	08:37:04
2	Zn 213.857†	72903.4	63922.7	483.54 µg/L	483.54 ppb	08:37:04
3	Sc RADIAL	25322.5	25322.5	115 %		08:36:31
3	Al 396.153Radial†	17727.9	15551.9	4979.1 µg/L	4979.1 ppb	08:36:31
3	Ca 317.933Radial†	27954.2	24078.4	5156.5 µg/L	5156.5 ppb	08:36:31
3	Fe 238.204 Radial†	29879.3	26018.4	5064.0 µg/L	5064.0 ppb	08:36:31
3	K 766.490 Radial†	6554.7	5293.8	4810.5 µg/L	4810.5 ppb	08:36:31
3	Mg 279.077 IEC†	3704.0	3173.7	5186.5 µg/L	5186.5 ppb	08:36:31
3	Na 589.592 Radial†	7338.1	6270.9	9636.3 µg/L	9636.3 ppb	08:36:31
3	Sr 421.552†	94535.2	82170.1	483.10 µg/L	483.10 ppb	08:36:26
3	Sc 361.383	409213.7	409213.7	111.74 %		08:37:30
3	Y 371.029	399373.2	399373.2	110.98 %		08:37:30
3	Ag 328.068†	52246.2	47438.8	481.76 µg/L	481.76 ppb	08:37:30
3	As 188.979†	1290.7	1167.8	517.79 µg/L	517.79 ppb	08:37:50
3	B 249.677†	16675.3	14749.5	508.06 µg/L	508.06 ppb	08:37:30
3	Ba 233.527†	64623.9	57847.5	486.78 µg/L	486.78 ppb	08:37:30
3	Be 313.107†	654793.0	589548.0	490.12 µg/L	490.12 ppb	08:37:30
3	Cd 226.502†	53378.1	48091.2	498.59 µg/L	498.59 ppb	08:37:30
3	Co 228.616†	23597.9	21340.1	491.78 µg/L	491.78 ppb	08:37:50
3	Cr 267.716†	27379.4	24379.9	485.36 µg/L	485.36 ppb	08:37:50
3	Cu 324.752†	74877.0	65087.3	478.10 µg/L	478.10 ppb	08:37:30
3	Mn 257.610†	347023.2	310094.1	487.33 µg/L	487.33 ppb	08:37:30
3	Mo 202.031†	9602.1	8559.9	485.65 µg/L	485.65 ppb	08:37:50
3	Ni 231.604†	19927.7	18037.2	498.66 µg/L	498.66 ppb	08:37:50
3	P 214.914†	4262.0	3682.4	2437.3 µg/L	2437.3 ppb	08:37:50
3	Pb 220.353†	4417.5	4016.7	496.89 µg/L	496.89 ppb	08:37:50
3	S 181.975 Axial†	1016.2	817.0	1001.4 µg/L	1001.4 ppb	08:37:50
3	Sb 206.836†	2037.2	1668.5	474.51 µg/L	474.51 ppb	08:37:50
3	Se 196.026†	1170.6	1071.3	508.61 µg/L	508.61 ppb	08:37:50
3	SiO2†	35622.4	30813.2	5184.0 µg/L	5184.0 ppb	08:37:30
3	Si 251.611†	49180.5	44019.8	2426.0 µg/L	2426.0 ppb	08:37:30
3	Sn 189.927†	4514.2	3992.2	497.72 µg/L	497.72 ppb	08:37:50
3	Ti 334.940†	124651.9	112272.5	477.96 µg/L	477.96 ppb	08:37:30
3	Tl 190.801†	2510.9	2325.3	498.78 µg/L	498.78 ppb	08:37:50
3	U 367.007†	2485.4	1340.7	449.2 µg/L	449.2 ppb	08:37:30
3	V 292.402†	41077.5	36892.1	487.69 µg/L	487.69 ppb	08:37:30
3	Zn 213.857†	72962.5	64396.3	487.13 µg/L	487.13 ppb	08:37:30

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	412752.1	112.71	%	1.107				0.98%
Sc RADIAL	25461.2	115	%	0.59				0.52%
Y 371.029	402907.0	111.96	%	1.103				0.98%
Ag 328.068†	47322.3	480.59	µg/L	1.268	480.59	ppb	1.268	0.26%
QC value within limits for Ag 328.068 Recovery = 96.12%								
Al 396.153Radial†	15497.0	4961.6	µg/L	19.48	4961.6	ppb	19.48	0.39%
QC value within limits for Al 396.153Radial Recovery = 99.23%								
As 188.979†	1154.5	511.92	µg/L	6.223	511.92	ppb	6.223	1.22%
QC value within limits for As 188.979 Recovery = 102.38%								
B 249.677†	14739.1	507.70	µg/L	0.320	507.70	ppb	0.320	0.06%
QC value within limits for B 249.677 Recovery = 101.54%								
Ba 233.527†	57651.7	485.13	µg/L	1.491	485.13	ppb	1.491	0.31%
QC value within limits for Ba 233.527 Recovery = 97.03%								
Be 313.107†	587648.1	488.54	µg/L	1.436	488.54	ppb	1.436	0.29%
QC value within limits for Be 313.107 Recovery = 97.71%								
Ca 317.933Radial†	24016.0	5143.2	µg/L	33.19	5143.2	ppb	33.19	0.65%
QC value within limits for Ca 317.933Radial Recovery = 102.86%								
Cd 226.502†	47957.6	497.21	µg/L	1.916	497.21	ppb	1.916	0.39%
QC value within limits for Cd 226.502 Recovery = 99.44%								

Co 228.616†	21144.3	487.27 µg/L	5.201	487.27 ppb	5.201	1.07%
QC value within limits for Co 228.616 Recovery = 97.45%						
Cr 267.716†	24145.3	480.70 µg/L	5.338	480.70 ppb	5.338	1.11%
QC value within limits for Cr 267.716 Recovery = 96.14%						
Cu 324.752†	64794.9	475.95 µg/L	1.877	475.95 ppb	1.877	0.39%
QC value within limits for Cu 324.752 Recovery = 95.19%						
Fe 238.204 Radial†	25973.6	5055.3 µg/L	29.89	5055.3 ppb	29.89	0.59%
QC value within limits for Fe 238.204 Radial Recovery = 101.11%						
K 766.490 Radial†	5251.3	4771.8 µg/L	40.75	4771.8 ppb	40.75	0.85%
QC value within limits for K 766.490 Radial Recovery = 95.44%						
Mg 279.077 IEC†	3174.2	5187.4 µg/L	46.66	5187.4 ppb	46.66	0.90%
QC value within limits for Mg 279.077 IEC Recovery = 103.75%						
Mn 257.610†	308651.2	485.07 µg/L	1.997	485.07 ppb	1.997	0.41%
QC value within limits for Mn 257.610 Recovery = 97.01%						
Mo 202.031†	8490.2	481.69 µg/L	4.674	481.69 ppb	4.674	0.97%
QC value within limits for Mo 202.031 Recovery = 96.34%						
Na 589.592 Radial†	6233.4	9578.8 µg/L	65.65	9578.8 ppb	65.65	0.69%
QC value within limits for Na 589.592 Radial Recovery = 95.79%						
Ni 231.604†	17876.0	494.20 µg/L	5.288	494.20 ppb	5.288	1.07%
QC value within limits for Ni 231.604 Recovery = 98.84%						
P 214.914†	3652.3	2417.3 µg/L	25.30	2417.3 ppb	25.30	1.05%
QC value within limits for P 214.914 Recovery = 96.69%						
Pb 220.353†	3996.1	494.34 µg/L	5.861	494.34 ppb	5.861	1.19%
QC value within limits for Pb 220.353 Recovery = 98.87%						
S 181.975 Axial†	809.5	992.06 µg/L	17.104	992.06 ppb	17.104	1.72%
QC value within limits for S 181.975 Axial Recovery = 99.21%						
Sb 206.836†	1664.0	473.28 µg/L	6.707	473.28 ppb	6.707	1.42%
QC value within limits for Sb 206.836 Recovery = 94.66%						
Se 196.026†	1057.1	501.87 µg/L	6.218	501.87 ppb	6.218	1.24%
QC value within limits for Se 196.026 Recovery = 100.37%						
SiO2†	30684.8	5162.5 µg/L	19.28	5162.5 ppb	19.28	0.37%
QC value within limits for SiO2 Recovery = 96.54%						
Si 251.611†	43841.5	2416.2 µg/L	8.74	2416.2 ppb	8.74	0.36%
QC value within limits for Si 251.611 Recovery = 96.65%						
Sn 189.927†	3955.9	493.19 µg/L	5.649	493.19 ppb	5.649	1.15%
QC value within limits for Sn 189.927 Recovery = 98.64%						
Sr 421.552†	81632.2	479.94 µg/L	2.748	479.94 ppb	2.748	0.57%
QC value within limits for Sr 421.552 Recovery = 95.99%						
Ti 334.940†	111694.6	475.51 µg/L	2.127	475.51 ppb	2.127	0.45%
QC value within limits for Ti 334.940 Recovery = 95.10%						
Tl 190.801†	2300.3	493.41 µg/L	5.403	493.41 ppb	5.403	1.10%
QC value within limits for Tl 190.801 Recovery = 98.68%						
U 367.007†	1304.4	436.5 µg/L	15.65	436.5 ppb	15.65	3.58%
QC value less than the lower limit for U 367.007 Recovery = 87.30%						
V 292.402†	36762.8	485.95 µg/L	1.525	485.95 ppb	1.525	0.31%
QC value within limits for V 292.402 Recovery = 97.19%						
Zn 213.857†	64129.6	485.12 µg/L	1.833	485.12 ppb	1.833	0.38%
QC value within limits for Zn 213.857 Recovery = 97.02%						

QC Failed. Continue with analysis.

Sequence No.: 27 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 08:37:59**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25003.0	25003.0	113	%			08:38:50
1	Al 396.153Radial†	-98.6	6.9	2.2145	µg/L	2.2145	ppb	08:38:50
1	Ca 317.933Radial†	561.7	199.7	42.766	µg/L	42.766	ppb	08:38:50
1	Fe 238.204 Radial†	105.7	58.2	11.337	µg/L	11.337	ppb	08:38:50
1	K 766.490 Radial†	516.4	34.3	31.201	µg/L	31.201	ppb	08:38:30
1	Mg 279.077 IEC†	59.0	-4.0	-6.4973	µg/L	-6.4973	ppb	08:38:50
1	Na 589.592 Radial†	95.2	-43.5	-66.942	µg/L	-66.942	ppb	08:38:50
1	Sr 421.552†	320.0	22.0	0.1289	µg/L	0.1289	ppb	08:38:30
1	Sc 361.383	409595.7	409595.7	111.85	%			08:39:47
1	Y 371.029	403737.5	403737.5	112.19	%			08:39:47
1	Ag 328.068†	-740.6	21.5	0.2193	µg/L	0.2193	ppb	08:39:47
1	As 188.979†	-25.2	-9.8	-4.2954	µg/L	-4.2954	ppb	08:40:07
1	B 249.677†	226.4	29.2	1.0093	µg/L	1.0093	ppb	08:40:07
1	Ba 233.527†	13.7	27.8	0.2337	µg/L	0.2337	ppb	08:40:07
1	Be 313.107†	-3759.5	212.7	0.1768	µg/L	0.1768	ppb	08:39:47
1	Cd 226.502†	-306.4	49.2	0.5093	µg/L	0.5093	ppb	08:40:07
1	Co 228.616†	-184.9	57.1	1.3156	µg/L	1.3156	ppb	08:40:07
1	Cr 267.716†	109.9	-23.7	-0.4713	µg/L	-0.4713	ppb	08:40:07
1	Cu 324.752†	2052.9	-84.7	-0.6222	µg/L	-0.6222	ppb	08:39:47
1	Mn 257.610†	1010.1	446.3	0.7016	µg/L	0.7016	ppb	08:40:07
1	Mo 202.031†	44.9	7.2	0.4084	µg/L	0.4084	ppb	08:40:07
1	Ni 231.604†	-216.2	10.6	0.2933	µg/L	0.2933	ppb	08:40:07
1	P 214.914†	92.5	-49.0	-32.601	µg/L	-32.601	ppb	08:40:07
1	Pb 220.353†	-83.6	-11.2	-1.3853	µg/L	-1.3853	ppb	08:40:07
1	S 181.975 Axial†	128.7	22.8	27.983	µg/L	27.983	ppb	08:40:07
1	Sb 206.836†	169.4	-3.1	-0.8852	µg/L	-0.8852	ppb	08:40:07
1	Se 196.026†	-11.4	13.5	6.4087	µg/L	6.4087	ppb	08:40:07
1	SiO2†	1287.2	85.6	14.442	µg/L	14.442	ppb	08:40:07
1	Si 251.611†	243.7	226.1	12.497	µg/L	12.497	ppb	08:40:07
1	Sn 189.927†	55.4	2.0	0.2482	µg/L	0.2482	ppb	08:40:07
1	Ti 334.940†	-700.1	95.6	0.4099	µg/L	0.4099	ppb	08:39:47
1	Tl 190.801†	-85.5	1.8	0.3945	µg/L	0.3945	ppb	08:40:07
1	U 367.007†	983.9	-3.8	-1.401	µg/L	-1.401	ppb	08:39:47
1	V 292.402†	-182.5	-31.3	-0.4040	µg/L	-0.4040	ppb	08:40:07
1	Zn 213.857†	1379.0	335.1	2.5510	µg/L	2.5510	ppb	08:40:07
2	Sc RADIAL	25044.1	25044.1	113	%			08:39:15
2	Al 396.153Radial†	-124.3	-15.6	-5.0181	µg/L	-5.0181	ppb	08:39:15
2	Ca 317.933Radial†	517.9	160.3	34.328	µg/L	34.328	ppb	08:39:15
2	Fe 238.204 Radial†	77.1	33.0	6.4131	µg/L	6.4131	ppb	08:39:15
2	K 766.490 Radial†	517.5	34.6	31.416	µg/L	31.416	ppb	08:38:55
2	Mg 279.077 IEC†	66.9	2.9	4.7716	µg/L	4.7716	ppb	08:39:15
2	Na 589.592 Radial†	104.5	-35.4	-54.507	µg/L	-54.507	ppb	08:39:15
2	Sr 421.552†	372.9	68.3	0.4009	µg/L	0.4009	ppb	08:38:55
2	Sc 361.383	410006.4	410006.4	111.96	%			08:40:12
2	Y 371.029	403408.8	403408.8	112.10	%			08:40:12
2	Ag 328.068†	-711.8	47.9	0.4736	µg/L	0.4736	ppb	08:40:12
2	As 188.979†	-9.7	4.2	1.8261	µg/L	1.8261	ppb	08:40:32
2	B 249.677†	245.6	46.2	1.5557	µg/L	1.5557	ppb	08:40:32
2	Ba 233.527†	-11.6	5.1	0.0430	µg/L	0.0430	ppb	08:40:32
2	Be 313.107†	-3635.1	327.2	0.2771	µg/L	0.2771	ppb	08:40:12
2	Cd 226.502†	-304.4	51.2	0.5306	µg/L	0.5306	ppb	08:40:32
2	Co 228.616†	-203.2	40.9	0.9423	µg/L	0.9423	ppb	08:40:32
2	Cr 267.716†	95.2	-36.9	-0.7506	µg/L	-0.7506	ppb	08:40:32
2	Cu 324.752†	2099.7	-44.7	-0.3154	µg/L	-0.3154	ppb	08:40:12
2	Mn 257.610†	504.2	-6.5	-0.0098	µg/L	-0.0098	ppb	08:40:32
2	Mo 202.031†	34.7	-1.9	-0.1087	µg/L	-0.1087	ppb	08:40:32
2	Ni 231.604†	-223.8	4.0	0.1109	µg/L	0.1109	ppb	08:40:32
2	P 214.914†	98.2	-44.0	-29.288	µg/L	-29.288	ppb	08:40:32

2	Pb 220.353†	-89.4	-16.3	-2.0346 µg/L	-2.0346 ppb	08:40:32
2	S 181.975 Axial†	118.0	13.1	16.086 µg/L	16.086 ppb	08:40:32
2	Sb 206.836†	145.8	-24.3	-6.9588 µg/L	-6.9588 ppb	08:40:32
2	Se 196.026†	-15.6	9.8	4.6579 µg/L	4.6579 ppb	08:40:32
2	SiO2†	1280.2	78.2	13.214 µg/L	13.214 ppb	08:40:32
2	Si 251.611†	216.0	201.1	11.122 µg/L	11.122 ppb	08:40:32
2	Sn 189.927†	47.2	-5.3	-0.6607 µg/L	-0.6607 ppb	08:40:32
2	Ti 334.940†	-735.5	64.6	0.2676 µg/L	0.2676 ppb	08:40:12
2	Tl 190.801†	-96.2	-7.6	-1.6273 µg/L	-1.6273 ppb	08:40:32
2	U 367.007†	1053.8	57.7	20.27 µg/L	20.27 ppb	08:40:12
2	V 292.402†	-165.2	-15.7	-0.1933 µg/L	-0.1933 ppb	08:40:32
2	Zn 213.857†	1332.5	292.3	2.2263 µg/L	2.2263 ppb	08:40:32
3	Sc RADIAL	24981.2	24981.2	113 %		08:39:40
3	Al 396.153Radial†	-106.6	-0.2	-0.0627 µg/L	-0.0627 ppb	08:39:40
3	Ca 317.933Radial†	508.8	153.4	32.843 µg/L	32.843 ppb	08:39:40
3	Fe 238.204 Radial†	63.2	20.8	4.0519 µg/L	4.0519 ppb	08:39:40
3	K 766.490 Radial†	453.0	-21.2	-19.297 µg/L	-19.297 ppb	08:39:20
3	Mg 279.077 IEC†	72.2	7.7	12.648 µg/L	12.648 ppb	08:39:40
3	Na 589.592 Radial†	127.0	-15.3	-23.534 µg/L	-23.534 ppb	08:39:40
3	Sr 421.552†	309.6	13.1	0.0766 µg/L	0.0766 ppb	08:39:20
3	Sc 361.383	407948.5	407948.5	111.40 %		08:40:37
3	Y 371.029	401879.9	401879.9	111.68 %		08:40:37
3	Ag 328.068†	-644.6	105.1	1.0557 µg/L	1.0557 ppb	08:40:37
3	As 188.979†	-10.5	3.3	1.4647 µg/L	1.4647 ppb	08:40:57
3	B 249.677†	266.4	65.9	2.2041 µg/L	2.2041 ppb	08:40:57
3	Ba 233.527†	10.8	25.2	0.2120 µg/L	0.2120 ppb	08:40:57
3	Be 313.107†	-3514.0	419.5	0.3525 µg/L	0.3525 ppb	08:40:37
3	Cd 226.502†	-298.3	55.3	0.5738 µg/L	0.5738 ppb	08:40:57
3	Co 228.616†	-208.7	35.0	0.8069 µg/L	0.8069 ppb	08:40:57
3	Cr 267.716†	125.7	-9.1	-0.1929 µg/L	-0.1929 ppb	08:40:57
3	Cu 324.752†	2057.0	-73.6	-0.5308 µg/L	-0.5308 ppb	08:40:37
3	Mn 257.610†	588.0	71.0	0.1117 µg/L	0.1117 ppb	08:40:57
3	Mo 202.031†	30.8	-5.3	-0.2999 µg/L	-0.2999 ppb	08:40:57
3	Ni 231.604†	-208.4	16.8	0.4653 µg/L	0.4653 ppb	08:40:57
3	P 214.914†	107.8	-35.0	-23.258 µg/L	-23.258 ppb	08:40:57
3	Pb 220.353†	-81.2	-9.3	-1.1629 µg/L	-1.1629 ppb	08:40:57
3	S 181.975 Axial†	124.3	19.2	23.635 µg/L	23.635 ppb	08:40:57
3	Sb 206.836†	161.3	-9.8	-2.8005 µg/L	-2.8005 ppb	08:40:57
3	Se 196.026†	-21.4	4.5	2.1454 µg/L	2.1454 ppb	08:40:57
3	SiO2†	1256.0	62.2	10.533 µg/L	10.533 ppb	08:40:57
3	Si 251.611†	215.0	201.2	11.131 µg/L	11.131 ppb	08:40:57
3	Sn 189.927†	37.3	-14.1	-1.7477 µg/L	-1.7477 ppb	08:40:57
3	Ti 334.940†	-735.1	61.7	0.2572 µg/L	0.2572 ppb	08:40:37
3	Tl 190.801†	-102.5	-13.7	-2.9302 µg/L	-2.9302 ppb	08:40:57
3	U 367.007†	1031.3	42.3	14.85 µg/L	14.85 ppb	08:40:37
3	V 292.402†	-152.6	-5.1	-0.0601 µg/L	-0.0601 ppb	08:40:57
3	Zn 213.857†	1332.1	297.9	2.2675 µg/L	2.2675 ppb	08:40:57

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	409183.5	111.74	%	0.297				0.27%
Sc RADIAL	25009.4	113	%	0.14				0.13%
Y 371.029	403008.7	111.99	%	0.275				0.25%
Ag 328.068†	58.1	0.5829	µg/L	0.42874	0.5829	ppb	0.42874	73.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.0	-0.9554	µg/L	3.69801	-0.9554	ppb	3.69801	387.05%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.8	-0.3349	µg/L	3.43465	-0.3349	ppb	3.43465	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	47.1	1.5897	µg/L	0.59811	1.5897	ppb	0.59811	37.62%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	19.4	0.1629	µg/L	0.10443	0.1629	ppb	0.10443	64.10%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	319.8	0.2688	µg/L	0.08816	0.2688	ppb	0.08816	32.80%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	171.1	36.646	µg/L	5.3523	36.646	ppb	5.3523	14.61%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	51.9	0.5379	µg/L	0.03286	0.5379	ppb	0.03286	6.11%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	44.3	1.0216 µg/L	0.26345	1.0216 ppb	0.26345	25.79%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-23.2	-0.4716 µg/L	0.27888	-0.4716 ppb	0.27888	59.14%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-67.7	-0.4895 µg/L	0.15750	-0.4895 ppb	0.15750	32.18%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	37.3	7.2674 µg/L	3.71706	7.2674 ppb	3.71706	51.15%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	15.9	14.440 µg/L	29.2173	14.440 ppb	29.2173	202.34%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	2.2	3.6409 µg/L	9.62279	3.6409 ppb	9.62279	264.30%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	170.3	0.2678 µg/L	0.38053	0.2678 ppb	0.38053	142.07%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-0.0	-0.0001 µg/L	0.36643	-0.0001 ppb	0.36643	>999.9%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-31.4	-48.327 µg/L	22.3540	-48.327 ppb	22.3540	46.26%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	10.5	0.2899 µg/L	0.17724	0.2899 ppb	0.17724	61.15%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-42.6	-28.382 µg/L	4.7369	-28.382 ppb	4.7369	16.69%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-12.3	-1.5276 µg/L	0.45294	-1.5276 ppb	0.45294	29.65%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	18.4	22.568 µg/L	6.0199	22.568 ppb	6.0199	26.67%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-12.4	-3.5482 µg/L	3.10509	-3.5482 ppb	3.10509	87.51%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	9.3	4.4040 µg/L	2.14297	4.4040 ppb	2.14297	48.66%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	75.3	12.730 µg/L	1.9992	12.730 ppb	1.9992	15.71%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	209.5	11.584 µg/L	0.7910	11.584 ppb	0.7910	6.83%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-5.8	-0.7201 µg/L	0.99930	-0.7201 ppb	0.99930	138.77%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	34.5	0.2021 µg/L	0.17411	0.2021 ppb	0.17411	86.15%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	74.0	0.3116 µg/L	0.08531	0.3116 ppb	0.08531	27.38%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-6.5	-1.3877 µg/L	1.67526	-1.3877 ppb	1.67526	120.72%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	32.1	11.24 µg/L	11.275	11.24 ppb	11.275	100.34%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	-17.3	-0.2192 µg/L	0.17340	-0.2192 ppb	0.17340	79.12%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	308.4	2.3483 µg/L	0.17677	2.3483 ppb	0.17677	7.53%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 7 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 08:55:38**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24633.8	24633.8	112	%			08:56:17
1	Al 396.153Radial†	17398.9	15689.2	5022.9	µg/L	5022.9	ppb	08:56:17
1	Ca 317.933Radial†	27624.0	24464.0	5239.1	µg/L	5239.1	ppb	08:56:17
1	Fe 238.204 Radial†	29610.8	26506.2	5159.0	µg/L	5159.0	ppb	08:56:17
1	K 766.490 Radial†	6446.2	5356.3	4867.3	µg/L	4867.3	ppb	08:56:17
1	Mg 279.077 IEC†	3747.9	3303.3	5398.3	µg/L	5398.3	ppb	08:56:17
1	Na 589.592 Radial†	7218.4	6342.5	9746.4	µg/L	9746.4	ppb	08:56:17
1	Sr 421.552†	93197.7	83276.0	489.60	µg/L	489.60	ppb	08:56:12
1	Sc 361.383	399336.5	399336.5	109.05	%			08:56:44
1	Y 371.029	390367.9	390367.9	108.48	%			08:56:44
1	Ag 328.068†	52004.0	48373.1	491.25	µg/L	491.25	ppb	08:56:44
1	As 188.979†	1280.4	1187.0	526.29	µg/L	526.29	ppb	08:57:04
1	B 249.677†	16550.2	15003.8	516.87	µg/L	516.87	ppb	08:56:44
1	Ba 233.527†	64228.9	58915.7	495.77	µg/L	495.77	ppb	08:56:44
1	Be 313.107†	650230.2	599857.3	498.69	µg/L	498.69	ppb	08:56:44
1	Cd 226.502†	53105.5	49022.7	508.25	µg/L	508.25	ppb	08:56:44
1	Co 228.616†	23293.4	21583.3	497.39	µg/L	497.39	ppb	08:57:04
1	Cr 267.716†	27081.2	24712.5	491.98	µg/L	491.98	ppb	08:57:04
1	Cu 324.752†	74138.6	66067.6	485.30	µg/L	485.30	ppb	08:56:44
1	Mn 257.610†	343722.9	314748.8	494.65	µg/L	494.65	ppb	08:56:44
1	Mo 202.031†	9528.3	8704.8	493.87	µg/L	493.87	ppb	08:57:04
1	Ni 231.604†	19737.1	18303.6	506.02	µg/L	506.02	ppb	08:57:04
1	P 214.914†	4237.5	3754.3	2484.9	µg/L	2484.9	ppb	08:57:04
1	Pb 220.353†	4387.5	4087.0	505.58	µg/L	505.58	ppb	08:57:04
1	S 181.975 Axial†	996.4	821.4	1006.7	µg/L	1006.7	ppb	08:57:04
1	Sb 206.836†	2043.9	1719.7	489.16	µg/L	489.16	ppb	08:57:04
1	Se 196.026†	1152.8	1081.0	513.20	µg/L	513.20	ppb	08:57:04
1	SiO2†	35173.4	31189.9	5247.2	µg/L	5247.2	ppb	08:56:44
1	Si 251.611†	48498.4	44482.9	2451.4	µg/L	2451.4	ppb	08:56:44
1	Sn 189.927†	4470.6	4052.1	505.19	µg/L	505.19	ppb	08:57:04
1	Ti 334.940†	123462.6	113941.0	485.06	µg/L	485.06	ppb	08:56:44
1	Tl 190.801†	2460.1	2334.3	500.73	µg/L	500.73	ppb	08:57:04
1	U 367.007†	2445.4	1359.1	455.3	µg/L	455.3	ppb	08:56:44
1	V 292.402†	40764.0	37513.9	495.91	µg/L	495.91	ppb	08:56:44
1	Zn 213.857†	72519.7	65605.2	496.28	µg/L	496.28	ppb	08:56:44
2	Sc RADIAL	24723.6	24723.6	112	%			08:56:27
2	Al 396.153Radial†	17590.6	15803.8	5059.7	µg/L	5059.7	ppb	08:56:27
2	Ca 317.933Radial†	28004.2	24713.6	5292.6	µg/L	5292.6	ppb	08:56:27
2	Fe 238.204 Radial†	30020.8	26776.0	5211.5	µg/L	5211.5	ppb	08:56:27
2	K 766.490 Radial†	6373.4	5270.3	4789.1	µg/L	4789.1	ppb	08:56:27
2	Mg 279.077 IEC†	3776.1	3316.3	5419.5	µg/L	5419.5	ppb	08:56:27
2	Na 589.592 Radial†	7295.2	6387.6	9815.7	µg/L	9815.7	ppb	08:56:27
2	Sr 421.552†	93379.4	83134.8	488.77	µg/L	488.77	ppb	08:56:22
2	Sc 361.383	401529.9	401529.9	109.65	%			08:57:10
2	Y 371.029	392274.3	392274.3	109.01	%			08:57:10
2	Ag 328.068†	52217.8	48307.6	490.61	µg/L	490.61	ppb	08:57:10
2	As 188.979†	1280.3	1180.5	523.44	µg/L	523.44	ppb	08:57:30
2	B 249.677†	16695.9	15053.8	518.73	µg/L	518.73	ppb	08:57:10
2	Ba 233.527†	64382.8	58734.2	494.24	µg/L	494.24	ppb	08:57:10
2	Be 313.107†	654636.2	600618.4	499.32	µg/L	499.32	ppb	08:57:10
2	Cd 226.502†	53554.0	49165.7	509.73	µg/L	509.73	ppb	08:57:10
2	Co 228.616†	23459.7	21618.2	498.19	µg/L	498.19	ppb	08:57:30
2	Cr 267.716†	27204.7	24689.5	491.55	µg/L	491.55	ppb	08:57:30
2	Cu 324.752†	74487.1	66014.0	484.90	µg/L	484.90	ppb	08:57:10
2	Mn 257.610†	345769.7	314893.7	494.88	µg/L	494.88	ppb	08:57:10
2	Mo 202.031†	9578.2	8702.6	493.75	µg/L	493.75	ppb	08:57:30
2	Ni 231.604†	19800.8	18262.8	504.89	µg/L	504.89	ppb	08:57:30
2	P 214.914†	4260.1	3753.6	2484.4	µg/L	2484.4	ppb	08:57:30

2	Pb 220.353†	4446.7	4119.0	509.55 µg/L	509.55 ppb	08:57:30
2	S 181.975 Axial†	999.2	819.0	1003.7 µg/L	1003.7 ppb	08:57:30
2	Sb 206.836†	2036.0	1702.3	484.17 µg/L	484.17 ppb	08:57:30
2	Se 196.026†	1158.8	1080.7	513.09 µg/L	513.09 ppb	08:57:30
2	SiO2†	35378.5	31200.8	5249.1 µg/L	5249.1 ppb	08:57:10
2	Si 251.611†	48908.2	44613.7	2458.7 µg/L	2458.7 ppb	08:57:10
2	Sn 189.927†	4492.8	4050.0	504.92 µg/L	504.92 ppb	08:57:30
2	Ti 334.940†	124035.1	113844.6	484.67 µg/L	484.67 ppb	08:57:10
2	Tl 190.801†	2485.3	2345.0	503.00 µg/L	503.00 ppb	08:57:30
2	U 367.007†	2379.6	1286.8	429.6 µg/L	429.6 ppb	08:57:10
2	V 292.402†	40962.8	37491.0	495.61 µg/L	495.61 ppb	08:57:10
2	Zn 213.857†	73008.5	65687.7	496.91 µg/L	496.91 ppb	08:57:10
3	Sc RADIAL	24814.9	24814.9	112 %		08:56:37
3	Al 396.153Radial†	17495.3	15661.2	5014.2 µg/L	5014.2 ppb	08:56:37
3	Ca 317.933Radial†	27757.2	24401.9	5225.8 µg/L	5225.8 ppb	08:56:37
3	Fe 238.204 Radial†	29824.4	26502.5	5158.2 µg/L	5158.2 ppb	08:56:37
3	K 766.490 Radial†	6536.7	5394.7	4902.2 µg/L	4902.2 ppb	08:56:37
3	Mg 279.077 IEC†	3689.7	3227.0	5273.7 µg/L	5273.7 ppb	08:56:37
3	Na 589.592 Radial†	7193.9	6273.5	9640.3 µg/L	9640.3 ppb	08:56:37
3	Sr 421.552†	93163.6	82635.9	485.84 µg/L	485.84 ppb	08:56:32
3	Sc 361.383	405832.7	405832.7	110.82 %		08:57:36
3	Y 371.029	396108.2	396108.2	110.07 %		08:57:36
3	Ag 328.068†	52450.8	48012.9	487.60 µg/L	487.60 ppb	08:57:36
3	As 188.979†	1274.1	1162.5	515.45 µg/L	515.45 ppb	08:57:56
3	B 249.677†	16848.7	15030.3	517.77 µg/L	517.77 ppb	08:57:36
3	Ba 233.527†	64832.0	58517.0	492.41 µg/L	492.41 ppb	08:57:36
3	Be 313.107†	657296.3	596688.6	496.06 µg/L	496.06 ppb	08:57:36
3	Cd 226.502†	53682.3	48763.6	505.56 µg/L	505.56 ppb	08:57:36
3	Co 228.616†	23360.3	21301.7	490.89 µg/L	490.89 ppb	08:57:56
3	Cr 267.716†	27089.5	24322.4	484.22 µg/L	484.22 ppb	08:57:56
3	Cu 324.752†	74863.3	65633.1	482.11 µg/L	482.11 ppb	08:57:36
3	Mn 257.610†	347012.8	312671.9	491.39 µg/L	491.39 ppb	08:57:36
3	Mo 202.031†	9558.1	8591.8	487.46 µg/L	487.46 ppb	08:57:56
3	Ni 231.604†	19749.4	18024.9	498.32 µg/L	498.32 ppb	08:57:56
3	P 214.914†	4254.4	3707.3	2453.7 µg/L	2453.7 ppb	08:57:56
3	Pb 220.353†	4398.1	4032.1	498.79 µg/L	498.79 ppb	08:57:56
3	S 181.975 Axial†	995.9	806.4	988.21 µg/L	988.21 ppb	08:57:56
3	Sb 206.836†	2048.1	1693.6	481.74 µg/L	481.74 ppb	08:57:56
3	Se 196.026†	1161.5	1071.9	508.92 µg/L	508.92 ppb	08:57:56
3	SiO2†	35589.0	31048.6	5223.7 µg/L	5223.7 ppb	08:57:36
3	Si 251.611†	48986.7	44211.6	2436.5 µg/L	2436.5 ppb	08:57:36
3	Sn 189.927†	4475.5	3990.9	497.57 µg/L	497.57 ppb	08:57:56
3	Ti 334.940†	124642.3	113193.2	481.89 µg/L	481.89 ppb	08:57:36
3	Tl 190.801†	2464.2	2301.9	493.80 µg/L	493.80 ppb	08:57:56
3	U 367.007†	2463.5	1339.5	448.4 µg/L	448.4 ppb	08:57:36
3	V 292.402†	41225.3	37331.7	493.46 µg/L	493.46 ppb	08:57:36
3	Zn 213.857†	73258.7	65207.5	493.30 µg/L	493.30 ppb	08:57:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	402233.0	109.84	%	0.902				0.82%
Sc RADIAL	24724.1	112	%	0.41				0.37%
Y 371.029	392916.8	109.19	%	0.812				0.74%
Ag 328.068†	48231.2	489.82	µg/L	1.947	489.82	ppb	1.947	0.40%
QC value within limits for Ag 328.068 Recovery = 97.96%								
Al 396.153Radial†	15718.1	5032.3	µg/L	24.19	5032.3	ppb	24.19	0.48%
QC value within limits for Al 396.153Radial Recovery = 100.65%								
As 188.979†	1176.7	521.73	µg/L	5.618	521.73	ppb	5.618	1.08%
QC value within limits for As 188.979 Recovery = 104.35%								
B 249.677†	15029.3	517.79	µg/L	0.932	517.79	ppb	0.932	0.18%
QC value within limits for B 249.677 Recovery = 103.56%								
Ba 233.527†	58722.3	494.14	µg/L	1.680	494.14	ppb	1.680	0.34%
QC value within limits for Ba 233.527 Recovery = 98.83%								
Be 313.107†	599054.8	498.02	µg/L	1.732	498.02	ppb	1.732	0.35%
QC value within limits for Be 313.107 Recovery = 99.60%								
Ca 317.933Radial†	24526.5	5252.5	µg/L	35.34	5252.5	ppb	35.34	0.67%
QC value within limits for Ca 317.933Radial Recovery = 105.05%								
Cd 226.502†	48984.0	507.85	µg/L	2.114	507.85	ppb	2.114	0.42%
QC value within limits for Cd 226.502 Recovery = 101.57%								

Co 228.616†	21501.1	495.49 µg/L	4.002	495.49 ppb	4.002	0.81%
QC value within limits for Co 228.616 Recovery = 99.10%						
Cr 267.716†	24574.8	489.25 µg/L	4.363	489.25 ppb	4.363	0.89%
QC value within limits for Cr 267.716 Recovery = 97.85%						
Cu 324.752†	65904.9	484.11 µg/L	1.736	484.11 ppb	1.736	0.36%
QC value within limits for Cu 324.752 Recovery = 96.82%						
Fe 238.204 Radial†	26594.9	5176.2 µg/L	30.52	5176.2 ppb	30.52	0.59%
QC value within limits for Fe 238.204 Radial Recovery = 103.52%						
K 766.490 Radial†	5340.4	4852.9 µg/L	57.88	4852.9 ppb	57.88	1.19%
QC value within limits for K 766.490 Radial Recovery = 97.06%						
Mg 279.077 IEC†	3282.2	5363.9 µg/L	78.80	5363.9 ppb	78.80	1.47%
QC value within limits for Mg 279.077 IEC Recovery = 107.28%						
Mn 257.610†	314104.8	493.64 µg/L	1.953	493.64 ppb	1.953	0.40%
QC value within limits for Mn 257.610 Recovery = 98.73%						
Mo 202.031†	8666.4	491.69 µg/L	3.665	491.69 ppb	3.665	0.75%
QC value within limits for Mo 202.031 Recovery = 98.34%						
Na 589.592 Radial†	6334.6	9734.1 µg/L	88.33	9734.1 ppb	88.33	0.91%
QC value within limits for Na 589.592 Radial Recovery = 97.34%						
Ni 231.604†	18197.1	503.08 µg/L	4.160	503.08 ppb	4.160	0.83%
QC value within limits for Ni 231.604 Recovery = 100.62%						
P 214.914†	3738.4	2474.3 µg/L	17.86	2474.3 ppb	17.86	0.72%
QC value within limits for P 214.914 Recovery = 98.97%						
Pb 220.353†	4079.4	504.64 µg/L	5.441	504.64 ppb	5.441	1.08%
QC value within limits for Pb 220.353 Recovery = 100.93%						
S 181.975 Axial†	815.6	999.55 µg/L	9.930	999.55 ppb	9.930	0.99%
QC value within limits for S 181.975 Axial Recovery = 99.95%						
Sb 206.836†	1705.2	485.02 µg/L	3.781	485.02 ppb	3.781	0.78%
QC value within limits for Sb 206.836 Recovery = 97.00%						
Se 196.026†	1077.8	511.74 µg/L	2.439	511.74 ppb	2.439	0.48%
QC value within limits for Se 196.026 Recovery = 102.35%						
SiO2†	31146.5	5240.0 µg/L	14.17	5240.0 ppb	14.17	0.27%
QC value within limits for SiO2 Recovery = 97.99%						
Si 251.611†	44436.1	2448.9 µg/L	11.28	2448.9 ppb	11.28	0.46%
QC value within limits for Si 251.611 Recovery = 97.96%						
Sn 189.927†	4031.0	502.56 µg/L	4.322	502.56 ppb	4.322	0.86%
QC value within limits for Sn 189.927 Recovery = 100.51%						
Sr 421.552†	83015.6	488.07 µg/L	1.977	488.07 ppb	1.977	0.41%
QC value within limits for Sr 421.552 Recovery = 97.61%						
Ti 334.940†	113659.6	483.87 µg/L	1.733	483.87 ppb	1.733	0.36%
QC value within limits for Ti 334.940 Recovery = 96.77%						
Tl 190.801†	2327.1	499.18 µg/L	4.794	499.18 ppb	4.794	0.96%
QC value within limits for Tl 190.801 Recovery = 99.84%						
U 367.007†	1328.5	444.4 µg/L	13.28	444.4 ppb	13.28	2.99%
QC value less than the lower limit for U 367.007 Recovery = 88.88%						
V 292.402†	37445.5	494.99 µg/L	1.334	494.99 ppb	1.334	0.27%
QC value within limits for V 292.402 Recovery = 99.00%						
Zn 213.857†	65500.1	495.50 µg/L	1.931	495.50 ppb	1.931	0.39%
QC value within limits for Zn 213.857 Recovery = 99.10%						

QC Failed. Continue with analysis.

Sequence No.: 8 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 08:58:05**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24402.2	24402.2	111	%			08:58:56
1	Al 396.153Radial†	-107.4	-3.2	-1.0285	µg/L	-1.0285	ppb	08:58:56
1	Ca 317.933Radial†	493.0	149.7	32.069	µg/L	32.069	ppb	08:58:56
1	Fe 238.204 Radial†	47.8	8.2	1.6027	µg/L	1.6027	ppb	08:58:56
1	K 766.490 Radial†	465.8	-0.2	-0.1980	µg/L	-0.1980	ppb	08:58:36
1	Mg 279.077 IEC†	68.4	5.8	9.5060	µg/L	9.5060	ppb	08:58:56
1	Na 589.592 Radial†	110.6	-27.5	-42.259	µg/L	-42.259	ppb	08:58:56
1	Sr 421.552†	339.9	47.0	0.2760	µg/L	0.2760	ppb	08:58:36
1	Sc 361.383	399119.8	399119.8	108.99	%			08:59:52
1	Y 371.029	393006.7	393006.7	109.21	%			08:59:52
1	Ag 328.068†	-731.1	12.9	0.1077	µg/L	0.1077	ppb	08:59:52
1	As 188.979†	-8.2	5.3	2.3309	µg/L	2.3309	ppb	09:00:12
1	B 249.677†	248.0	54.4	1.8096	µg/L	1.8096	ppb	09:00:12
1	Ba 233.527†	4.7	19.8	0.1668	µg/L	0.1668	ppb	09:00:12
1	Be 313.107†	-3576.5	292.3	0.2532	µg/L	0.2532	ppb	08:59:52
1	Cd 226.502†	-302.5	45.6	0.4726	µg/L	0.4726	ppb	09:00:12
1	Co 228.616†	-204.1	35.2	0.8087	µg/L	0.8087	ppb	09:00:12
1	Cr 267.716†	140.6	7.1	0.1099	µg/L	0.1099	ppb	09:00:12
1	Cu 324.752†	2051.1	-38.2	-0.2553	µg/L	-0.2553	ppb	08:59:52
1	Mn 257.610†	668.6	156.6	0.2460	µg/L	0.2460	ppb	09:00:12
1	Mo 202.031†	29.4	-5.9	-0.3371	µg/L	-0.3371	ppb	09:00:12
1	Ni 231.604†	-230.9	-7.9	-0.2181	µg/L	-0.2181	ppb	09:00:12
1	P 214.914†	97.0	-42.7	-28.423	µg/L	-28.423	ppb	09:00:12
1	Pb 220.353†	-97.1	-25.6	-3.1939	µg/L	-3.1939	ppb	09:00:12
1	S 181.975 Axial†	111.1	9.6	11.840	µg/L	11.840	ppb	09:00:12
1	Sb 206.836†	165.1	-3.1	-0.9027	µg/L	-0.9027	ppb	09:00:12
1	Se 196.026†	-13.5	11.4	5.3800	µg/L	5.3800	ppb	09:00:12
1	SiO2†	1191.2	27.7	4.6933	µg/L	4.6933	ppb	09:00:12
1	Si 251.611†	89.6	90.5	5.0083	µg/L	5.0083	ppb	09:00:12
1	Sn 189.927†	40.5	-10.4	-1.2892	µg/L	-1.2892	ppb	09:00:12
1	Ti 334.940†	-657.3	118.5	0.4875	µg/L	0.4875	ppb	08:59:52
1	Tl 190.801†	-96.1	-9.8	-2.0834	µg/L	-2.0834	ppb	09:00:12
1	U 367.007†	1086.7	113.6	39.93	µg/L	39.93	ppb	08:59:52
1	V 292.402†	-135.8	7.3	0.1158	µg/L	0.1158	ppb	09:00:12
1	Zn 213.857†	1318.9	312.3	2.3812	µg/L	2.3812	ppb	09:00:12
2	Sc RADIAL	24183.2	24183.2	110	%			08:59:21
2	Al 396.153Radial†	-73.6	26.8	8.5494	µg/L	8.5494	ppb	08:59:21
2	Ca 317.933Radial†	627.5	276.5	59.223	µg/L	59.223	ppb	08:59:21
2	Fe 238.204 Radial†	211.0	157.6	30.672	µg/L	30.672	ppb	08:59:21
2	K 766.490 Radial†	583.6	111.2	101.05	µg/L	101.05	ppb	08:59:01
2	Mg 279.077 IEC†	80.5	17.4	28.438	µg/L	28.438	ppb	08:59:21
2	Na 589.592 Radial†	115.1	-22.5	-34.680	µg/L	-34.680	ppb	08:59:21
2	Sr 421.552†	283.0	-2.1	-0.0135	µg/L	-0.0135	ppb	08:59:01
2	Sc 361.383	395818.5	395818.5	108.09	%			09:00:18
2	Y 371.029	390093.5	390093.5	108.40	%			09:00:18
2	Ag 328.068†	-622.3	108.0	1.0750	µg/L	1.0750	ppb	09:00:18
2	As 188.979†	-14.3	-0.4	-0.1844	µg/L	-0.1844	ppb	09:00:38
2	B 249.677†	231.9	41.4	1.4930	µg/L	1.4930	ppb	09:00:38
2	Ba 233.527†	9.5	24.3	0.2039	µg/L	0.2039	ppb	09:00:38
2	Be 313.107†	-3605.4	238.2	0.2084	µg/L	0.2084	ppb	09:00:18
2	Cd 226.502†	-294.2	50.9	0.5246	µg/L	0.5246	ppb	09:00:38
2	Co 228.616†	-220.8	18.1	0.4197	µg/L	0.4197	ppb	09:00:38
2	Cr 267.716†	135.2	3.2	0.0327	µg/L	0.0327	ppb	09:00:38
2	Cu 324.752†	1978.1	-90.0	-0.6357	µg/L	-0.6357	ppb	09:00:18
2	Mn 257.610†	471.0	-21.1	-0.0312	µg/L	-0.0312	ppb	09:00:38
2	Mo 202.031†	61.8	24.2	1.3742	µg/L	1.3742	ppb	09:00:38
2	Ni 231.604†	-213.2	6.7	0.1866	µg/L	0.1866	ppb	09:00:38
2	P 214.914†	89.6	-48.8	-32.484	µg/L	-32.484	ppb	09:00:38

2	Pb 220.353†	-77.3	-8.0	-1.0189 µg/L	-1.0189 ppb	09:00:38
2	S 181.975 Axial†	105.0	4.8	5.8595 µg/L	5.8595 ppb	09:00:38
2	Sb 206.836†	167.9	0.7	0.2169 µg/L	0.2169 ppb	09:00:38
2	Se 196.026†	-20.5	4.8	2.2986 µg/L	2.2986 ppb	09:00:38
2	SiO2†	1213.6	57.6	9.6596 µg/L	9.6596 ppb	09:00:38
2	Si 251.611†	100.4	101.1	5.5638 µg/L	5.5638 ppb	09:00:38
2	Sn 189.927†	36.4	-13.8	-1.7170 µg/L	-1.7170 ppb	09:00:38
2	Ti 334.940†	-738.2	38.6	0.1488 µg/L	0.1488 ppb	09:00:18
2	Tl 190.801†	-87.5	-2.6	-0.5398 µg/L	-0.5398 ppb	09:00:38
2	U 367.007†	1075.8	111.8	39.17 µg/L	39.17 ppb	09:00:18
2	V 292.402†	-149.4	-6.4	-0.0414 µg/L	-0.0414 ppb	09:00:38
2	Zn 213.857†	1308.1	312.4	2.3762 µg/L	2.3762 ppb	09:00:38
3	Sc RADIAL	24301.7	24301.7	110 %		08:59:46
3	Al 396.153Radial†	-88.7	13.4	4.2889 µg/L	4.2889 ppb	08:59:46
3	Ca 317.933Radial†	515.9	172.4	36.917 µg/L	36.917 ppb	08:59:46
3	Fe 238.204 Radial†	52.4	12.6	2.4466 µg/L	2.4466 ppb	08:59:46
3	K 766.490 Radial†	550.5	78.5	71.390 µg/L	71.390 ppb	08:59:26
3	Mg 279.077 IEC†	50.2	-10.5	-17.108 µg/L	-17.108 ppb	08:59:46
3	Na 589.592 Radial†	89.2	-46.5	-71.512 µg/L	-71.512 ppb	08:59:46
3	Sr 421.552†	223.6	-57.4	-0.3381 µg/L	-0.3381 ppb	08:59:26
3	Sc 361.383	397392.4	397392.4	108.52 %		09:00:43
3	Y 371.029	391223.2	391223.2	108.71 %		09:00:43
3	Ag 328.068†	-746.4	-4.1	-0.0508 µg/L	-0.0508 ppb	09:00:43
3	As 188.979†	-19.2	-4.9	-2.1373 µg/L	-2.1373 ppb	09:01:03
3	B 249.677†	205.3	16.0	0.5379 µg/L	0.5379 ppb	09:01:03
3	Ba 233.527†	-26.6	-9.0	-0.0760 µg/L	-0.0760 ppb	09:01:03
3	Be 313.107†	-3751.1	117.2	0.1016 µg/L	0.1016 ppb	09:00:43
3	Cd 226.502†	-296.2	50.2	0.5199 µg/L	0.5199 ppb	09:01:03
3	Co 228.616†	-189.6	47.7	1.0997 µg/L	1.0997 ppb	09:01:03
3	Cr 267.716†	134.5	2.0	0.0269 µg/L	0.0269 ppb	09:01:03
3	Cu 324.752†	2090.1	5.9	0.0526 µg/L	0.0526 ppb	09:00:43
3	Mn 257.610†	454.7	-37.9	-0.0592 µg/L	-0.0592 ppb	09:01:03
3	Mo 202.031†	45.8	9.3	0.5271 µg/L	0.5271 ppb	09:01:03
3	Ni 231.604†	-247.5	-24.1	-0.6678 µg/L	-0.6678 ppb	09:01:03
3	P 214.914†	114.2	-26.5	-17.620 µg/L	-17.620 ppb	09:01:03
3	Pb 220.353†	-65.0	3.6	0.4390 µg/L	0.4390 ppb	09:01:03
3	S 181.975 Axial†	105.7	5.1	6.2650 µg/L	6.2650 ppb	09:01:03
3	Sb 206.836†	169.4	1.5	0.4429 µg/L	0.4429 ppb	09:01:03
3	Se 196.026†	-21.8	3.6	1.7195 µg/L	1.7195 ppb	09:01:03
3	SiO2†	1203.5	43.8	7.3699 µg/L	7.3699 ppb	09:01:03
3	Si 251.611†	58.4	62.0	3.4216 µg/L	3.4216 ppb	09:01:03
3	Sn 189.927†	51.9	0.3	0.0417 µg/L	0.0417 ppb	09:01:03
3	Ti 334.940†	-689.1	86.5	0.3630 µg/L	0.3630 ppb	09:00:43
3	Tl 190.801†	-88.2	-2.9	-0.6217 µg/L	-0.6217 ppb	09:01:03
3	U 367.007†	1005.7	43.3	15.19 µg/L	15.19 ppb	09:00:43
3	V 292.402†	-171.8	-26.4	-0.3312 µg/L	-0.3312 ppb	09:01:03
3	Zn 213.857†	1301.9	301.9	2.3039 µg/L	2.3039 ppb	09:01:03

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	397443.5	108.53	%	0.451				0.42%
Sc RADIAL	24295.7	110	%	0.50				0.45%
Y 371.029	391441.1	108.78	%	0.408				0.38%
Ag 328.068†	38.9	0.3773	µg/L	0.60944	0.3773	ppb	0.60944	161.53%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	12.3	3.9366	µg/L	4.79866	3.9366	ppb	4.79866	121.90%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.0	0.0031	µg/L	2.23998	0.0031	ppb	2.23998	>999.9%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	37.2	1.2802	µg/L	0.66206	1.2802	ppb	0.66206	51.72%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	11.7	0.0983	µg/L	0.15203	0.0983	ppb	0.15203	154.71%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	215.9	0.1877	µg/L	0.07786	0.1877	ppb	0.07786	41.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	199.6	42.736	µg/L	14.4822	42.736	ppb	14.4822	33.89%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	48.9	0.5057	µg/L	0.02876	0.5057	ppb	0.02876	5.69%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	33.7	0.7760 µg/L	0.34117	0.7760 ppb	0.34117	43.96%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	4.1	0.0565 µg/L	0.04632	0.0565 ppb	0.04632	82.01%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-40.8	-0.2795 µg/L	0.34476	-0.2795 ppb	0.34476	123.36%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	59.5	11.574 µg/L	16.5450	11.574 ppb	16.5450	142.95%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	63.2	57.413 µg/L	52.0495	57.413 ppb	52.0495	90.66%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	4.2	6.9452 µg/L	22.88049	6.9452 ppb	22.88049	329.44%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	32.6	0.0519 µg/L	0.16872	0.0519 ppb	0.16872	325.38%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	9.2	0.5214 µg/L	0.85567	0.5214 ppb	0.85567	164.10%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-32.2	-49.484 µg/L	19.4502	-49.484 ppb	19.4502	39.31%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-8.4	-0.2331 µg/L	0.42739	-0.2331 ppb	0.42739	183.37%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-39.3	-26.176 µg/L	7.6827	-26.176 ppb	7.6827	29.35%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-10.0	-1.2580 µg/L	1.82819	-1.2580 ppb	1.82819	145.33%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	6.5	7.9882 µg/L	3.34199	7.9882 ppb	3.34199	41.84%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-0.3	-0.0810 µg/L	0.72059	-0.0810 ppb	0.72059	890.11%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.6	3.1327 µg/L	1.96763	3.1327 ppb	1.96763	62.81%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	43.0	7.2409 µg/L	2.48568	7.2409 ppb	2.48568	34.33%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	84.5	4.6646 µg/L	1.11172	4.6646 ppb	1.11172	23.83%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-8.0	-0.9881 µg/L	0.91716	-0.9881 ppb	0.91716	92.82%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-4.2	-0.0252 µg/L	0.30722	-0.0252 ppb	0.30722	>999.9%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	81.2	0.3331 µg/L	0.17133	0.3331 ppb	0.17133	51.44%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-5.1	-1.0816 µg/L	0.86853	-1.0816 ppb	0.86853	80.30%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	89.6	31.43 µg/L	14.070	31.43 ppb	14.070	44.76%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	-8.5	-0.0856 µg/L	0.22675	-0.0856 ppb	0.22675	264.89%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	308.9	2.3538 µg/L	0.04329	2.3538 ppb	0.04329	1.84%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 311**
Sample ID: 454474001|1782317|10| **Date Collected: 7/23/2018 09:01:12**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474001|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24731.6	24731.6	112	%			09:01:51
1	Al 396.153Radial†	38481.9	34450.2	11080	µg/L	11080	ppb	09:01:51
1	Ca 317.933Radial†	98395.6	87550.1	18749	µg/L	18749	ppb	09:01:51
1	Fe 238.204 Radial†	176181.8	157258.1	30607	µg/L	30607	ppb	09:01:46
1	K 766.490 Radial†	1816.0	1199.7	1086.2	µg/L	1086.2	ppb	09:01:51
1	Mg 279.077 IEC†	7542.3	6677.6	10913	µg/L	10913	ppb	09:01:51
1	Na 589.592 Radial†	129.2	-12.2	-58.809	µg/L	-58.809	ppb	09:01:51
1	Sr 421.552†	12730.8	11105.4	64.973	µg/L	64.973	ppb	09:01:51
1	Sc 361.383	395690.0	395690.0	108.05	%			09:02:18
1	Y 371.029	390180.1	390180.1	108.42	%			09:02:18
1	Ag 328.068†	-998.1	-240.0	2.0840	µg/L	2.0840	ppb	09:02:38
1	As 188.979†	-0.6	12.3	7.0586	µg/L	7.0586	ppb	09:02:38
1	B 249.677†	-3206.4	-3140.7	14.801	µg/L	14.801	ppb	09:02:38
1	Ba 233.527†	7584.1	7034.5	58.456	µg/L	58.456	ppb	09:02:38
1	Be 313.107†	-3044.2	756.5	0.8891	µg/L	0.8891	ppb	09:02:38
1	Cd 226.502†	56.0	375.0	0.5452	µg/L	0.5452	ppb	09:02:38
1	Co 228.616†	455.8	644.3	14.602	µg/L	14.602	ppb	09:02:38
1	Cr 267.716†	1107.3	902.9	18.268	µg/L	18.268	ppb	09:02:38
1	Cu 324.752†	6510.9	4105.6	32.044	µg/L	32.044	ppb	09:02:38
1	Mn 257.610†	378947.4	350253.3	552.04	µg/L	552.04	ppb	09:02:18
1	Mo 202.031†	43.5	7.3	0.9922	µg/L	0.9922	ppb	09:02:38
1	Ni 231.604†	1040.4	1166.8	32.860	µg/L	32.860	ppb	09:02:38
1	P 214.914†	947.5	745.2	470.37	µg/L	470.37	ppb	09:02:38
1	Pb 220.353†	48.3	108.3	14.663	µg/L	14.663	ppb	09:02:38
1	S 181.975 Axial†	7019.7	6404.3	7859.8	µg/L	7859.8	ppb	09:02:38
1	Sb 206.836†	168.3	1.2	-4.1748	µg/L	-4.1748	ppb	09:02:38
1	Se 196.026†	-44.4	-17.4	5.4043	µg/L	5.4043	ppb	09:02:38
1	SiO2†	17348.7	14990.8	2526.5	µg/L	2526.5	ppb	09:02:38
1	Si 251.611†	23312.9	21583.9	1191.4	µg/L	1191.4	ppb	09:02:38
1	Sn 189.927†	53.9	2.4	1.0119	µg/L	1.0119	ppb	09:02:38
1	Ti 334.940†	19042.1	18344.7	78.916	µg/L	78.916	ppb	09:02:38
1	Tl 190.801†	-106.3	-20.0	-1.3064	µg/L	-1.3064	ppb	09:02:38
1	U 367.007†	1348.8	364.8	0.240	µg/L	0.240	ppb	09:02:18
1	V 292.402†	1093.8	1144.1	21.239	µg/L	21.239	ppb	09:02:38
1	Zn 213.857†	10808.5	9105.3	65.829	µg/L	65.829	ppb	09:02:38
2	Sc RADIAL	24864.9	24864.9	113	%			09:02:01
2	Al 396.153Radial†	38393.9	34187.9	10995	µg/L	10995	ppb	09:02:01
2	Ca 317.933Radial†	98174.0	86882.6	18606	µg/L	18606	ppb	09:02:01
2	Fe 238.204 Radial†	176313.3	156532.0	30466	µg/L	30466	ppb	09:01:56
2	K 766.490 Radial†	1804.2	1180.5	1068.8	µg/L	1068.8	ppb	09:02:01
2	Mg 279.077 IEC†	7518.3	6620.2	10819	µg/L	10819	ppb	09:02:01
2	Na 589.592 Radial†	148.7	4.4	-33.059	µg/L	-33.059	ppb	09:02:01
2	Sr 421.552†	12662.0	10983.4	64.258	µg/L	64.258	ppb	09:02:01
2	Sc 361.383	396911.3	396911.3	108.38	%			09:02:43
2	Y 371.029	391143.9	391143.9	108.69	%			09:02:43
2	Ag 328.068†	-1036.3	-272.4	1.7094	µg/L	1.7094	ppb	09:03:03
2	As 188.979†	1.8	14.5	8.0288	µg/L	8.0288	ppb	09:03:03
2	B 249.677†	-3239.5	-3162.1	13.538	µg/L	13.538	ppb	09:03:03
2	Ba 233.527†	7589.0	7017.4	58.315	µg/L	58.315	ppb	09:03:03
2	Be 313.107†	-3064.4	746.6	0.8903	µg/L	0.8903	ppb	09:03:03
2	Cd 226.502†	56.9	375.6	0.5673	µg/L	0.5673	ppb	09:03:03
2	Co 228.616†	458.7	645.6	14.633	µg/L	14.633	ppb	09:03:03
2	Cr 267.716†	1122.8	914.0	18.451	µg/L	18.451	ppb	09:03:03
2	Cu 324.752†	6514.0	4090.0	31.949	µg/L	31.949	ppb	09:03:03
2	Mn 257.610†	379521.2	349703.6	551.17	µg/L	551.17	ppb	09:02:43
2	Mo 202.031†	33.8	-1.8	0.4704	µg/L	0.4704	ppb	09:03:03
2	Ni 231.604†	1026.1	1150.6	32.409	µg/L	32.409	ppb	09:03:03
2	P 214.914†	937.0	732.8	462.27	µg/L	462.27	ppb	09:03:03

2	Pb 220.353†	11.9	74.5	10.451 µg/L	10.451 ppb	09:03:03
2	S 181.975 Axial†	7008.3	6373.8	7822.3 µg/L	7822.3 ppb	09:03:03
2	Sb 206.836†	163.2	-4.0	-5.6423 µg/L	-5.6423 ppb	09:03:03
2	Se 196.026†	-54.8	-26.8	0.8881 µg/L	0.8881 ppb	09:03:03
2	SiO2†	17287.9	14885.2	2508.7 µg/L	2508.7 ppb	09:03:03
2	Si 251.611†	23201.9	21415.1	1182.0 µg/L	1182.0 ppb	09:03:03
2	Sn 189.927†	52.3	0.7	0.8085 µg/L	0.8085 ppb	09:03:03
2	Ti 334.940†	19010.9	18261.8	78.535 µg/L	78.535 ppb	09:03:03
2	Tl 190.801†	-90.8	-5.5	1.8125 µg/L	1.8125 ppb	09:03:03
2	U 367.007†	1490.6	491.9	45.54 µg/L	45.54 ppb	09:02:43
2	V 292.402†	1107.7	1153.9	21.360 µg/L	21.360 ppb	09:03:03
2	Zn 213.857†	10784.1	9052.0	65.442 µg/L	65.442 ppb	09:03:03
3	Sc RADIAL	24735.1	24735.1	112 %		09:02:11
3	Al 396.153Radial†	38204.7	34197.9	10998 µg/L	10998 ppb	09:02:11
3	Ca 317.933Radial†	97795.8	87002.5	18632 µg/L	18632 ppb	09:02:11
3	Fe 238.204 Radial†	175266.8	156419.3	30444 µg/L	30444 ppb	09:02:06
3	K 766.490 Radial†	1844.3	1224.7	1108.9 µg/L	1108.9 ppb	09:02:11
3	Mg 279.077 IEC†	7452.7	6596.7	10781 µg/L	10781 ppb	09:02:11
3	Na 589.592 Radial†	136.0	-6.2	-49.379 µg/L	-49.379 ppb	09:02:11
3	Sr 421.552†	12781.1	11148.8	65.230 µg/L	65.230 ppb	09:02:11
3	Sc 361.383	398503.9	398503.9	108.82 %		09:03:09
3	Y 371.029	392503.2	392503.2	109.07 %		09:03:09
3	Ag 328.068†	-1006.8	-241.5	2.0251 µg/L	2.0251 ppb	09:03:29
3	As 188.979†	-7.8	5.6	4.1246 µg/L	4.1246 ppb	09:03:29
3	B 249.677†	-3173.9	-3089.9	15.854 µg/L	15.854 ppb	09:03:29
3	Ba 233.527†	7573.3	6975.0	57.959 µg/L	57.959 ppb	09:03:29
3	Be 313.107†	-3051.1	770.1	0.9074 µg/L	0.9074 ppb	09:03:29
3	Cd 226.502†	54.3	373.0	0.5425 µg/L	0.5425 ppb	09:03:29
3	Co 228.616†	438.0	624.9	14.157 µg/L	14.157 ppb	09:03:29
3	Cr 267.716†	1108.1	896.4	18.107 µg/L	18.107 ppb	09:03:29
3	Cu 324.752†	6454.6	4011.4	31.363 µg/L	31.363 ppb	09:03:29
3	Mn 257.610†	381240.8	349884.5	551.45 µg/L	551.45 ppb	09:03:09
3	Mo 202.031†	49.8	12.8	1.3003 µg/L	1.3003 ppb	09:03:29
3	Ni 231.604†	1031.2	1151.6	32.436 µg/L	32.436 ppb	09:03:29
3	P 214.914†	904.9	699.9	440.36 µg/L	440.36 ppb	09:03:29
3	Pb 220.353†	39.1	99.5	13.539 µg/L	13.539 ppb	09:03:29
3	S 181.975 Axial†	7006.8	6346.6	7788.9 µg/L	7788.9 ppb	09:03:29
3	Sb 206.836†	159.2	-8.3	-6.8599 µg/L	-6.8599 ppb	09:03:29
3	Se 196.026†	-52.0	-24.1	2.1716 µg/L	2.1716 ppb	09:03:29
3	SiO2†	17284.2	14818.1	2497.4 µg/L	2497.4 ppb	09:03:29
3	Si 251.611†	23219.6	21345.9	1178.2 µg/L	1178.2 ppb	09:03:29
3	Sn 189.927†	54.2	2.3	1.0004 µg/L	1.0004 ppb	09:03:29
3	Ti 334.940†	19067.7	18243.8	78.465 µg/L	78.465 ppb	09:03:29
3	Tl 190.801†	-95.9	-9.8	0.8725 µg/L	0.8725 ppb	09:03:29
3	U 367.007†	1463.9	461.8	35.04 µg/L	35.04 ppb	09:03:09
3	V 292.402†	1090.9	1134.4	21.101 µg/L	21.101 ppb	09:03:29
3	Zn 213.857†	10816.4	9041.9	65.368 µg/L	65.368 ppb	09:03:29

Mean Data: 454474001|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	397035.1	108.42	%	0.385				0.36%
Sc RADIAL	24777.2	112	%	0.34				0.31%
Y 371.029	391275.7	108.73	%	0.324				0.30%
Ag 328.068†	-251.3	1.9395	µg/L	0.20146	1.9395	ppb	0.20146	10.39%
Al 396.153Radial†	34278.7	11024	µg/L	47.79	11024	ppb	47.79	0.43%
As 188.979†	10.8	6.4040	µg/L	2.03271	6.4040	ppb	2.03271	31.74%
B 249.677†	-3130.9	14.731	µg/L	1.1598	14.731	ppb	1.1598	7.87%
Ba 233.527†	7009.0	58.243	µg/L	0.2559	58.243	ppb	0.2559	0.44%
Be 313.107†	757.7	0.8956	µg/L	0.01021	0.8956	ppb	0.01021	1.14%
Ca 317.933Radial†	87145.1	18663	µg/L	76.21	18663	ppb	76.21	0.41%
Cd 226.502†	374.5	0.5517	µg/L	0.01360	0.5517	ppb	0.01360	2.47%
Co 228.616†	638.3	14.464	µg/L	0.2666	14.464	ppb	0.2666	1.84%
Cr 267.716†	904.4	18.275	µg/L	0.1724	18.275	ppb	0.1724	0.94%
Cu 324.752†	4069.0	31.785	µg/L	0.3686	31.785	ppb	0.3686	1.16%
Fe 238.204 Radial†	156736.5	30506	µg/L	88.60	30506	ppb	88.60	0.29%
K 766.490 Radial†	1201.6	1088.0	µg/L	20.14	1088.0	ppb	20.14	1.85%
Mg 279.077 IEC†	6631.5	10837	µg/L	68.01	10837	ppb	68.01	0.63%
Mn 257.610†	349947.1	551.55	µg/L	0.445	551.55	ppb	0.445	0.08%
Mo 202.031†	6.1	0.9210	µg/L	0.41949	0.9210	ppb	0.41949	45.55%

Na 589.592 Radial†	-4.7	-47.082 µg/L	13.0274	-47.082 ppb	13.0274	27.67%
Ni 231.604†	1156.4	32.568 µg/L	0.2528	32.568 ppb	0.2528	0.78%
P 214.914†	725.9	457.67 µg/L	15.525	457.67 ppb	15.525	3.39%
Pb 220.353†	94.1	12.885 µg/L	2.1810	12.885 ppb	2.1810	16.93%
S 181.975 Axial†	6374.9	7823.7 µg/L	35.48	7823.7 ppb	35.48	0.45%
Sb 206.836†	-3.7	-5.5590 µg/L	1.34451	-5.5590 ppb	1.34451	24.19%
Se 196.026†	-22.7	2.8213 µg/L	2.32715	2.8213 ppb	2.32715	82.48%
SiO2†	14898.0	2510.9 µg/L	14.70	2510.9 ppb	14.70	0.59%
Si 251.611†	21448.3	1183.9 µg/L	6.77	1183.9 ppb	6.77	0.57%
Sn 189.927†	1.8	0.9403 µg/L	0.11429	0.9403 ppb	0.11429	12.15%
Sr 421.552†	11079.2	64.820 µg/L	0.5035	64.820 ppb	0.5035	0.78%
Ti 334.940†	18283.4	78.638 µg/L	0.2426	78.638 ppb	0.2426	0.31%
Tl 190.801†	-11.8	0.4595 µg/L	1.59990	0.4595 ppb	1.59990	348.16%
U 367.007†	439.5	26.94 µg/L	23.710	26.94 ppb	23.710	88.02%
V 292.402†	1144.1	21.233 µg/L	0.1295	21.233 ppb	0.1295	0.61%
Zn 213.857†	9066.4	65.546 µg/L	0.2477	65.546 ppb	0.2477	0.38%

Sequence No.: 10 **Autosampler Location: 312**
Sample ID: 1204070401|1782317|10| **Date Collected: 7/23/2018 09:03:37**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204070401|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24559.7	24559.7	111	%			09:04:13
1	Al 396.153Radial†	46178.4	41610.1	13380	µg/L	13380	ppb	09:04:13
1	Ca 317.933Radial†	104235.0	93414.9	20005	µg/L	20005	ppb	09:04:13
1	Fe 238.204 Radial†	191827.0	172424.7	33559	µg/L	33559	ppb	09:04:08
1	K 766.490 Radial†	3078.5	2346.1	2127.5	µg/L	2127.5	ppb	09:04:13
1	Mg 279.077 IEC†	8077.0	7205.4	11775	µg/L	11775	ppb	09:04:13
1	Na 589.592 Radial†	533.9	352.4	498.02	µg/L	498.02	ppb	09:04:13
1	Sr 421.552†	22741.7	20185.1	118.34	µg/L	118.34	ppb	09:04:13
1	Sc 361.383	395379.3	395379.3	107.97	%			09:04:40
1	Y 371.029	389901.2	389901.2	108.35	%			09:04:40
1	Ag 328.068†	-51.5	636.0	11.444	µg/L	11.444	ppb	09:05:00
1	As 188.979†	118.8	122.8	56.222	µg/L	56.222	ppb	09:05:00
1	B 249.677†	-1869.3	-1904.5	67.196	µg/L	67.196	ppb	09:05:00
1	Ba 233.527†	17261.9	16003.7	133.88	µg/L	133.88	ppb	09:05:00
1	Be 313.107†	60344.6	59465.9	49.716	µg/L	49.716	ppb	09:04:40
1	Cd 226.502†	5117.6	5063.0	48.875	µg/L	48.875	ppb	09:05:00
1	Co 228.616†	2770.7	2788.6	63.944	µg/L	63.944	ppb	09:05:00
1	Cr 267.716†	3830.5	3426.0	68.525	µg/L	68.525	ppb	09:05:00
1	Cu 324.752†	13871.6	10927.9	82.326	µg/L	82.326	ppb	09:04:40
1	Mn 257.610†	404827.0	374499.0	590.31	µg/L	590.31	ppb	09:04:40
1	Mo 202.031†	937.4	835.3	48.013	µg/L	48.013	ppb	09:05:00
1	Ni 231.604†	3036.4	3016.3	84.038	µg/L	84.038	ppb	09:05:00
1	P 214.914†	1037.5	829.2	523.15	µg/L	523.15	ppb	09:05:00
1	Pb 220.353†	478.7	506.9	64.117	µg/L	64.117	ppb	09:05:00
1	S 181.975 Axial†	8569.6	7845.0	9629.0	µg/L	9629.0	ppb	09:05:00
1	Sb 206.836†	314.0	136.3	33.830	µg/L	33.830	ppb	09:05:00
1	Se 196.026†	64.2	83.2	54.240	µg/L	54.240	ppb	09:05:00
1	SiO2†	24981.4	22072.9	3720.6	µg/L	3720.6	ppb	09:05:00
1	Si 251.611†	35549.9	32934.9	1818.1	µg/L	1818.1	ppb	09:04:40
1	Sn 189.927†	485.4	402.1	51.036	µg/L	51.036	ppb	09:05:00
1	Ti 334.940†	41386.5	39054.2	167.11	µg/L	167.11	ppb	09:04:40
1	Tl 190.801†	105.7	176.2	41.164	µg/L	41.164	ppb	09:05:00
1	U 367.007†	1606.1	604.1	72.36	µg/L	72.36	ppb	09:04:40
1	V 292.402†	5342.9	5080.5	73.719	µg/L	73.719	ppb	09:05:00
1	Zn 213.857†	17047.3	14891.6	109.31	µg/L	109.31	ppb	09:05:00
2	Sc RADIAL	24862.5	24862.5	113	%			09:04:23
2	Al 396.153Radial†	46272.3	41187.9	13244	µg/L	13244	ppb	09:04:23
2	Ca 317.933Radial†	104613.7	92609.9	19833	µg/L	19833	ppb	09:04:23
2	Fe 238.204 Radial†	192348.7	170787.7	33241	µg/L	33241	ppb	09:04:18
2	K 766.490 Radial†	3119.9	2349.1	2130.3	µg/L	2130.3	ppb	09:04:23
2	Mg 279.077 IEC†	8112.4	7148.5	11682	µg/L	11682	ppb	09:04:23
2	Na 589.592 Radial†	533.1	345.9	488.39	µg/L	488.39	ppb	09:04:23
2	Sr 421.552†	22810.0	19996.8	117.24	µg/L	117.24	ppb	09:04:23
2	Sc 361.383	394861.5	394861.5	107.83	%			09:05:05
2	Y 371.029	389385.4	389385.4	108.20	%			09:05:05
2	Ag 328.068†	-67.6	620.9	11.243	µg/L	11.243	ppb	09:05:25
2	As 188.979†	119.3	123.4	56.468	µg/L	56.468	ppb	09:05:25
2	B 249.677†	-1865.3	-1903.2	66.001	µg/L	66.001	ppb	09:05:25
2	Ba 233.527†	17239.5	16003.9	133.89	µg/L	133.89	ppb	09:05:25
2	Be 313.107†	60008.0	59227.0	49.516	µg/L	49.516	ppb	09:05:05
2	Cd 226.502†	5115.1	5067.0	48.951	µg/L	48.951	ppb	09:05:25
2	Co 228.616†	2755.3	2777.8	63.695	µg/L	63.695	ppb	09:05:25
2	Cr 267.716†	3871.0	3468.2	69.358	µg/L	69.358	ppb	09:05:25
2	Cu 324.752†	13738.4	10821.2	81.525	µg/L	81.525	ppb	09:05:05
2	Mn 257.610†	403377.5	373646.3	588.95	µg/L	588.95	ppb	09:05:05
2	Mo 202.031†	942.2	840.9	48.323	µg/L	48.323	ppb	09:05:25
2	Ni 231.604†	3049.0	3031.6	84.457	µg/L	84.457	ppb	09:05:25
2	P 214.914†	1019.3	813.6	513.02	µg/L	513.02	ppb	09:05:25

2	Pb 220.353†	479.4	508.2	64.259 µg/L	64.259 ppb	09:05:25
2	S 181.975 Axial†	8585.3	7869.9	9659.8 µg/L	9659.8 ppb	09:05:25
2	Sb 206.836†	310.7	133.5	33.074 µg/L	33.074 ppb	09:05:25
2	Se 196.026†	60.2	79.6	52.419 µg/L	52.419 ppb	09:05:25
2	SiO2†	24935.6	22060.7	3718.6 µg/L	3718.6 ppb	09:05:25
2	Si 251.611†	35301.0	32747.3	1807.7 µg/L	1807.7 ppb	09:05:05
2	Sn 189.927†	459.9	379.0	48.172 µg/L	48.172 ppb	09:05:25
2	Ti 334.940†	41336.9	39058.5	167.12 µg/L	167.12 ppb	09:05:05
2	Tl 190.801†	111.3	181.6	42.278 µg/L	42.278 ppb	09:05:25
2	U 367.007†	1610.1	609.8	75.67 µg/L	75.67 ppb	09:05:05
2	V 292.402†	5345.6	5089.5	73.777 µg/L	73.777 ppb	09:05:25
2	Zn 213.857†	16974.3	14844.6	108.99 µg/L	108.99 ppb	09:05:25
3	Sc RADIAL	24859.2	24859.2	113 %		09:04:33
3	Al 396.153Radial†	46602.4	41486.7	13340 µg/L	13340 ppb	09:04:33
3	Ca 317.933Radial†	105347.2	93274.0	19975 µg/L	19975 ppb	09:04:33
3	Fe 238.204 Radial†	190729.0	169372.2	32965 µg/L	32965 ppb	09:04:28
3	K 766.490 Radial†	3189.7	2411.5	2187.1 µg/L	2187.1 ppb	09:04:33
3	Mg 279.077 IEC†	8208.1	7234.5	11823 µg/L	11823 ppb	09:04:33
3	Na 589.592 Radial†	530.9	344.0	485.80 µg/L	485.80 ppb	09:04:33
3	Sr 421.552†	23066.6	20227.4	118.59 µg/L	118.59 ppb	09:04:33
3	Sc 361.383	390877.4	390877.4	106.74 %		09:05:30
3	Y 371.029	385582.8	385582.8	107.15 %		09:05:30
3	Ag 328.068†	-44.7	641.8	11.413 µg/L	11.413 ppb	09:05:51
3	As 188.979†	120.8	126.0	57.600 µg/L	57.600 ppb	09:05:51
3	B 249.677†	-1876.5	-1931.3	63.991 µg/L	63.991 ppb	09:05:51
3	Ba 233.527†	17269.7	16195.2	135.50 µg/L	135.50 ppb	09:05:51
3	Be 313.107†	59108.1	58951.1	49.289 µg/L	49.289 ppb	09:05:30
3	Cd 226.502†	5108.6	5109.3	49.421 µg/L	49.421 ppb	09:05:51
3	Co 228.616†	2755.2	2803.7	64.297 µg/L	64.297 ppb	09:05:51
3	Cr 267.716†	3869.2	3503.0	70.050 µg/L	70.050 ppb	09:05:51
3	Cu 324.752†	13737.7	10950.5	82.458 µg/L	82.458 ppb	09:05:30
3	Mn 257.610†	398421.8	372816.6	587.63 µg/L	587.63 ppb	09:05:30
3	Mo 202.031†	950.2	857.2	49.246 µg/L	49.246 ppb	09:05:51
3	Ni 231.604†	3080.5	3090.0	86.065 µg/L	86.065 ppb	09:05:51
3	P 214.914†	1001.0	806.1	508.27 µg/L	508.27 ppb	09:05:51
3	Pb 220.353†	468.6	502.5	63.572 µg/L	63.572 ppb	09:05:51
3	S 181.975 Axial†	8586.4	7952.1	9760.9 µg/L	9760.9 ppb	09:05:51
3	Sb 206.836†	308.8	134.7	33.449 µg/L	33.449 ppb	09:05:51
3	Se 196.026†	67.4	86.9	55.746 µg/L	55.746 ppb	09:05:51
3	SiO2†	24970.9	22329.5	3764.0 µg/L	3764.0 ppb	09:05:51
3	Si 251.611†	34843.2	32652.1	1802.5 µg/L	1802.5 ppb	09:05:30
3	Sn 189.927†	480.2	402.3	51.055 µg/L	51.055 ppb	09:05:51
3	Ti 334.940†	40723.5	38874.6	166.34 µg/L	166.34 ppb	09:05:30
3	Tl 190.801†	102.4	174.2	40.681 µg/L	40.681 ppb	09:05:51
3	U 367.007†	1598.6	614.2	78.22 µg/L	78.22 ppb	09:05:30
3	V 292.402†	5327.0	5122.6	74.163 µg/L	74.163 ppb	09:05:51
3	Zn 213.857†	17035.1	15062.0	110.66 µg/L	110.66 ppb	09:05:51

Mean Data: 1204070401|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	393706.1	107.51	%	0.673				0.63%
Sc RADIAL	24760.5	112	%	0.79				0.70%
Y 371.029	388289.8	107.90	%	0.655				0.61%
Ag 328.068†	632.9	11.367	µg/L	0.1082	11.367	ppb	0.1082	0.95%
Al 396.153Radial†	41428.2	13322	µg/L	69.83	13322	ppb	69.83	0.52%
As 188.979†	124.1	56.763	µg/L	0.7347	56.763	ppb	0.7347	1.29%
B 249.677†	-1913.0	65.729	µg/L	1.6195	65.729	ppb	1.6195	2.46%
Ba 233.527†	16067.6	134.42	µg/L	0.936	134.42	ppb	0.936	0.70%
Be 313.107†	59214.7	49.507	µg/L	0.2135	49.507	ppb	0.2135	0.43%
Ca 317.933Radial†	93099.6	19938	µg/L	92.07	19938	ppb	92.07	0.46%
Cd 226.502†	5079.8	49.083	µg/L	0.2956	49.083	ppb	0.2956	0.60%
Co 228.616†	2790.0	63.979	µg/L	0.3025	63.979	ppb	0.3025	0.47%
Cr 267.716†	3465.7	69.311	µg/L	0.7636	69.311	ppb	0.7636	1.10%
Cu 324.752†	10899.9	82.103	µg/L	0.5049	82.103	ppb	0.5049	0.61%
Fe 238.204 Radial†	170861.5	33255	µg/L	297.32	33255	ppb	297.32	0.89%
K 766.490 Radial†	2368.9	2148.3	µg/L	33.61	2148.3	ppb	33.61	1.56%
Mg 279.077 IEC†	7196.1	11760	µg/L	71.47	11760	ppb	71.47	0.61%
Mn 257.610†	373654.0	588.96	µg/L	1.340	588.96	ppb	1.340	0.23%
Mo 202.031†	844.5	48.527	µg/L	0.6416	48.527	ppb	0.6416	1.32%

Na 589.592 Radial†	347.4	490.74 µg/L	6.439	490.74 ppb	6.439	1.31%
Ni 231.604†	3046.0	84.853 µg/L	1.0702	84.853 ppb	1.0702	1.26%
P 214.914†	816.3	514.81 µg/L	7.596	514.81 ppb	7.596	1.48%
Pb 220.353†	505.9	63.983 µg/L	0.3627	63.983 ppb	0.3627	0.57%
S 181.975 Axial†	7889.0	9683.3 µg/L	68.97	9683.3 ppb	68.97	0.71%
Sb 206.836†	134.8	33.451 µg/L	0.3775	33.451 ppb	0.3775	1.13%
Se 196.026†	83.2	54.135 µg/L	1.6664	54.135 ppb	1.6664	3.08%
SiO2†	22154.3	3734.4 µg/L	25.68	3734.4 ppb	25.68	0.69%
Si 251.611†	32778.1	1809.4 µg/L	7.95	1809.4 ppb	7.95	0.44%
Sn 189.927†	394.5	50.088 µg/L	1.6593	50.088 ppb	1.6593	3.31%
Sr 421.552†	20136.5	118.06 µg/L	0.720	118.06 ppb	0.720	0.61%
Ti 334.940†	38995.8	166.86 µg/L	0.446	166.86 ppb	0.446	0.27%
Tl 190.801†	177.4	41.374 µg/L	0.8187	41.374 ppb	0.8187	1.98%
U 367.007†	609.4	75.42 µg/L	2.936	75.42 ppb	2.936	3.89%
V 292.402†	5097.5	73.887 µg/L	0.2413	73.887 ppb	0.2413	0.33%
Zn 213.857†	14932.7	109.66 µg/L	0.888	109.66 ppb	0.888	0.81%

Sequence No.: 11 **Autosampler Location: 313**
Sample ID: 1204070402|1782317|10| **Date Collected: 7/23/2018 09:05:59**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204070402|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24505.7	24505.7	111	%			09:06:35
1	Al 396.153Radial†	44003.9	39742.3	12779	µg/L	12779	ppb	09:06:35
1	Ca 317.933Radial†	108823.1	97755.3	20935	µg/L	20935	ppb	09:06:35
1	Fe 238.204 Radial†	180914.8	162972.5	31720	µg/L	31720	ppb	09:06:30
1	K 766.490 Radial†	2761.0	2066.1	1873.7	µg/L	1873.7	ppb	09:06:35
1	Mg 279.077 IEC†	7872.6	7037.3	11501	µg/L	11501	ppb	09:06:35
1	Na 589.592 Radial†	492.3	316.0	444.43	µg/L	444.43	ppb	09:06:35
1	Sr 421.552†	22650.2	20147.7	118.11	µg/L	118.11	ppb	09:06:35
1	Sc 361.383	397730.7	397730.7	108.61	%			09:07:01
1	Y 371.029	392322.7	392322.7	109.02	%			09:07:01
1	Ag 328.068†	-69.9	619.3	11.013	µg/L	11.013	ppb	09:07:22
1	As 188.979†	122.2	125.3	57.230	µg/L	57.230	ppb	09:07:22
1	B 249.677†	-1723.5	-1760.1	64.837	µg/L	64.837	ppb	09:07:22
1	Ba 233.527†	15164.7	13978.2	116.87	µg/L	116.87	ppb	09:07:22
1	Be 313.107†	60423.0	59207.6	49.506	µg/L	49.506	ppb	09:07:01
1	Cd 226.502†	5122.8	5039.9	48.838	µg/L	48.838	ppb	09:07:22
1	Co 228.616†	2697.7	2706.3	62.075	µg/L	62.075	ppb	09:07:22
1	Cr 267.716†	3815.1	3390.7	67.799	µg/L	67.799	ppb	09:07:22
1	Cu 324.752†	14349.9	11292.4	84.875	µg/L	84.875	ppb	09:07:01
1	Mn 257.610†	416751.6	383261.6	603.95	µg/L	603.95	ppb	09:07:01
1	Mo 202.031†	957.6	848.8	48.743	µg/L	48.743	ppb	09:07:22
1	Ni 231.604†	2966.0	2934.9	81.751	µg/L	81.751	ppb	09:07:22
1	P 214.914†	1072.5	855.8	542.33	µg/L	542.33	ppb	09:07:22
1	Pb 220.353†	466.0	492.5	62.331	µg/L	62.331	ppb	09:07:22
1	S 181.975 Axial†	6712.0	6087.6	7470.0	µg/L	7470.0	ppb	09:07:22
1	Sb 206.836†	319.6	139.7	35.072	µg/L	35.072	ppb	09:07:22
1	Se 196.026†	57.3	76.5	50.280	µg/L	50.280	ppb	09:07:22
1	SiO2†	16628.5	14245.2	2398.0	µg/L	2398.0	ppb	09:07:22
1	Si 251.611†	22313.6	20553.2	1133.5	µg/L	1133.5	ppb	09:07:22
1	Sn 189.927†	469.5	384.8	48.775	µg/L	48.775	ppb	09:07:22
1	Ti 334.940†	37654.6	35391.5	151.57	µg/L	151.57	ppb	09:07:01
1	Tl 190.801†	142.5	209.5	48.070	µg/L	48.070	ppb	09:07:22
1	U 367.007†	1535.8	530.6	53.05	µg/L	53.05	ppb	09:07:01
1	V 292.402†	5230.8	4948.0	71.614	µg/L	71.614	ppb	09:07:22
1	Zn 213.857†	17450.0	15169.0	111.63	µg/L	111.63	ppb	09:07:22
2	Sc RADIAL	24553.3	24553.3	111	%			09:06:45
2	Al 396.153Radial†	44033.6	39692.2	12763	µg/L	12763	ppb	09:06:45
2	Ca 317.933Radial†	108765.7	97513.6	20883	µg/L	20883	ppb	09:06:45
2	Fe 238.204 Radial†	180985.5	162720.2	31671	µg/L	31671	ppb	09:06:40
2	K 766.490 Radial†	2804.8	2100.6	1905.0	µg/L	1905.0	ppb	09:06:45
2	Mg 279.077 IEC†	7873.9	7024.7	11480	µg/L	11480	ppb	09:06:45
2	Na 589.592 Radial†	520.6	340.5	482.22	µg/L	482.22	ppb	09:06:45
2	Sr 421.552†	22696.2	20149.6	118.12	µg/L	118.12	ppb	09:06:45
2	Sc 361.383	394705.1	394705.1	107.78	%			09:07:27
2	Y 371.029	389434.0	389434.0	108.22	%			09:07:27
2	Ag 328.068†	-66.4	622.0	11.021	µg/L	11.021	ppb	09:07:47
2	As 188.979†	118.3	122.6	56.024	µg/L	56.024	ppb	09:07:47
2	B 249.677†	-1653.0	-1706.9	66.412	µg/L	66.412	ppb	09:07:47
2	Ba 233.527†	15069.1	13996.5	117.03	µg/L	117.03	ppb	09:07:47
2	Be 313.107†	60354.3	59570.3	49.812	µg/L	49.812	ppb	09:07:27
2	Cd 226.502†	5096.6	5051.7	48.965	µg/L	48.965	ppb	09:07:47
2	Co 228.616†	2708.5	2735.3	62.744	µg/L	62.744	ppb	09:07:47
2	Cr 267.716†	3764.2	3370.5	67.376	µg/L	67.376	ppb	09:07:47
2	Cu 324.752†	14329.6	11374.8	85.490	µg/L	85.490	ppb	09:07:27
2	Mn 257.610†	415876.6	385391.1	607.29	µg/L	607.29	ppb	09:07:27
2	Mo 202.031†	960.5	858.2	49.277	µg/L	49.277	ppb	09:07:47
2	Ni 231.604†	2924.3	2917.1	81.260	µg/L	81.260	ppb	09:07:47
2	P 214.914†	1059.5	851.3	539.38	µg/L	539.38	ppb	09:07:47

2	Pb 220.353†	466.7	496.5	62.805 µg/L	62.805 ppb	09:07:47
2	S 181.975 Axial†	6693.7	6118.1	7507.4 µg/L	7507.4 ppb	09:07:47
2	Sb 206.836†	342.4	163.1	41.802 µg/L	41.802 ppb	09:07:47
2	Se 196.026†	43.2	63.8	44.252 µg/L	44.252 ppb	09:07:47
2	SiO2†	16548.0	14287.9	2405.2 µg/L	2405.2 ppb	09:07:47
2	Si 251.611†	22187.9	20594.1	1135.7 µg/L	1135.7 ppb	09:07:47
2	Sn 189.927†	473.0	391.3	49.591 µg/L	49.591 ppb	09:07:47
2	Ti 334.940†	37503.0	35516.6	152.09 µg/L	152.09 ppb	09:07:27
2	Tl 190.801†	138.6	206.9	47.511 µg/L	47.511 ppb	09:07:47
2	U 367.007†	1587.2	589.1	73.84 µg/L	73.84 ppb	09:07:27
2	V 292.402†	5181.2	4938.9	71.501 µg/L	71.501 ppb	09:07:47
2	Zn 213.857†	17398.9	15244.7	112.22 µg/L	112.22 ppb	09:07:47
3	Sc RADIAL	24484.6	24484.6	111 %		09:06:55
3	Al 396.153Radial†	43755.9	39552.9	12718 µg/L	12718 ppb	09:06:55
3	Ca 317.933Radial†	108103.7	97191.3	20814 µg/L	20814 ppb	09:06:55
3	Fe 238.204 Radial†	178617.8	161042.1	31344 µg/L	31344 ppb	09:06:50
3	K 766.490 Radial†	2810.8	2113.1	1916.5 µg/L	1916.5 ppb	09:06:55
3	Mg 279.077 IEC†	7812.5	6989.2	11422 µg/L	11422 ppb	09:06:55
3	Na 589.592 Radial†	510.9	333.2	471.29 µg/L	471.29 ppb	09:06:55
3	Sr 421.552†	22582.2	20104.0	117.85 µg/L	117.85 ppb	09:06:55
3	Sc 361.383	391643.7	391643.7	106.95 %		09:07:52
3	Y 371.029	386367.3	386367.3	107.37 %		09:07:52
3	Ag 328.068†	-75.8	612.8	10.880 µg/L	10.880 ppb	09:08:12
3	As 188.979†	118.2	123.3	56.316 µg/L	56.316 ppb	09:08:12
3	B 249.677†	-1697.7	-1760.6	63.352 µg/L	63.352 ppb	09:08:12
3	Ba 233.527†	15081.7	14117.7	118.06 µg/L	118.06 ppb	09:08:12
3	Be 313.107†	60357.0	60010.5	50.177 µg/L	50.177 ppb	09:07:52
3	Cd 226.502†	5125.9	5116.0	49.669 µg/L	49.669 ppb	09:08:12
3	Co 228.616†	2683.9	2732.0	62.666 µg/L	62.666 ppb	09:08:12
3	Cr 267.716†	3768.1	3401.4	67.983 µg/L	67.983 ppb	09:08:12
3	Cu 324.752†	14341.2	11489.5	86.313 µg/L	86.313 ppb	09:07:52
3	Mn 257.610†	415903.3	388432.2	612.05 µg/L	612.05 ppb	09:07:52
3	Mo 202.031†	953.3	858.4	49.281 µg/L	49.281 ppb	09:08:12
3	Ni 231.604†	2970.2	2981.3	83.027 µg/L	83.027 ppb	09:08:12
3	P 214.914†	1069.2	868.1	550.80 µg/L	550.80 ppb	09:08:12
3	Pb 220.353†	456.4	490.3	62.028 µg/L	62.028 ppb	09:08:12
3	S 181.975 Axial†	6679.8	6153.6	7551.1 µg/L	7551.1 ppb	09:08:12
3	Sb 206.836†	321.9	146.4	37.044 µg/L	37.044 ppb	09:08:12
3	Se 196.026†	62.5	82.2	52.806 µg/L	52.806 ppb	09:08:12
3	SiO2†	16574.9	14433.0	2429.8 µg/L	2429.8 ppb	09:08:12
3	Si 251.611†	22175.8	20743.6	1144.0 µg/L	1144.0 ppb	09:08:12
3	Sn 189.927†	479.6	401.0	50.789 µg/L	50.789 ppb	09:08:12
3	Ti 334.940†	37531.4	35815.1	153.35 µg/L	153.35 ppb	09:07:52
3	Tl 190.801†	131.3	201.1	46.240 µg/L	46.240 ppb	09:08:12
3	U 367.007†	1575.3	589.5	75.27 µg/L	75.27 ppb	09:07:52
3	V 292.402†	5194.3	4988.8	72.086 µg/L	72.086 ppb	09:08:12
3	Zn 213.857†	17391.9	15364.4	113.15 µg/L	113.15 ppb	09:08:12

Mean Data: 1204070402|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	394693.2	107.78	%	0.831				0.77%
Sc RADIAL	24514.5	111	%	0.16				0.14%
Y 371.029	389374.7	108.20	%	0.828				0.76%
Ag 328.068†	618.1	10.971	µg/L	0.0791	10.971	ppb	0.0791	0.72%
Al 396.153Radial†	39662.5	12754	µg/L	31.57	12754	ppb	31.57	0.25%
As 188.979†	123.7	56.524	µg/L	0.6291	56.524	ppb	0.6291	1.11%
B 249.677†	-1742.5	64.867	µg/L	1.5298	64.867	ppb	1.5298	2.36%
Ba 233.527†	14030.8	117.32	µg/L	0.643	117.32	ppb	0.643	0.55%
Be 313.107†	59596.1	49.831	µg/L	0.3358	49.831	ppb	0.3358	0.67%
Ca 317.933Radial†	97486.7	20877	µg/L	60.59	20877	ppb	60.59	0.29%
Cd 226.502†	5069.2	49.157	µg/L	0.4477	49.157	ppb	0.4477	0.91%
Co 228.616†	2724.5	62.495	µg/L	0.3662	62.495	ppb	0.3662	0.59%
Cr 267.716†	3387.5	67.719	µg/L	0.3114	67.719	ppb	0.3114	0.46%
Cu 324.752†	11385.6	85.559	µg/L	0.7212	85.559	ppb	0.7212	0.84%
Fe 238.204 Radial†	162244.9	31578	µg/L	204.23	31578	ppb	204.23	0.65%
K 766.490 Radial†	2093.2	1898.4	µg/L	22.16	1898.4	ppb	22.16	1.17%
Mg 279.077 IEC†	7017.1	11468	µg/L	40.76	11468	ppb	40.76	0.36%
Mn 257.610†	385695.0	607.76	µg/L	4.069	607.76	ppb	4.069	0.67%
Mo 202.031†	855.1	49.100	µg/L	0.3093	49.100	ppb	0.3093	0.63%

Na 589.592 Radial†	329.9	465.98 µg/L	19.448	465.98 ppb	19.448	4.17%
Ni 231.604†	2944.4	82.012 µg/L	0.9119	82.012 ppb	0.9119	1.11%
P 214.914†	858.4	544.17 µg/L	5.926	544.17 ppb	5.926	1.09%
Pb 220.353†	493.1	62.388 µg/L	0.3917	62.388 ppb	0.3917	0.63%
S 181.975 Axial†	6119.8	7509.5 µg/L	40.60	7509.5 ppb	40.60	0.54%
Sb 206.836†	149.7	37.973 µg/L	3.4595	37.973 ppb	3.4595	9.11%
Se 196.026†	74.2	49.113 µg/L	4.3949	49.113 ppb	4.3949	8.95%
SiO2†	14322.1	2411.0 µg/L	16.67	2411.0 ppb	16.67	0.69%
Si 251.611†	20630.3	1137.8 µg/L	5.56	1137.8 ppb	5.56	0.49%
Sn 189.927†	392.3	49.718 µg/L	1.0128	49.718 ppb	1.0128	2.04%
Sr 421.552†	20133.8	118.03 µg/L	0.151	118.03 ppb	0.151	0.13%
Ti 334.940†	35574.4	152.34 µg/L	0.920	152.34 ppb	0.920	0.60%
Tl 190.801†	205.8	47.274 µg/L	0.9378	47.274 ppb	0.9378	1.98%
U 367.007†	569.7	67.39 µg/L	12.440	67.39 ppb	12.440	18.46%
V 292.402†	4958.6	71.734 µg/L	0.3101	71.734 ppb	0.3101	0.43%
Zn 213.857†	15259.4	112.33 µg/L	0.768	112.33 ppb	0.768	0.68%

Sequence No.: 12 **Autosampler Location: 314**
Sample ID: 1204069480|1782317|50| **Date Collected: 7/23/2018 09:08:21**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 1204069480|1782317|50|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24271.9	24271.9	110	%			09:08:52
1	Al 396.153Radial†	7705.6	7103.8	2284.7	µg/L	2284.7	ppb	09:08:52
1	Ca 317.933Radial†	20027.3	17922.5	3838.2	µg/L	3838.2	ppb	09:08:52
1	Fe 238.204 Radial†	35202.2	31988.4	6226.0	µg/L	6226.0	ppb	09:08:52
1	K 766.490 Radial†	723.4	236.4	214.05	µg/L	214.05	ppb	09:08:52
1	Mg 279.077 IEC†	1593.4	1393.5	2277.2	µg/L	2277.2	ppb	09:08:52
1	Na 589.592 Radial†	147.9	6.9	2.5271	µg/L	2.5271	ppb	09:08:52
1	Sr 421.552†	2866.9	2347.5	13.737	µg/L	13.737	ppb	09:08:52
1	Sc 361.383	390260.2	390260.2	106.57	%			09:09:08
1	Y 371.029	384499.4	384499.4	106.85	%			09:09:08
1	Ag 328.068†	-719.7	8.3	0.9871	µg/L	0.9871	ppb	09:09:28
1	As 188.979†	-8.3	5.0	2.5497	µg/L	2.5497	ppb	09:09:28
1	B 249.677†	-468.3	-612.6	3.8827	µg/L	3.8827	ppb	09:09:28
1	Ba 233.527†	1513.0	1435.2	11.927	µg/L	11.927	ppb	09:09:28
1	Be 313.107†	-3432.8	352.8	0.3527	µg/L	0.3527	ppb	09:09:28
1	Cd 226.502†	-255.3	83.5	0.1858	µg/L	0.1858	ppb	09:09:28
1	Co 228.616†	-89.5	138.4	3.1400	µg/L	3.1400	ppb	09:09:28
1	Cr 267.716†	324.1	182.2	3.6678	µg/L	3.6678	ppb	09:09:28
1	Cu 324.752†	2816.0	722.3	5.7059	µg/L	5.7059	ppb	09:09:28
1	Mn 257.610†	77033.9	71828.8	113.21	µg/L	113.21	ppb	09:09:08
1	Mo 202.031†	39.7	4.3	0.3594	µg/L	0.3594	ppb	09:09:28
1	Ni 231.604†	20.4	223.1	6.2892	µg/L	6.2892	ppb	09:09:28
1	P 214.914†	256.4	108.9	67.269	µg/L	67.269	ppb	09:09:28
1	Pb 220.353†	-55.9	11.0	1.6072	µg/L	1.6072	ppb	09:09:28
1	S 181.975 Axial†	1449.9	1268.2	1556.3	µg/L	1556.3	ppb	09:09:28
1	Sb 206.836†	164.3	-0.4	-1.0452	µg/L	-1.0452	ppb	09:09:28
1	Se 196.026†	-24.9	0.4	2.9556	µg/L	2.9556	ppb	09:09:28
1	SiO2†	4425.5	3087.4	520.36	µg/L	520.36	ppb	09:09:28
1	Si 251.611†	4757.5	4472.5	246.87	µg/L	246.87	ppb	09:09:28
1	Sn 189.927†	34.4	-15.2	-1.7423	µg/L	-1.7423	ppb	09:09:28
1	Ti 334.940†	3237.4	3759.4	16.160	µg/L	16.160	ppb	09:09:28
1	Tl 190.801†	-90.8	-6.9	-0.8641	µg/L	-0.8641	ppb	09:09:28
1	U 367.007†	1098.2	147.0	25.65	µg/L	25.65	ppb	09:09:08
1	V 292.402†	91.8	218.1	4.1449	µg/L	4.1449	ppb	09:09:28
1	Zn 213.857†	3084.3	1996.3	14.492	µg/L	14.492	ppb	09:09:28
2	Sc RADIAL	24417.6	24417.6	111	%			09:08:57
2	Al 396.153Radial†	7744.4	7097.0	2282.5	µg/L	2282.5	ppb	09:08:57
2	Ca 317.933Radial†	20085.7	17866.5	3826.2	µg/L	3826.2	ppb	09:08:57
2	Fe 238.204 Radial†	35289.7	31876.3	6204.2	µg/L	6204.2	ppb	09:08:57
2	K 766.490 Radial†	814.1	314.5	285.00	µg/L	285.00	ppb	09:08:57
2	Mg 279.077 IEC†	1566.4	1360.4	2223.2	µg/L	2223.2	ppb	09:08:57
2	Na 589.592 Radial†	97.0	-39.9	-69.453	µg/L	-69.453	ppb	09:08:57
2	Sr 421.552†	2850.9	2317.5	13.560	µg/L	13.560	ppb	09:08:57
2	Sc 361.383	393734.9	393734.9	107.52	%			09:09:34
2	Y 371.029	387684.8	387684.8	107.73	%			09:09:34
2	Ag 328.068†	-787.6	-48.9	0.4033	µg/L	0.4033	ppb	09:09:54
2	As 188.979†	-12.2	1.4	0.9615	µg/L	0.9615	ppb	09:09:54
2	B 249.677†	-460.5	-601.5	4.1658	µg/L	4.1658	ppb	09:09:54
2	Ba 233.527†	1513.7	1423.4	11.828	µg/L	11.828	ppb	09:09:54
2	Be 313.107†	-3418.7	394.2	0.3880	µg/L	0.3880	ppb	09:09:54
2	Cd 226.502†	-224.8	114.0	0.5046	µg/L	0.5046	ppb	09:09:54
2	Co 228.616†	-81.6	146.5	3.3257	µg/L	3.3257	ppb	09:09:54
2	Cr 267.716†	332.9	187.7	3.7734	µg/L	3.7734	ppb	09:09:54
2	Cu 324.752†	2819.1	701.9	5.5570	µg/L	5.5570	ppb	09:09:54
2	Mn 257.610†	77220.7	71364.6	112.48	µg/L	112.48	ppb	09:09:34
2	Mo 202.031†	29.9	-5.1	-0.1749	µg/L	-0.1749	ppb	09:09:54
2	Ni 231.604†	9.4	212.7	6.0029	µg/L	6.0029	ppb	09:09:54
2	P 214.914†	275.4	124.5	77.687	µg/L	77.687	ppb	09:09:54

2	Pb 220.353†	-51.0	16.1	2.2309 µg/L	2.2309 ppb	09:09:54
2	S 181.975 Axial†	1459.2	1264.8	1552.2 µg/L	1552.2 ppb	09:09:54
2	Sb 206.836†	161.1	-4.8	-2.2834 µg/L	-2.2834 ppb	09:09:54
2	Se 196.026†	-20.8	4.4	4.8266 µg/L	4.8266 ppb	09:09:54
2	SiO2†	4459.4	3082.3	519.53 µg/L	519.53 ppb	09:09:54
2	Si 251.611†	4811.7	4483.5	247.49 µg/L	247.49 ppb	09:09:54
2	Sn 189.927†	57.0	5.5	0.8248 µg/L	0.8248 ppb	09:09:54
2	Ti 334.940†	3270.2	3763.1	16.174 µg/L	16.174 ppb	09:09:54
2	Tl 190.801†	-85.4	-1.1	0.3789 µg/L	0.3789 ppb	09:09:54
2	U 367.007†	1119.2	157.5	29.42 µg/L	29.42 ppb	09:09:34
2	V 292.402†	117.9	241.5	4.4441 µg/L	4.4441 ppb	09:09:54
2	Zn 213.857†	3023.9	1914.7	13.874 µg/L	13.874 ppb	09:09:54
3	Sc RADIAL	24474.5	24474.5	111 %		09:09:02
3	Al 396.153Radial†	7699.0	7039.7	2264.1 µg/L	2264.1 ppb	09:09:02
3	Ca 317.933Radial†	20123.1	17858.1	3824.4 µg/L	3824.4 ppb	09:09:02
3	Fe 238.204 Radial†	35244.7	31761.6	6181.8 µg/L	6181.8 ppb	09:09:02
3	K 766.490 Radial†	709.6	218.5	197.73 µg/L	197.73 ppb	09:09:02
3	Mg 279.077 IEC†	1560.4	1351.7	2209.0 µg/L	2209.0 ppb	09:09:02
3	Na 589.592 Radial†	123.5	-16.1	-32.906 µg/L	-32.906 ppb	09:09:02
3	Sr 421.552†	2770.1	2238.6	13.096 µg/L	13.096 ppb	09:09:02
3	Sc 361.383	391631.7	391631.7	106.94 %		09:09:59
3	Y 371.029	385739.5	385739.5	107.19 %		09:09:59
3	Ag 328.068†	-723.1	7.6	0.9722 µg/L	0.9722 ppb	09:10:19
3	As 188.979†	-8.8	4.6	2.3434 µg/L	2.3434 ppb	09:10:19
3	B 249.677†	-516.2	-655.9	2.2704 µg/L	2.2704 ppb	09:10:19
3	Ba 233.527†	1504.6	1422.4	11.820 µg/L	11.820 ppb	09:10:19
3	Be 313.107†	-3348.9	442.4	0.4272 µg/L	0.4272 ppb	09:10:19
3	Cd 226.502†	-253.1	86.5	0.2214 µg/L	0.2214 ppb	09:10:19
3	Co 228.616†	-66.0	160.7	3.6526 µg/L	3.6526 ppb	09:10:19
3	Cr 267.716†	336.4	192.6	3.8713 µg/L	3.8713 ppb	09:10:19
3	Cu 324.752†	2834.2	730.1	5.7607 µg/L	5.7607 ppb	09:10:19
3	Mn 257.610†	77367.5	71887.6	113.30 µg/L	113.30 ppb	09:09:59
3	Mo 202.031†	35.8	0.5	0.1465 µg/L	0.1465 ppb	09:10:19
3	Ni 231.604†	18.5	221.2	6.2367 µg/L	6.2367 ppb	09:10:19
3	P 214.914†	251.2	103.1	63.504 µg/L	63.504 ppb	09:10:19
3	Pb 220.353†	-50.7	16.2	2.2389 µg/L	2.2389 ppb	09:10:19
3	S 181.975 Axial†	1454.3	1267.6	1555.6 µg/L	1555.6 ppb	09:10:19
3	Sb 206.836†	160.0	-5.0	-2.3433 µg/L	-2.3433 ppb	09:10:19
3	Se 196.026†	-17.7	7.2	6.1514 µg/L	6.1514 ppb	09:10:19
3	SiO2†	4415.4	3063.5	516.33 µg/L	516.33 ppb	09:10:19
3	Si 251.611†	4740.8	4441.2	245.15 µg/L	245.15 ppb	09:10:19
3	Sn 189.927†	65.5	13.7	1.8507 µg/L	1.8507 ppb	09:10:19
3	Ti 334.940†	3251.3	3761.7	16.169 µg/L	16.169 ppb	09:10:19
3	Tl 190.801†	-83.0	0.7	0.7723 µg/L	0.7723 ppb	09:10:19
3	U 367.007†	1104.0	148.9	26.47 µg/L	26.47 ppb	09:09:59
3	V 292.402†	69.3	196.7	3.8553 µg/L	3.8553 ppb	09:10:19
3	Zn 213.857†	3044.3	1948.8	14.135 µg/L	14.135 ppb	09:10:19

Mean Data: 1204069480|1782317|50|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	391875.6	107.01	%	0.478				0.45%
Sc RADIAL	24388.0	110	%	0.47				0.43%
Y 371.029	385974.6	107.26	%	0.446				0.42%
Ag 328.068†	-11.0	0.7876	µg/L	0.33283	0.7876	ppb	0.33283	42.26%
Al 396.153Radial†	7080.2	2277.1	µg/L	11.31	2277.1	ppb	11.31	0.50%
As 188.979†	3.7	1.9515	µg/L	0.86354	1.9515	ppb	0.86354	44.25%
B 249.677†	-623.3	3.4396	µg/L	1.02246	3.4396	ppb	1.02246	29.73%
Ba 233.527†	1427.0	11.858	µg/L	0.0597	11.858	ppb	0.0597	0.50%
Be 313.107†	396.5	0.3893	µg/L	0.03729	0.3893	ppb	0.03729	9.58%
Ca 317.933Radial†	17882.4	3829.6	µg/L	7.49	3829.6	ppb	7.49	0.20%
Cd 226.502†	94.7	0.3039	µg/L	0.17468	0.3039	ppb	0.17468	57.48%
Co 228.616†	148.5	3.3728	µg/L	0.25954	3.3728	ppb	0.25954	7.70%
Cr 267.716†	187.5	3.7708	µg/L	0.10179	3.7708	ppb	0.10179	2.70%
Cu 324.752†	718.1	5.6745	µg/L	0.10542	5.6745	ppb	0.10542	1.86%
Fe 238.204 Radial†	31875.4	6204.0	µg/L	22.08	6204.0	ppb	22.08	0.36%
K 766.490 Radial†	256.5	232.26	µg/L	46.396	232.26	ppb	46.396	19.98%
Mg 279.077 IEC†	1368.5	2236.5	µg/L	36.03	2236.5	ppb	36.03	1.61%
Mn 257.610†	71693.7	112.99	µg/L	0.450	112.99	ppb	0.450	0.40%
Mo 202.031†	-0.1	0.1103	µg/L	0.26899	0.1103	ppb	0.26899	243.81%

Na 589.592 Radial†	-16.4	-33.277 µg/L	35.9915	-33.277 ppb	35.9915	108.16%
Ni 231.604†	219.0	6.1763 µg/L	0.15242	6.1763 ppb	0.15242	2.47%
P 214.914†	112.2	69.487 µg/L	7.3469	69.487 ppb	7.3469	10.57%
Pb 220.353†	14.4	2.0257 µg/L	0.36241	2.0257 ppb	0.36241	17.89%
S 181.975 Axial†	1266.9	1554.7 µg/L	2.20	1554.7 ppb	2.20	0.14%
Sb 206.836†	-3.4	-1.8906 µg/L	0.73279	-1.8906 ppb	0.73279	38.76%
Se 196.026†	4.0	4.6445 µg/L	1.60566	4.6445 ppb	1.60566	34.57%
SiO2†	3077.7	518.74 µg/L	2.128	518.74 ppb	2.128	0.41%
Si 251.611†	4465.7	246.50 µg/L	1.213	246.50 ppb	1.213	0.49%
Sn 189.927†	1.3	0.3110 µg/L	1.85077	0.3110 ppb	1.85077	595.03%
Sr 421.552†	2301.2	13.464 µg/L	0.3308	13.464 ppb	0.3308	2.46%
Ti 334.940†	3761.4	16.168 µg/L	0.0068	16.168 ppb	0.0068	0.04%
Tl 190.801†	-2.4	0.0957 µg/L	0.85417	0.0957 ppb	0.85417	892.62%
U 367.007†	151.1	27.18 µg/L	1.984	27.18 ppb	1.984	7.30%
V 292.402†	218.7	4.1481 µg/L	0.29442	4.1481 ppb	0.29442	7.10%
Zn 213.857†	1953.3	14.167 µg/L	0.3100	14.167 ppb	0.3100	2.19%

Sequence No.: 13 **Autosampler Location: 315**
Sample ID: 454474002|1782317|10| **Date Collected: 7/23/2018 09:10:28**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474002|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24350.1	24350.1	110	%			09:11:04
1	Al 396.153Radial†	38606.0	35101.1	11289	µg/L	11289	ppb	09:11:04
1	Ca 317.933Radial†	122484.3	110769.9	23722	µg/L	23722	ppb	09:11:04
1	Fe 238.204 Radial†	175542.5	159143.3	30974	µg/L	30974	ppb	09:10:59
1	K 766.490 Radial†	2084.6	1468.6	1331.5	µg/L	1331.5	ppb	09:11:04
1	Mg 279.077 IEC†	7703.6	6929.4	11324	µg/L	11324	ppb	09:11:04
1	Na 589.592 Radial†	203.8	57.3	47.508	µg/L	47.508	ppb	09:11:04
1	Sr 421.552†	15850.5	14112.4	82.567	µg/L	82.567	ppb	09:11:04
1	Sc 361.383	390362.1	390362.1	106.60	%			09:11:30
1	Y 371.029	385661.0	385661.0	107.17	%			09:11:30
1	Ag 328.068†	-1057.5	-308.4	1.4147	µg/L	1.4147	ppb	09:11:51
1	As 188.979†	-6.8	6.4	4.4930	µg/L	4.4930	ppb	09:11:51
1	B 249.677†	-3175.7	-3152.4	15.839	µg/L	15.839	ppb	09:11:51
1	Ba 233.527†	10085.1	9476.6	79.002	µg/L	79.002	ppb	09:11:51
1	Be 313.107†	-2988.5	770.4	0.9747	µg/L	0.9747	ppb	09:11:51
1	Cd 226.502†	62.4	381.6	0.5696	µg/L	0.5696	ppb	09:11:51
1	Co 228.616†	479.2	671.9	15.186	µg/L	15.186	ppb	09:11:51
1	Cr 267.716†	1085.0	895.9	18.080	µg/L	18.080	ppb	09:11:51
1	Cu 324.752†	6351.6	4038.5	31.609	µg/L	31.609	ppb	09:11:51
1	Mn 257.610†	393029.3	368250.5	580.33	µg/L	580.33	ppb	09:11:30
1	Mo 202.031†	49.1	13.1	1.3253	µg/L	1.3253	ppb	09:11:51
1	Ni 231.604†	1117.2	1252.0	35.223	µg/L	35.223	ppb	09:11:51
1	P 214.914†	902.6	715.0	450.01	µg/L	450.01	ppb	09:11:51
1	Pb 220.353†	37.3	98.5	13.542	µg/L	13.542	ppb	09:11:51
1	S 181.975 Axial†	6779.1	6267.2	7691.2	µg/L	7691.2	ppb	09:11:51
1	Sb 206.836†	163.7	-1.0	-4.8090	µg/L	-4.8090	ppb	09:11:51
1	Se 196.026†	-47.0	-20.4	4.1543	µg/L	4.1543	ppb	09:11:51
1	SiO2†	22250.0	19807.8	3340.5	µg/L	3340.5	ppb	09:11:51
1	Si 251.611†	31358.7	29426.3	1625.0	µg/L	1625.0	ppb	09:11:30
1	Sn 189.927†	40.3	-9.7	-0.4267	µg/L	-0.4267	ppb	09:11:51
1	Ti 334.940†	27254.8	26289.7	112.95	µg/L	112.95	ppb	09:11:30
1	Tl 190.801†	-111.8	-26.6	-2.5600	µg/L	-2.5600	ppb	09:11:51
1	U 367.007†	1507.9	531.1	54.52	µg/L	54.52	ppb	09:11:30
1	V 292.402†	1170.9	1230.3	22.455	µg/L	22.455	ppb	09:11:51
1	Zn 213.857†	10340.3	8802.6	63.500	µg/L	63.500	ppb	09:11:51
2	Sc RADIAL	24388.5	24388.5	110	%			09:11:14
2	Al 396.153Radial†	38596.9	35037.7	11269	µg/L	11269	ppb	09:11:14
2	Ca 317.933Radial†	122858.4	110933.5	23757	µg/L	23757	ppb	09:11:14
2	Fe 238.204 Radial†	176703.5	159943.4	31130	µg/L	31130	ppb	09:11:09
2	K 766.490 Radial†	2082.5	1463.7	1327.0	µg/L	1327.0	ppb	09:11:14
2	Mg 279.077 IEC†	7685.5	6902.0	11279	µg/L	11279	ppb	09:11:14
2	Na 589.592 Radial†	178.4	33.9	11.400	µg/L	11.400	ppb	09:11:14
2	Sr 421.552†	15969.7	14197.6	83.068	µg/L	83.068	ppb	09:11:14
2	Sc 361.383	394630.8	394630.8	107.76	%			09:11:56
2	Y 371.029	388927.9	388927.9	108.08	%			09:11:56
2	Ag 328.068†	-1058.9	-298.9	1.5468	µg/L	1.5468	ppb	09:12:16
2	As 188.979†	-11.2	2.4	2.7481	µg/L	2.7481	ppb	09:12:16
2	B 249.677†	-3173.0	-3117.6	17.602	µg/L	17.602	ppb	09:12:16
2	Ba 233.527†	10159.7	9443.4	78.719	µg/L	78.719	ppb	09:12:16
2	Be 313.107†	-2976.2	812.1	1.0048	µg/L	1.0048	ppb	09:12:16
2	Cd 226.502†	27.0	348.2	0.2058	µg/L	0.2058	ppb	09:12:16
2	Co 228.616†	469.1	657.8	14.857	µg/L	14.857	ppb	09:12:16
2	Cr 267.716†	1115.4	913.1	18.445	µg/L	18.445	ppb	09:12:16
2	Cu 324.752†	6387.3	4007.1	31.376	µg/L	31.376	ppb	09:12:16
2	Mn 257.610†	392283.2	363569.9	572.99	µg/L	572.99	ppb	09:11:56
2	Mo 202.031†	27.1	-7.8	0.1414	µg/L	0.1414	ppb	09:12:16
2	Ni 231.604†	1121.0	1244.2	35.009	µg/L	35.009	ppb	09:12:16
2	P 214.914†	913.4	715.9	450.47	µg/L	450.47	ppb	09:12:16

2	Pb 220.353†	65.6	124.4	16.752 µg/L	16.752 ppb	09:12:16
2	S 181.975 Axial†	6813.5	6230.4	7645.9 µg/L	7645.9 ppb	09:12:16
2	Sb 206.836†	154.4	-11.3	-7.7921 µg/L	-7.7921 ppb	09:12:16
2	Se 196.026†	-52.3	-24.8	2.1303 µg/L	2.1303 ppb	09:12:16
2	SiO2†	22370.2	19693.6	3321.3 µg/L	3321.3 ppb	09:12:16
2	Si 251.611†	31282.7	29037.6	1603.5 µg/L	1603.5 ppb	09:11:56
2	Sn 189.927†	42.7	-7.9	-0.2025 µg/L	-0.2025 ppb	09:12:16
2	Ti 334.940†	27420.0	26166.4	112.44 µg/L	112.44 ppb	09:11:56
2	Tl 190.801†	-101.5	-15.8	-0.2558 µg/L	-0.2558 ppb	09:12:16
2	U 367.007†	1462.2	473.4	33.60 µg/L	33.60 ppb	09:11:56
2	V 292.402†	1222.5	1266.3	22.935 µg/L	22.935 ppb	09:12:16
2	Zn 213.857†	10427.1	8778.2	63.299 µg/L	63.299 ppb	09:12:16
3	Sc RADIAL	24255.8	24255.8	110 %		09:11:24
3	Al 396.153Radial†	38280.6	34940.9	11237 µg/L	11237 ppb	09:11:24
3	Ca 317.933Radial†	121616.4	110411.4	23645 µg/L	23645 ppb	09:11:24
3	Fe 238.204 Radial†	176776.5	160885.1	31313 µg/L	31313 ppb	09:11:19
3	K 766.490 Radial†	2138.3	1524.8	1382.4 µg/L	1382.4 ppb	09:11:24
3	Mg 279.077 IEC†	7584.5	6848.1	11191 µg/L	11191 ppb	09:11:24
3	Na 589.592 Radial†	141.6	1.3	-38.959 µg/L	-38.959 ppb	09:11:24
3	Sr 421.552†	15772.4	14097.1	82.479 µg/L	82.479 ppb	09:11:24
3	Sc 361.383	391836.1	391836.1	107.00 %		09:12:21
3	Y 371.029	386369.3	386369.3	107.37 %		09:12:21
3	Ag 328.068†	-1031.6	-280.5	1.7489 µg/L	1.7489 ppb	09:12:41
3	As 188.979†	2.9	15.5	8.5411 µg/L	8.5411 ppb	09:12:41
3	B 249.677†	-3213.5	-3176.5	16.358 µg/L	16.358 ppb	09:12:41
3	Ba 233.527†	10120.8	9474.3	78.974 µg/L	78.974 ppb	09:12:41
3	Be 313.107†	-2943.1	823.3	1.0177 µg/L	1.0177 ppb	09:12:41
3	Cd 226.502†	32.8	353.7	0.2430 µg/L	0.2430 ppb	09:12:41
3	Co 228.616†	480.4	671.4	15.171 µg/L	15.171 ppb	09:12:41
3	Cr 267.716†	1125.4	929.8	18.760 µg/L	18.760 ppb	09:12:41
3	Cu 324.752†	6359.9	4023.7	31.520 µg/L	31.520 ppb	09:12:41
3	Mn 257.610†	393764.1	367550.3	579.25 µg/L	579.25 ppb	09:12:21
3	Mo 202.031†	56.3	19.7	1.7069 µg/L	1.7069 ppb	09:12:41
3	Ni 231.604†	1097.7	1229.8	34.616 µg/L	34.616 ppb	09:12:41
3	P 214.914†	921.7	729.7	459.49 µg/L	459.49 ppb	09:12:41
3	Pb 220.353†	40.0	100.9	13.835 µg/L	13.835 ppb	09:12:41
3	S 181.975 Axial†	6828.8	6289.8	7718.8 µg/L	7718.8 ppb	09:12:41
3	Sb 206.836†	163.9	-1.4	-4.9716 µg/L	-4.9716 ppb	09:12:41
3	Se 196.026†	-37.0	-10.9	8.7925 µg/L	8.7925 ppb	09:12:41
3	SiO2†	22298.1	19774.3	3334.8 µg/L	3334.8 ppb	09:12:41
3	Si 251.611†	31364.1	29320.7	1619.2 µg/L	1619.2 ppb	09:12:21
3	Sn 189.927†	46.6	-4.0	0.2963 µg/L	0.2963 ppb	09:12:41
3	Ti 334.940†	27485.3	26409.0	113.46 µg/L	113.46 ppb	09:12:21
3	Tl 190.801†	-106.8	-21.5	-1.4412 µg/L	-1.4412 ppb	09:12:41
3	U 367.007†	1511.8	529.4	52.66 µg/L	52.66 ppb	09:12:21
3	V 292.402†	1180.6	1235.2	22.592 µg/L	22.592 ppb	09:12:41
3	Zn 213.857†	10382.4	8805.4	63.491 µg/L	63.491 ppb	09:12:41

Mean Data: 454474002|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	392276.3	107.12	%	0.592				0.55%
Sc RADIAL	24331.5	110	%	0.31				0.28%
Y 371.029	386986.1	107.54	%	0.478				0.44%
Ag 328.068†	-295.9	1.5701	µg/L	0.16828	1.5701	ppb	0.16828	10.72%
Al 396.153Radial†	35026.6	11265	µg/L	25.97	11265	ppb	25.97	0.23%
As 188.979†	8.1	5.2607	µg/L	2.97186	5.2607	ppb	2.97186	56.49%
B 249.677†	-3148.8	16.600	µg/L	0.9061	16.600	ppb	0.9061	5.46%
Ba 233.527†	9464.8	78.898	µg/L	0.1560	78.898	ppb	0.1560	0.20%
Be 313.107†	801.9	0.9991	µg/L	0.02210	0.9991	ppb	0.02210	2.21%
Ca 317.933Radial†	110704.9	23708	µg/L	57.18	23708	ppb	57.18	0.24%
Cd 226.502†	361.2	0.3394	µg/L	0.20019	0.3394	ppb	0.20019	58.97%
Co 228.616†	667.0	15.071	µg/L	0.1855	15.071	ppb	0.1855	1.23%
Cr 267.716†	912.9	18.428	µg/L	0.3404	18.428	ppb	0.3404	1.85%
Cu 324.752†	4023.1	31.502	µg/L	0.1173	31.502	ppb	0.1173	0.37%
Fe 238.204 Radial†	159990.6	31139	µg/L	169.69	31139	ppb	169.69	0.54%
K 766.490 Radial†	1485.7	1347.0	µg/L	30.80	1347.0	ppb	30.80	2.29%
Mg 279.077 IEC†	6893.2	11265	µg/L	67.55	11265	ppb	67.55	0.60%
Mn 257.610†	366456.9	577.52	µg/L	3.964	577.52	ppb	3.964	0.69%
Mo 202.031†	8.3	1.0579	µg/L	0.81626	1.0579	ppb	0.81626	77.16%

Na 589.592 Radial†	30.8	6.6498 µg/L	43.42895	6.6498 ppb	43.42895	653.09%
Ni 231.604†	1242.0	34.949 µg/L	0.3080	34.949 ppb	0.3080	0.88%
P 214.914†	720.2	453.32 µg/L	5.343	453.32 ppb	5.343	1.18%
Pb 220.353†	107.9	14.709 µg/L	1.7747	14.709 ppb	1.7747	12.07%
S 181.975 Axial†	6262.5	7685.3 µg/L	36.82	7685.3 ppb	36.82	0.48%
Sb 206.836†	-4.6	-5.8576 µg/L	1.67734	-5.8576 ppb	1.67734	28.64%
Se 196.026†	-18.7	5.0257 µg/L	3.41549	5.0257 ppb	3.41549	67.96%
SiO2†	19758.6	3332.2 µg/L	9.90	3332.2 ppb	9.90	0.30%
Si 251.611†	29261.5	1615.9 µg/L	11.11	1615.9 ppb	11.11	0.69%
Sn 189.927†	-7.2	-0.1110 µg/L	0.37010	-0.1110 ppb	0.37010	333.52%
Sr 421.552†	14135.7	82.705 µg/L	0.3177	82.705 ppb	0.3177	0.38%
Ti 334.940†	26288.4	112.95 µg/L	0.509	112.95 ppb	0.509	0.45%
Tl 190.801†	-21.3	-1.4190 µg/L	1.15225	-1.4190 ppb	1.15225	81.20%
U 367.007†	511.3	46.92 µg/L	11.579	46.92 ppb	11.579	24.68%
V 292.402†	1243.9	22.661 µg/L	0.2470	22.661 ppb	0.2470	1.09%
Zn 213.857†	8795.4	63.430 µg/L	0.1134	63.430 ppb	0.1134	0.18%

Sequence No.: 14 **Autosampler Location: 316**
Sample ID: 454474003|1782317|10| **Date Collected: 7/23/2018 09:12:50**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474003|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24331.1	24331.1	110	%			09:13:26
1	Al 396.153Radial†	19713.7	17983.9	5783.9	µg/L	5783.9	ppb	09:13:26
1	Ca 317.933Radial†	78150.3	70624.1	15125	µg/L	15125	ppb	09:13:26
1	Fe 238.204 Radial†	108339.4	98281.6	19129	µg/L	19129	ppb	09:13:21
1	K 766.490 Radial†	1205.8	672.6	609.40	µg/L	609.40	ppb	09:13:26
1	Mg 279.077 IEC†	4481.9	4011.2	6555.2	µg/L	6555.2	ppb	09:13:26
1	Na 589.592 Radial†	197.0	51.2	53.719	µg/L	53.719	ppb	09:13:26
1	Sr 421.552†	8617.5	7559.8	44.187	µg/L	44.187	ppb	09:13:26
1	Sc 361.383	395454.4	395454.4	107.99	%			09:13:52
1	Y 371.029	390264.8	390264.8	108.45	%			09:13:52
1	Ag 328.068†	-906.4	-155.7	1.2243	µg/L	1.2243	ppb	09:14:13
1	As 188.979†	5.5	17.9	8.8945	µg/L	8.8945	ppb	09:14:13
1	B 249.677†	-1932.8	-1963.1	9.2123	µg/L	9.2123	ppb	09:14:13
1	Ba 233.527†	2854.3	2658.7	21.907	µg/L	21.907	ppb	09:14:13
1	Be 313.107†	-3258.4	556.5	0.6721	µg/L	0.6721	ppb	09:14:13
1	Cd 226.502†	-84.4	244.9	0.4570	µg/L	0.4570	ppb	09:14:13
1	Co 228.616†	545.0	727.1	16.610	µg/L	16.610	ppb	09:14:13
1	Cr 267.716†	588.5	423.0	8.5401	µg/L	8.5401	ppb	09:14:13
1	Cu 324.752†	5023.5	2731.8	21.262	µg/L	21.262	ppb	09:14:13
1	Mn 257.610†	276266.7	255376.2	402.30	µg/L	402.30	ppb	09:13:52
1	Mo 202.031†	36.4	0.7	0.4003	µg/L	0.4003	ppb	09:14:13
1	Ni 231.604†	1014.2	1143.2	31.980	µg/L	31.980	ppb	09:14:13
1	P 214.914†	766.7	578.3	368.65	µg/L	368.65	ppb	09:14:13
1	Pb 220.353†	138.0	191.3	24.406	µg/L	24.406	ppb	09:14:13
1	S 181.975 Axial†	5684.5	5171.8	6349.1	µg/L	6349.1	ppb	09:14:13
1	Sb 206.836†	179.4	11.5	0.5307	µg/L	0.5307	ppb	09:14:13
1	Se 196.026†	-45.4	-18.3	-0.1221	µg/L	-0.1221	ppb	09:14:13
1	SiO2†	10943.6	9068.9	1528.3	µg/L	1528.3	ppb	09:14:13
1	Si 251.611†	14179.4	13138.8	725.19	µg/L	725.19	ppb	09:14:13
1	Sn 189.927†	66.5	14.1	2.1240	µg/L	2.1240	ppb	09:14:13
1	Ti 334.940†	9488.1	9507.8	41.130	µg/L	41.130	ppb	09:14:13
1	Tl 190.801†	-93.0	-7.8	0.1637	µg/L	0.1637	ppb	09:14:13
1	U 367.007†	1284.0	305.5	25.51	µg/L	25.51	ppb	09:13:52
1	V 292.402†	399.2	501.6	10.502	µg/L	10.502	ppb	09:14:13
1	Zn 213.857†	7788.6	6314.7	45.841	µg/L	45.841	ppb	09:14:13
2	Sc RADIAL	24500.4	24500.4	111	%			09:13:36
2	Al 396.153Radial†	19757.2	17899.5	5756.7	µg/L	5756.7	ppb	09:13:36
2	Ca 317.933Radial†	78606.4	70544.9	15108	µg/L	15108	ppb	09:13:36
2	Fe 238.204 Radial†	108782.6	98001.4	19074	µg/L	19074	ppb	09:13:31
2	K 766.490 Radial†	1216.8	675.0	611.53	µg/L	611.53	ppb	09:13:36
2	Mg 279.077 IEC†	4466.7	3969.3	6486.8	µg/L	6486.8	ppb	09:13:36
2	Na 589.592 Radial†	204.6	56.8	62.337	µg/L	62.337	ppb	09:13:36
2	Sr 421.552†	8560.8	7454.6	43.569	µg/L	43.569	ppb	09:13:36
2	Sc 361.383	394005.2	394005.2	107.59	%			09:14:18
2	Y 371.029	388629.4	388629.4	107.99	%			09:14:18
2	Ag 328.068†	-894.0	-147.3	1.2968	µg/L	1.2968	ppb	09:14:38
2	As 188.979†	-0.0	12.8	6.6567	µg/L	6.6567	ppb	09:14:38
2	B 249.677†	-1957.4	-1992.5	8.0221	µg/L	8.0221	ppb	09:14:38
2	Ba 233.527†	2843.4	2658.3	21.905	µg/L	21.905	ppb	09:14:38
2	Be 313.107†	-3272.0	532.8	0.6542	µg/L	0.6542	ppb	09:14:38
2	Cd 226.502†	-69.1	258.8	0.6077	µg/L	0.6077	ppb	09:14:38
2	Co 228.616†	541.6	725.8	16.580	µg/L	16.580	ppb	09:14:38
2	Cr 267.716†	619.3	453.7	9.1440	µg/L	9.1440	ppb	09:14:38
2	Cu 324.752†	4909.1	2642.6	20.608	µg/L	20.608	ppb	09:14:38
2	Mn 257.610†	274739.8	254898.0	401.54	µg/L	401.54	ppb	09:14:18
2	Mo 202.031†	50.2	13.7	1.1349	µg/L	1.1349	ppb	09:14:38
2	Ni 231.604†	1023.0	1154.8	32.300	µg/L	32.300	ppb	09:14:38
2	P 214.914†	760.5	575.1	366.57	µg/L	366.57	ppb	09:14:38

2	Pb 220.353†	146.9	200.1	25.486 µg/L	25.486 ppb	09:14:38
2	S 181.975 Axial†	5692.3	5198.4	6381.9 µg/L	6381.9 ppb	09:14:38
2	Sb 206.836†	161.1	-4.9	-4.1605 µg/L	-4.1605 ppb	09:14:38
2	Se 196.026†	-28.8	-3.0	7.0766 µg/L	7.0766 ppb	09:14:38
2	SiO2†	10959.2	9120.7	1537.1 µg/L	1537.1 ppb	09:14:38
2	Si 251.611†	14163.1	13172.0	727.01 µg/L	727.01 ppb	09:14:38
2	Sn 189.927†	64.2	12.1	1.8786 µg/L	1.8786 ppb	09:14:38
2	Ti 334.940†	9503.1	9554.1	41.323 µg/L	41.323 ppb	09:14:38
2	Tl 190.801†	-97.6	-12.4	-0.8180 µg/L	-0.8180 ppb	09:14:38
2	U 367.007†	1301.5	326.2	33.00 µg/L	33.00 ppb	09:14:18
2	V 292.402†	403.2	506.7	10.568 µg/L	10.568 ppb	09:14:38
2	Zn 213.857†	7774.3	6327.9	45.948 µg/L	45.948 ppb	09:14:38
3	Sc RADIAL	24289.7	24289.7	110 %		09:13:46
3	Al 396.153Radial†	19660.5	17966.0	5778.0 µg/L	5778.0 ppb	09:13:46
3	Ca 317.933Radial†	77875.4	70495.0	15097 µg/L	15097 ppb	09:13:46
3	Fe 238.204 Radial†	107936.7	98083.1	19090 µg/L	19090 ppb	09:13:41
3	K 766.490 Radial†	1224.0	691.0	626.12 µg/L	626.12 ppb	09:13:46
3	Mg 279.077 IEC†	4465.8	4003.5	6542.6 µg/L	6542.6 ppb	09:13:46
3	Na 589.592 Radial†	195.8	50.4	52.582 µg/L	52.582 ppb	09:13:46
3	Sr 421.552†	8497.7	7464.2	43.626 µg/L	43.626 ppb	09:13:46
3	Sc 361.383	395825.1	395825.1	108.09 %		09:14:43
3	Y 371.029	390802.8	390802.8	108.60 %		09:14:43
3	Ag 328.068†	-863.6	-115.3	1.6239 µg/L	1.6239 ppb	09:15:03
3	As 188.979†	-0.5	12.4	6.4727 µg/L	6.4727 ppb	09:15:03
3	B 249.677†	-1944.1	-1971.8	8.7701 µg/L	8.7701 ppb	09:15:03
3	Ba 233.527†	2826.7	2630.7	21.673 µg/L	21.673 ppb	09:15:03
3	Be 313.107†	-3273.3	545.6	0.6645 µg/L	0.6645 ppb	09:15:03
3	Cd 226.502†	-77.7	251.2	0.5264 µg/L	0.5264 ppb	09:15:03
3	Co 228.616†	556.5	737.3	16.848 µg/L	16.848 ppb	09:15:03
3	Cr 267.716†	624.1	455.4	9.1796 µg/L	9.1796 ppb	09:15:03
3	Cu 324.752†	4966.5	2674.7	20.844 µg/L	20.844 ppb	09:15:03
3	Mn 257.610†	277246.3	256042.9	403.34 µg/L	403.34 ppb	09:14:43
3	Mo 202.031†	63.5	25.8	1.8248 µg/L	1.8248 ppb	09:15:03
3	Ni 231.604†	1016.5	1144.4	32.013 µg/L	32.013 ppb	09:15:03
3	P 214.914†	766.1	577.1	367.88 µg/L	367.88 ppb	09:15:03
3	Pb 220.353†	165.5	216.6	27.529 µg/L	27.529 ppb	09:15:03
3	S 181.975 Axial†	5658.3	5142.6	6313.3 µg/L	6313.3 ppb	09:15:03
3	Sb 206.836†	173.8	6.2	-0.9811 µg/L	-0.9811 ppb	09:15:03
3	Se 196.026†	-29.5	-3.6	6.8053 µg/L	6.8053 ppb	09:15:03
3	SiO2†	10940.0	9056.1	1526.1 µg/L	1526.1 ppb	09:15:03
3	Si 251.611†	14154.7	13103.7	723.23 µg/L	723.23 ppb	09:15:03
3	Sn 189.927†	48.1	-3.1	-0.0070 µg/L	-0.0070 ppb	09:15:03
3	Ti 334.940†	9405.3	9423.1	40.765 µg/L	40.765 ppb	09:15:03
3	Tl 190.801†	-88.3	-3.4	1.1139 µg/L	1.1139 ppb	09:15:03
3	U 367.007†	1305.6	324.4	32.31 µg/L	32.31 ppb	09:14:43
3	V 292.402†	404.8	506.4	10.575 µg/L	10.575 ppb	09:15:03
3	Zn 213.857†	7724.9	6249.0	45.345 µg/L	45.345 ppb	09:15:03

Mean Data: 454474003|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	395094.9	107.89	%	0.263				0.24%
Sc RADIAL	24373.7	110	%	0.51				0.46%
Y 371.029	389899.0	108.35	%	0.315				0.29%
Ag 328.068†	-139.4	1.3817	µg/L	0.21291	1.3817	ppb	0.21291	15.41%
Al 396.153Radial†	17949.8	5772.9	µg/L	14.32	5772.9	ppb	14.32	0.25%
As 188.979†	14.3	7.3413	µg/L	1.34827	7.3413	ppb	1.34827	18.37%
B 249.677†	-1975.8	8.6682	µg/L	0.60166	8.6682	ppb	0.60166	6.94%
Ba 233.527†	2649.2	21.828	µg/L	0.1349	21.828	ppb	0.1349	0.62%
Be 313.107†	545.0	0.6636	µg/L	0.00901	0.6636	ppb	0.00901	1.36%
Ca 317.933Radial†	70554.7	15110	µg/L	13.94	15110	ppb	13.94	0.09%
Cd 226.502†	251.6	0.5303	µg/L	0.07542	0.5303	ppb	0.07542	14.22%
Co 228.616†	730.1	16.679	µg/L	0.1468	16.679	ppb	0.1468	0.88%
Cr 267.716†	444.1	8.9546	µg/L	0.35937	8.9546	ppb	0.35937	4.01%
Cu 324.752†	2683.0	20.904	µg/L	0.3312	20.904	ppb	0.3312	1.58%
Fe 238.204 Radial†	98122.0	19098	µg/L	28.05	19098	ppb	28.05	0.15%
K 766.490 Radial†	679.5	615.68	µg/L	9.100	615.68	ppb	9.100	1.48%
Mg 279.077 IEC†	3994.7	6528.2	µg/L	36.37	6528.2	ppb	36.37	0.56%
Mn 257.610†	255439.0	402.40	µg/L	0.903	402.40	ppb	0.903	0.22%
Mo 202.031†	13.4	1.1200	µg/L	0.71237	1.1200	ppb	0.71237	63.60%

Na 589.592 Radial†	52.8	56.213 µg/L	5.3343	56.213 ppb	5.3343	9.49%
Ni 231.604†	1147.5	32.098 µg/L	0.1759	32.098 ppb	0.1759	0.55%
P 214.914†	576.8	367.70 µg/L	1.054	367.70 ppb	1.054	0.29%
Pb 220.353†	202.7	25.807 µg/L	1.5859	25.807 ppb	1.5859	6.15%
S 181.975 Axial†	5170.9	6348.1 µg/L	34.28	6348.1 ppb	34.28	0.54%
Sb 206.836†	4.3	-1.5370 µg/L	2.39449	-1.5370 ppb	2.39449	155.79%
Se 196.026†	-8.3	4.5866 µg/L	4.08012	4.5866 ppb	4.08012	88.96%
SiO2†	9081.9	1530.5 µg/L	5.79	1530.5 ppb	5.79	0.38%
Si 251.611†	13138.2	725.14 µg/L	1.895	725.14 ppb	1.895	0.26%
Sn 189.927†	7.7	1.3319 µg/L	1.16596	1.3319 ppb	1.16596	87.54%
Sr 421.552†	7492.9	43.794 µg/L	0.3418	43.794 ppb	0.3418	0.78%
Ti 334.940†	9495.0	41.073 µg/L	0.2836	41.073 ppb	0.2836	0.69%
Tl 190.801†	-7.9	0.1532 µg/L	0.96601	0.1532 ppb	0.96601	630.62%
U 367.007†	318.7	30.27 µg/L	4.141	30.27 ppb	4.141	13.68%
V 292.402†	504.9	10.548 µg/L	0.0404	10.548 ppb	0.0404	0.38%
Zn 213.857†	6297.2	45.711 µg/L	0.3217	45.711 ppb	0.3217	0.70%

Sequence No.: 15 **Autosampler Location: 317**
Sample ID: 454474004|1782317|10| **Date Collected: 7/23/2018 09:15:12**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474004|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24599.8	24599.8	111	%			09:15:48
1	Al 396.153Radial†	37914.9	34125.3	10975	µg/L	10975	ppb	09:15:48
1	Ca 317.933Radial†	57424.0	51245.8	10975	µg/L	10975	ppb	09:15:48
1	Fe 238.204 Radial†	176450.5	158342.0	30818	µg/L	30818	ppb	09:15:43
1	K 766.490 Radial†	1456.6	885.8	799.33	µg/L	799.33	ppb	09:15:48
1	Mg 279.077 IEC†	5418.4	4807.3	7856.3	µg/L	7856.3	ppb	09:15:48
1	Na 589.592 Radial†	251.4	98.1	110.46	µg/L	110.46	ppb	09:15:48
1	Sr 421.552†	6582.7	5648.0	33.018	µg/L	33.018	ppb	09:15:48
1	Sc 361.383	399535.0	399535.0	109.10	%			09:16:15
1	Y 371.029	394793.7	394793.7	109.71	%			09:16:15
1	Ag 328.068†	-1143.6	-364.6	0.8464	µg/L	0.8464	ppb	09:16:15
1	As 188.979†	-0.5	12.3	7.0869	µg/L	7.0869	ppb	09:16:35
1	B 249.677†	-3367.0	-3259.3	11.683	µg/L	11.683	ppb	09:16:15
1	Ba 233.527†	7009.2	6440.0	53.447	µg/L	53.447	ppb	09:16:35
1	Be 313.107†	-2930.4	887.9	0.9089	µg/L	0.9089	ppb	09:16:15
1	Cd 226.502†	83.9	400.0	0.7785	µg/L	0.7785	ppb	09:16:35
1	Co 228.616†	404.1	592.8	13.368	µg/L	13.368	ppb	09:16:35
1	Cr 267.716†	1045.6	836.4	16.875	µg/L	16.875	ppb	09:16:35
1	Cu 324.752†	6926.2	4428.3	34.436	µg/L	34.436	ppb	09:16:15
1	Mn 257.610†	384500.7	351968.2	554.75	µg/L	554.75	ppb	09:16:15
1	Mo 202.031†	40.1	3.8	0.7956	µg/L	0.7956	ppb	09:16:35
1	Ni 231.604†	1070.7	1185.3	33.376	µg/L	33.376	ppb	09:16:35
1	P 214.914†	965.0	752.8	475.23	µg/L	475.23	ppb	09:16:35
1	Pb 220.353†	40.4	100.6	13.522	µg/L	13.522	ppb	09:16:35
1	S 181.975 Axial†	312.6	194.1	228.06	µg/L	228.06	ppb	09:16:35
1	Sb 206.836†	159.0	-8.8	-7.0232	µg/L	-7.0232	ppb	09:16:35
1	Se 196.026†	-60.4	-31.6	-1.2232	µg/L	-1.2232	ppb	09:16:35
1	SiO2†	22073.5	19166.9	3232.3	µg/L	3232.3	ppb	09:16:15
1	Si 251.611†	29775.6	27299.9	1507.5	µg/L	1507.5	ppb	09:16:15
1	Sn 189.927†	45.9	-5.4	0.2494	µg/L	0.2494	ppb	09:16:35
1	Ti 334.940†	24991.9	23628.6	101.05	µg/L	101.05	ppb	09:16:15
1	Tl 190.801†	-97.9	-11.5	0.6173	µg/L	0.6173	ppb	09:16:35
1	U 367.007†	1413.2	411.8	20.32	µg/L	20.32	ppb	09:16:15
1	V 292.402†	1168.9	1203.2	22.046	µg/L	22.046	ppb	09:16:15
1	Zn 213.857†	12111.2	10203.1	74.197	µg/L	74.197	ppb	09:16:15
2	Sc RADIAL	24697.8	24697.8	112	%			09:15:58
2	Al 396.153Radial†	37954.5	34025.8	10943	µg/L	10943	ppb	09:15:58
2	Ca 317.933Radial†	57462.7	51076.0	10938	µg/L	10938	ppb	09:15:58
2	Fe 238.204 Radial†	178478.8	159527.4	31049	µg/L	31049	ppb	09:15:53
2	K 766.490 Radial†	1498.9	918.4	828.90	µg/L	828.90	ppb	09:15:58
2	Mg 279.077 IEC†	5396.6	4768.6	7793.0	µg/L	7793.0	ppb	09:15:58
2	Na 589.592 Radial†	231.5	79.4	81.419	µg/L	81.419	ppb	09:15:58
2	Sr 421.552†	6529.1	5576.6	32.599	µg/L	32.599	ppb	09:15:58
2	Sc 361.383	400171.3	400171.3	109.28	%			09:16:40
2	Y 371.029	394825.5	394825.5	109.72	%			09:16:40
2	Ag 328.068†	-1081.4	-306.0	1.4744	µg/L	1.4744	ppb	09:16:40
2	As 188.979†	-2.0	11.0	6.5122	µg/L	6.5122	ppb	09:17:00
2	B 249.677†	-3287.7	-3181.8	15.156	µg/L	15.156	ppb	09:16:40
2	Ba 233.527†	7016.2	6436.2	53.409	µg/L	53.409	ppb	09:17:00
2	Be 313.107†	-2926.4	895.9	0.9141	µg/L	0.9141	ppb	09:16:40
2	Cd 226.502†	31.5	351.9	0.2545	µg/L	0.2545	ppb	09:17:00
2	Co 228.616†	433.1	618.8	13.964	µg/L	13.964	ppb	09:17:00
2	Cr 267.716†	1019.4	811.0	16.373	µg/L	16.373	ppb	09:17:00
2	Cu 324.752†	6936.3	4427.4	34.441	µg/L	34.441	ppb	09:16:40
2	Mn 257.610†	385211.4	352058.2	554.91	µg/L	554.91	ppb	09:16:40
2	Mo 202.031†	46.2	9.3	1.1106	µg/L	1.1106	ppb	09:17:00
2	Ni 231.604†	1055.6	1170.0	32.956	µg/L	32.956	ppb	09:17:00
2	P 214.914†	989.4	773.7	488.92	µg/L	488.92	ppb	09:17:00

2	Pb 220.353†	40.1	100.2	13.481 µg/L	13.481 ppb	09:17:00
2	S 181.975 Axial†	307.0	188.6	221.19 µg/L	221.19 ppb	09:17:00
2	Sb 206.836†	164.4	-4.1	-5.6912 µg/L	-5.6912 ppb	09:17:00
2	Se 196.026†	-38.4	-11.4	8.4255 µg/L	8.4255 ppb	09:17:00
2	SiO2†	22163.8	19217.4	3240.7 µg/L	3240.7 ppb	09:16:40
2	Si 251.611†	29721.9	27207.4	1502.3 µg/L	1502.3 ppb	09:16:40
2	Sn 189.927†	56.6	4.3	1.4616 µg/L	1.4616 ppb	09:17:00
2	Ti 334.940†	25132.1	23720.5	101.44 µg/L	101.44 ppb	09:16:40
2	Tl 190.801†	-92.5	-6.3	1.7332 µg/L	1.7332 ppb	09:17:00
2	U 367.007†	1404.7	402.0	16.01 µg/L	16.01 ppb	09:16:40
2	V 292.402†	1088.8	1128.3	21.114 µg/L	21.114 ppb	09:16:40
2	Zn 213.857†	12115.4	10189.2	74.070 µg/L	74.070 ppb	09:16:40
3	Sc RADIAL	24736.7	24736.7	112 %		09:16:08
3	Al 396.153Radial†	37928.9	33949.6	10919 µg/L	10919 ppb	09:16:08
3	Ca 317.933Radial†	57702.9	51209.7	10967 µg/L	10967 ppb	09:16:08
3	Fe 238.204 Radial†	177382.3	158297.8	30810 µg/L	30810 ppb	09:16:03
3	K 766.490 Radial†	1486.6	905.3	817.06 µg/L	817.06 ppb	09:16:08
3	Mg 279.077 IEC†	5381.8	4747.8	7758.9 µg/L	7758.9 ppb	09:16:08
3	Na 589.592 Radial†	231.6	79.2	81.460 µg/L	81.460 ppb	09:16:08
3	Sr 421.552†	6555.5	5591.0	32.684 µg/L	32.684 ppb	09:16:08
3	Sc 361.383	400652.5	400652.5	109.41 %		09:17:06
3	Y 371.029	395469.8	395469.8	109.89 %		09:17:06
3	Ag 328.068†	-1030.2	-257.9	1.9209 µg/L	1.9209 ppb	09:17:06
3	As 188.979†	-0.7	12.1	7.0158 µg/L	7.0158 ppb	09:17:26
3	B 249.677†	-3369.3	-3252.8	11.866 µg/L	11.866 ppb	09:17:06
3	Ba 233.527†	7037.9	6448.3	53.517 µg/L	53.517 ppb	09:17:26
3	Be 313.107†	-3029.2	805.2	0.8418 µg/L	0.8418 ppb	09:17:06
3	Cd 226.502†	69.2	386.3	0.6371 µg/L	0.6371 ppb	09:17:26
3	Co 228.616†	406.7	594.2	13.401 µg/L	13.401 ppb	09:17:26
3	Cr 267.716†	1030.1	819.6	16.533 µg/L	16.533 ppb	09:17:26
3	Cu 324.752†	6909.6	4395.4	34.198 µg/L	34.198 ppb	09:17:06
3	Mn 257.610†	384976.5	351420.1	553.89 µg/L	553.89 ppb	09:17:06
3	Mo 202.031†	57.7	19.8	1.7022 µg/L	1.7022 ppb	09:17:26
3	Ni 231.604†	1053.9	1167.2	32.876 µg/L	32.876 ppb	09:17:26
3	P 214.914†	969.4	754.3	476.22 µg/L	476.22 ppb	09:17:26
3	Pb 220.353†	64.2	122.2	16.189 µg/L	16.189 ppb	09:17:26
3	S 181.975 Axial†	319.3	199.5	234.63 µg/L	234.63 ppb	09:17:26
3	Sb 206.836†	176.3	6.5	-2.5956 µg/L	-2.5956 ppb	09:17:26
3	Se 196.026†	-48.5	-20.6	3.9814 µg/L	3.9814 ppb	09:17:26
3	SiO2†	22071.4	19108.5	3222.4 µg/L	3222.4 ppb	09:17:06
3	Si 251.611†	29797.6	27243.9	1504.3 µg/L	1504.3 ppb	09:17:06
3	Sn 189.927†	45.5	-5.9	0.1913 µg/L	0.1913 ppb	09:17:26
3	Ti 334.940†	25017.2	23587.8	100.88 µg/L	100.88 ppb	09:17:06
3	Tl 190.801†	-87.9	-2.1	2.6278 µg/L	2.6278 ppb	09:17:26
3	U 367.007†	1440.2	432.9	27.77 µg/L	27.77 ppb	09:17:06
3	V 292.402†	1178.9	1209.4	22.138 µg/L	22.138 ppb	09:17:06
3	Zn 213.857†	12148.7	10206.4	74.227 µg/L	74.227 ppb	09:17:06

Mean Data: 454474004|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	400119.6	109.26	%	0.153				0.14%
Sc RADIAL	24678.1	112	%	0.32				0.29%
Y 371.029	395029.7	109.77	%	0.106				0.10%
Ag 328.068†	-309.5	1.4139	µg/L	0.53978	1.4139	ppb	0.53978	38.18%
Al 396.153Radial†	34033.6	10946	µg/L	28.36	10946	ppb	28.36	0.26%
As 188.979†	11.8	6.8716	µg/L	0.31333	6.8716	ppb	0.31333	4.56%
B 249.677†	-3231.3	12.901	µg/L	1.9542	12.901	ppb	1.9542	15.15%
Ba 233.527†	6441.5	53.458	µg/L	0.0547	53.458	ppb	0.0547	0.10%
Be 313.107†	863.0	0.8883	µg/L	0.04035	0.8883	ppb	0.04035	4.54%
Ca 317.933Radial†	51177.2	10960	µg/L	19.16	10960	ppb	19.16	0.17%
Cd 226.502†	379.4	0.5567	µg/L	0.27110	0.5567	ppb	0.27110	48.70%
Co 228.616†	601.9	13.578	µg/L	0.3352	13.578	ppb	0.3352	2.47%
Cr 267.716†	822.3	16.594	µg/L	0.2566	16.594	ppb	0.2566	1.55%
Cu 324.752†	4417.0	34.358	µg/L	0.1388	34.358	ppb	0.1388	0.40%
Fe 238.204 Radial†	158722.4	30892	µg/L	135.75	30892	ppb	135.75	0.44%
K 766.490 Radial†	903.1	815.09	µg/L	14.882	815.09	ppb	14.882	1.83%
Mg 279.077 IEC†	4774.6	7802.8	µg/L	49.42	7802.8	ppb	49.42	0.63%
Mn 257.610†	351815.5	554.52	µg/L	0.548	554.52	ppb	0.548	0.10%
Mo 202.031†	11.0	1.2028	µg/L	0.46027	1.2028	ppb	0.46027	38.27%

Na 589.592 Radial†	85.5	91.112 µg/L	16.7541	91.112 ppb	16.7541	18.39%
Ni 231.604†	1174.2	33.069 µg/L	0.2684	33.069 ppb	0.2684	0.81%
P 214.914†	760.3	480.13 µg/L	7.634	480.13 ppb	7.634	1.59%
Pb 220.353†	107.7	14.398 µg/L	1.5518	14.398 ppb	1.5518	10.78%
S 181.975 Axial†	194.1	227.96 µg/L	6.718	227.96 ppb	6.718	2.95%
Sb 206.836†	-2.2	-5.1033 µg/L	2.27155	-5.1033 ppb	2.27155	44.51%
Se 196.026†	-21.2	3.7279 µg/L	4.82932	3.7279 ppb	4.82932	129.55%
SiO2†	19164.2	3231.8 µg/L	9.19	3231.8 ppb	9.19	0.28%
Si 251.611†	27250.4	1504.7 µg/L	2.59	1504.7 ppb	2.59	0.17%
Sn 189.927†	-2.4	0.6341 µg/L	0.71722	0.6341 ppb	0.71722	113.11%
Sr 421.552†	5605.2	32.767 µg/L	0.2216	32.767 ppb	0.2216	0.68%
Ti 334.940†	23645.6	101.12 µg/L	0.291	101.12 ppb	0.291	0.29%
Tl 190.801†	-6.6	1.6594 µg/L	1.00727	1.6594 ppb	1.00727	60.70%
U 367.007†	415.6	21.37 µg/L	5.950	21.37 ppb	5.950	27.85%
V 292.402†	1180.3	21.766 µg/L	0.5664	21.766 ppb	0.5664	2.60%
Zn 213.857†	10199.6	74.165 µg/L	0.0833	74.165 ppb	0.0833	0.11%

Sequence No.: 16 **Autosampler Location: 318**
Sample ID: 454474005|1782317|10| **Date Collected: 7/23/2018 09:17:34**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474005|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24923.4	24923.4	113	%			09:18:10
1	Al 396.153Radial†	36665.7	32576.9	10477	µg/L	10477	ppb	09:18:10
1	Ca 317.933Radial†	181098.8	160142.9	34296	µg/L	34296	ppb	09:18:05
1	Fe 238.204 Radial†	166229.0	147230.7	28656	µg/L	28656	ppb	09:18:05
1	K 766.490 Radial†	1967.5	1321.4	1200.3	µg/L	1200.3	ppb	09:18:10
1	Mg 279.077 IEC†	7374.6	6477.3	10585	µg/L	10585	ppb	09:18:10
1	Na 589.592 Radial†	199.2	48.9	37.638	µg/L	37.638	ppb	09:18:10
1	Sr 421.552†	20288.1	17713.2	103.55	µg/L	103.55	ppb	09:18:10
1	Sc 361.383	398296.9	398296.9	108.76	%			09:18:36
1	Y 371.029	392353.3	392353.3	109.03	%			09:18:36
1	Ag 328.068†	-1005.1	-240.4	1.7711	µg/L	1.7711	ppb	09:18:57
1	As 188.979†	0.2	13.0	7.2870	µg/L	7.2870	ppb	09:18:57
1	B 249.677†	-3004.1	-2935.3	14.025	µg/L	14.025	ppb	09:18:57
1	Ba 233.527†	11206.1	10318.7	86.147	µg/L	86.147	ppb	09:18:57
1	Be 313.107†	-3192.6	638.6	0.9849	µg/L	0.9849	ppb	09:18:57
1	Cd 226.502†	61.2	379.3	0.8002	µg/L	0.8002	ppb	09:18:57
1	Co 228.616†	445.7	632.2	14.306	µg/L	14.306	ppb	09:18:57
1	Cr 267.716†	1057.0	849.9	17.141	µg/L	17.141	ppb	09:18:57
1	Cu 324.752†	6688.2	4229.2	32.853	µg/L	32.853	ppb	09:18:57
1	Mn 257.610†	391907.5	359873.7	567.02	µg/L	567.02	ppb	09:18:36
1	Mo 202.031†	54.5	17.1	1.5106	µg/L	1.5106	ppb	09:18:57
1	Ni 231.604†	1050.6	1169.9	32.907	µg/L	32.907	ppb	09:18:57
1	P 214.914†	890.6	687.1	433.37	µg/L	433.37	ppb	09:18:57
1	Pb 220.353†	35.9	96.6	13.477	µg/L	13.477	ppb	09:18:57
1	S 181.975 Axial†	6327.2	5725.0	7025.6	µg/L	7025.6	ppb	09:18:57
1	Sb 206.836†	176.2	7.4	-2.0518	µg/L	-2.0518	ppb	09:18:57
1	Se 196.026†	-54.8	-26.6	0.1824	µg/L	0.1824	ppb	09:18:57
1	SiO2†	16718.5	14306.2	2411.2	µg/L	2411.2	ppb	09:18:57
1	Si 251.611†	22413.5	20615.8	1138.0	µg/L	1138.0	ppb	09:18:57
1	Sn 189.927†	79.2	25.3	3.6872	µg/L	3.6872	ppb	09:18:57
1	Ti 334.940†	25082.5	23783.1	102.77	µg/L	102.77	ppb	09:18:36
1	Tl 190.801†	-97.4	-11.2	0.4774	µg/L	0.4774	ppb	09:18:57
1	U 367.007†	1453.0	452.5	29.83	µg/L	29.83	ppb	09:18:36
1	V 292.402†	1088.2	1132.4	20.694	µg/L	20.694	ppb	09:18:57
1	Zn 213.857†	10632.4	8877.9	64.368	µg/L	64.368	ppb	09:18:57
2	Sc RADIAL	24661.3	24661.3	112	%			09:18:20
2	Al 396.153Radial†	36441.9	32721.7	10524	µg/L	10524	ppb	09:18:20
2	Ca 317.933Radial†	182037.6	162688.4	34841	µg/L	34841	ppb	09:18:15
2	Fe 238.204 Radial†	166982.7	149470.5	29092	µg/L	29092	ppb	09:18:15
2	K 766.490 Radial†	1940.5	1315.7	1195.1	µg/L	1195.1	ppb	09:18:20
2	Mg 279.077 IEC†	7275.9	6458.3	10554	µg/L	10554	ppb	09:18:20
2	Na 589.592 Radial†	224.9	73.8	75.354	µg/L	75.354	ppb	09:18:20
2	Sr 421.552†	20251.1	17871.0	104.47	µg/L	104.47	ppb	09:18:20
2	Sc 361.383	394377.5	394377.5	107.69	%			09:19:02
2	Y 371.029	388219.6	388219.6	107.88	%			09:19:02
2	Ag 328.068†	-1049.7	-291.0	1.3121	µg/L	1.3121	ppb	09:19:22
2	As 188.979†	-6.4	6.9	4.6110	µg/L	4.6110	ppb	09:19:22
2	B 249.677†	-2976.4	-2937.0	15.664	µg/L	15.664	ppb	09:19:22
2	Ba 233.527†	11260.7	10471.8	87.425	µg/L	87.425	ppb	09:19:22
2	Be 313.107†	-3255.0	551.5	0.9240	µg/L	0.9240	ppb	09:19:22
2	Cd 226.502†	61.3	380.0	0.7596	µg/L	0.7596	ppb	09:19:22
2	Co 228.616†	463.6	652.9	14.782	µg/L	14.782	ppb	09:19:22
2	Cr 267.716†	1079.7	880.6	17.743	µg/L	17.743	ppb	09:19:22
2	Cu 324.752†	6739.3	4337.7	33.689	µg/L	33.689	ppb	09:19:22
2	Mn 257.610†	389130.4	360876.1	568.63	µg/L	568.63	ppb	09:19:02
2	Mo 202.031†	50.2	13.6	1.3203	µg/L	1.3203	ppb	09:19:22
2	Ni 231.604†	1043.9	1173.3	33.008	µg/L	33.008	ppb	09:19:22
2	P 214.914†	920.9	723.4	457.13	µg/L	457.13	ppb	09:19:22

2	Pb 220.353†	58.5	117.9	16.110 µg/L	16.110 ppb	09:19:22
2	S 181.975 Axial†	6366.5	5819.4	7141.4 µg/L	7141.4 ppb	09:19:22
2	Sb 206.836†	156.0	-9.7	-7.0385 µg/L	-7.0385 ppb	09:19:22
2	Se 196.026†	-51.7	-24.3	1.4737 µg/L	1.4737 ppb	09:19:22
2	SiO2†	16798.7	14533.4	2449.6 µg/L	2449.6 ppb	09:19:22
2	Si 251.611†	22535.0	20933.4	1155.5 µg/L	1155.5 ppb	09:19:22
2	Sn 189.927†	75.9	23.0	3.4103 µg/L	3.4103 ppb	09:19:22
2	Ti 334.940†	24990.4	23926.7	103.40 µg/L	103.40 ppb	09:19:02
2	Tl 190.801†	-106.1	-20.2	-1.3972 µg/L	-1.3972 ppb	09:19:22
2	U 367.007†	1499.4	508.8	47.66 µg/L	47.66 ppb	09:19:02
2	V 292.402†	1058.5	1114.7	20.563 µg/L	20.563 ppb	09:19:22
2	Zn 213.857†	10734.7	9070.0	65.785 µg/L	65.785 ppb	09:19:22
3	Sc RADIAL	24993.7	24993.7	113 %		09:18:30
3	Al 396.153Radial†	36561.2	32393.2	10418 µg/L	10418 ppb	09:18:30
3	Ca 317.933Radial†	183413.1	161736.0	34637 µg/L	34637 ppb	09:18:25
3	Fe 238.204 Radial†	168459.0	148786.4	28959 µg/L	28959 ppb	09:18:25
3	K 766.490 Radial†	2034.4	1375.6	1249.6 µg/L	1249.6 ppb	09:18:30
3	Mg 279.077 IEC†	7313.8	6405.2	10468 µg/L	10468 ppb	09:18:30
3	Na 589.592 Radial†	218.8	65.8	63.217 µg/L	63.217 ppb	09:18:30
3	Sr 421.552†	20282.6	17657.7	103.22 µg/L	103.22 ppb	09:18:30
3	Sc 361.383	394300.5	394300.5	107.67 %		09:19:27
3	Y 371.029	388343.8	388343.8	107.91 %		09:19:27
3	Ag 328.068†	-1046.2	-288.0	1.3311 µg/L	1.3311 ppb	09:19:47
3	As 188.979†	0.6	13.4	7.4668 µg/L	7.4668 ppb	09:19:47
3	B 249.677†	-2968.4	-2930.1	15.375 µg/L	15.375 ppb	09:19:47
3	Ba 233.527†	11221.6	10437.5	87.140 µg/L	87.140 ppb	09:19:47
3	Be 313.107†	-3222.0	581.5	0.9431 µg/L	0.9431 ppb	09:19:47
3	Cd 226.502†	79.0	396.5	0.9450 µg/L	0.9450 ppb	09:19:47
3	Co 228.616†	454.3	644.4	14.586 µg/L	14.586 ppb	09:19:47
3	Cr 267.716†	1061.2	863.7	17.411 µg/L	17.411 ppb	09:19:47
3	Cu 324.752†	6728.6	4329.1	33.609 µg/L	33.609 ppb	09:19:47
3	Mn 257.610†	389768.7	361539.4	569.66 µg/L	569.66 ppb	09:19:27
3	Mo 202.031†	56.7	19.7	1.6599 µg/L	1.6599 ppb	09:19:47
3	Ni 231.604†	1017.8	1149.3	32.342 µg/L	32.342 ppb	09:19:47
3	P 214.914†	912.8	716.1	452.33 µg/L	452.33 ppb	09:19:47
3	Pb 220.353†	27.6	89.2	12.563 µg/L	12.563 ppb	09:19:47
3	S 181.975 Axial†	6351.3	5806.5	7125.6 µg/L	7125.6 ppb	09:19:47
3	Sb 206.836†	169.1	2.5	-3.5162 µg/L	-3.5162 ppb	09:19:47
3	Se 196.026†	-39.2	-12.7	6.8903 µg/L	6.8903 ppb	09:19:47
3	SiO2†	16773.1	14512.7	2446.1 µg/L	2446.1 ppb	09:19:47
3	Si 251.611†	22527.1	20930.2	1155.3 µg/L	1155.3 ppb	09:19:47
3	Sn 189.927†	54.6	3.2	0.9488 µg/L	0.9488 ppb	09:19:47
3	Ti 334.940†	24926.3	23871.8	103.16 µg/L	103.16 ppb	09:19:27
3	Tl 190.801†	-100.5	-15.0	-0.3033 µg/L	-0.3033 ppb	09:19:47
3	U 367.007†	1456.9	469.7	34.52 µg/L	34.52 ppb	09:19:27
3	V 292.402†	1073.4	1128.8	20.715 µg/L	20.715 ppb	09:19:47
3	Zn 213.857†	10696.8	9036.8	65.551 µg/L	65.551 ppb	09:19:47

Mean Data: 454474005|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	395658.3	108.04	%	0.624				0.58%
Sc RADIAL	24859.4	113	%	0.79				0.70%
Y 371.029	389638.9	108.27	%	0.653				0.60%
Ag 328.068†	-273.1	1.4714	µg/L	0.25971	1.4714	ppb	0.25971	17.65%
Al 396.153Radial†	32563.9	10473	µg/L	52.96	10473	ppb	52.96	0.51%
As 188.979†	11.1	6.4549	µg/L	1.59943	6.4549	ppb	1.59943	24.78%
B 249.677†	-2934.1	15.021	µg/L	0.8746	15.021	ppb	0.8746	5.82%
Ba 233.527†	10409.4	86.904	µg/L	0.6707	86.904	ppb	0.6707	0.77%
Be 313.107†	590.5	0.9507	µg/L	0.03111	0.9507	ppb	0.03111	3.27%
Ca 317.933Radial†	161522.4	34591	µg/L	275.43	34591	ppb	275.43	0.80%
Cd 226.502†	385.3	0.8349	µg/L	0.09746	0.8349	ppb	0.09746	11.67%
Co 228.616†	643.2	14.558	µg/L	0.2388	14.558	ppb	0.2388	1.64%
Cr 267.716†	864.7	17.432	µg/L	0.3015	17.432	ppb	0.3015	1.73%
Cu 324.752†	4298.7	33.384	µg/L	0.4608	33.384	ppb	0.4608	1.38%
Fe 238.204 Radial†	148495.9	28902	µg/L	223.40	28902	ppb	223.40	0.77%
K 766.490 Radial†	1337.6	1215.0	µg/L	30.05	1215.0	ppb	30.05	2.47%
Mg 279.077 IEC†	6446.9	10536	µg/L	61.05	10536	ppb	61.05	0.58%
Mn 257.610†	360763.1	568.44	µg/L	1.328	568.44	ppb	1.328	0.23%
Mo 202.031†	16.8	1.4969	µg/L	0.17022	1.4969	ppb	0.17022	11.37%

Na 589.592 Radial†	62.8	58.736 µg/L	19.2528	58.736 ppb	19.2528	32.78%
Ni 231.604†	1164.1	32.752 µg/L	0.3587	32.752 ppb	0.3587	1.10%
P 214.914†	708.9	447.61 µg/L	12.563	447.61 ppb	12.563	2.81%
Pb 220.353†	101.2	14.050 µg/L	1.8416	14.050 ppb	1.8416	13.11%
S 181.975 Axial†	5783.6	7097.6 µg/L	62.78	7097.6 ppb	62.78	0.88%
Sb 206.836†	0.1	-4.2022 µg/L	2.56316	-4.2022 ppb	2.56316	61.00%
Se 196.026†	-21.2	2.8488 µg/L	3.55908	2.8488 ppb	3.55908	124.93%
SiO2†	14450.8	2435.6 µg/L	21.19	2435.6 ppb	21.19	0.87%
Si 251.611†	20826.5	1149.6 µg/L	10.07	1149.6 ppb	10.07	0.88%
Sn 189.927†	17.1	2.6821 µg/L	1.50745	2.6821 ppb	1.50745	56.20%
Sr 421.552†	17747.3	103.75 µg/L	0.648	103.75 ppb	0.648	0.62%
Ti 334.940†	23860.5	103.11 µg/L	0.317	103.11 ppb	0.317	0.31%
Tl 190.801†	-15.5	-0.4077 µg/L	0.94166	-0.4077 ppb	0.94166	230.97%
U 367.007†	477.0	37.34 µg/L	9.245	37.34 ppb	9.245	24.76%
V 292.402†	1125.3	20.658 µg/L	0.0823	20.658 ppb	0.0823	0.40%
Zn 213.857†	8994.9	65.235 µg/L	0.7599	65.235 ppb	0.7599	1.16%

Sequence No.: 17 **Autosampler Location: 319**
Sample ID: 454474006|1782317|10| **Date Collected: 7/23/2018 09:19:56**
Analyst: HSC **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: 454474006|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25113.9	25113.9	114	%			09:20:32
1	Al 396.153Radial†	39023.5	34403.4	11065	µg/L	11065	ppb	09:20:32
1	Ca 317.933Radial†	71497.9	62564.5	13399	µg/L	13399	ppb	09:20:32
1	Fe 238.204 Radial†	171324.3	150593.0	29310	µg/L	29310	ppb	09:20:27
1	K 766.490 Radial†	1717.4	1088.3	984.20	µg/L	984.20	ppb	09:20:32
1	Mg 279.077 IEC†	5431.7	4719.5	7712.8	µg/L	7712.8	ppb	09:20:32
1	Na 589.592 Radial†	191.6	40.9	24.564	µg/L	24.564	ppb	09:20:32
1	Sr 421.552†	8518.5	7228.9	42.272	µg/L	42.272	ppb	09:20:32
1	Sc 361.383	402118.3	402118.3	109.81	%			09:20:59
1	Y 371.029	397255.5	397255.5	110.39	%			09:20:59
1	Ag 328.068†	-1185.2	-395.6	0.2956	µg/L	0.2956	ppb	09:20:59
1	As 188.979†	-7.1	6.3	4.3680	µg/L	4.3680	ppb	09:21:19
1	B 249.677†	-3175.0	-3064.7	12.272	µg/L	12.272	ppb	09:20:59
1	Ba 233.527†	9688.8	8839.0	73.676	µg/L	73.676	ppb	09:21:19
1	Be 313.107†	-2910.2	923.6	0.9714	µg/L	0.9714	ppb	09:20:59
1	Cd 226.502†	28.3	348.9	0.4099	µg/L	0.4099	ppb	09:21:19
1	Co 228.616†	461.0	642.3	14.489	µg/L	14.489	ppb	09:21:19
1	Cr 267.716†	1064.3	847.3	17.053	µg/L	17.053	ppb	09:21:19
1	Cu 324.752†	6580.6	4072.8	31.745	µg/L	31.745	ppb	09:20:59
1	Mn 257.610†	386048.3	351113.5	553.31	µg/L	553.31	ppb	09:20:59
1	Mo 202.031†	50.5	13.1	1.2921	µg/L	1.2921	ppb	09:21:19
1	Ni 231.604†	1071.2	1179.5	33.186	µg/L	33.186	ppb	09:21:19
1	P 214.914†	894.2	682.6	429.91	µg/L	429.91	ppb	09:21:19
1	Pb 220.353†	48.9	108.1	14.500	µg/L	14.500	ppb	09:21:19
1	S 181.975 Axial†	543.8	402.9	484.96	µg/L	484.96	ppb	09:21:19
1	Sb 206.836†	174.5	4.4	-3.0095	µg/L	-3.0095	ppb	09:21:19
1	Se 196.026†	-46.9	-19.0	4.0767	µg/L	4.0767	ppb	09:21:19
1	SiO2†	21172.0	18215.9	3071.9	µg/L	3071.9	ppb	09:20:59
1	Si 251.611†	28343.4	25820.3	1425.7	µg/L	1425.7	ppb	09:20:59
1	Sn 189.927†	56.1	3.6	1.3787	µg/L	1.3787	ppb	09:21:19
1	Ti 334.940†	30335.7	28348.0	121.26	µg/L	121.26	ppb	09:20:59
1	Tl 190.801†	-91.5	-5.0	1.9248	µg/L	1.9248	ppb	09:21:19
1	U 367.007†	1470.3	455.5	40.12	µg/L	40.12	ppb	09:20:59
1	V 292.402†	1063.4	1100.3	20.397	µg/L	20.397	ppb	09:21:19
1	Zn 213.857†	12066.2	10090.8	73.528	µg/L	73.528	ppb	09:20:59
2	Sc RADIAL	25232.4	25232.4	114	%			09:20:42
2	Al 396.153Radial†	39068.3	34281.5	11025	µg/L	11025	ppb	09:20:42
2	Ca 317.933Radial†	71728.4	62471.0	13379	µg/L	13379	ppb	09:20:42
2	Fe 238.204 Radial†	172456.2	150876.0	29365	µg/L	29365	ppb	09:20:37
2	K 766.490 Radial†	1742.1	1102.8	997.38	µg/L	997.38	ppb	09:20:42
2	Mg 279.077 IEC†	5403.2	4672.1	7635.2	µg/L	7635.2	ppb	09:20:42
2	Na 589.592 Radial†	137.7	-7.1	-49.308	µg/L	-49.308	ppb	09:20:42
2	Sr 421.552†	8444.6	7129.1	41.686	µg/L	41.686	ppb	09:20:42
2	Sc 361.383	401338.3	401338.3	109.59	%			09:21:24
2	Y 371.029	396367.0	396367.0	110.14	%			09:21:24
2	Ag 328.068†	-1091.1	-311.9	1.1583	µg/L	1.1583	ppb	09:21:24
2	As 188.979†	-7.5	6.0	4.2226	µg/L	4.2226	ppb	09:21:44
2	B 249.677†	-3186.0	-3080.3	11.969	µg/L	11.969	ppb	09:21:24
2	Ba 233.527†	9686.7	8854.2	73.803	µg/L	73.803	ppb	09:21:44
2	Be 313.107†	-2810.0	1009.9	1.0405	µg/L	1.0405	ppb	09:21:24
2	Cd 226.502†	23.3	344.4	0.3569	µg/L	0.3569	ppb	09:21:44
2	Co 228.616†	447.0	630.3	14.210	µg/L	14.210	ppb	09:21:44
2	Cr 267.716†	1042.6	829.4	16.702	µg/L	16.702	ppb	09:21:44
2	Cu 324.752†	6486.3	3998.3	31.197	µg/L	31.197	ppb	09:21:24
2	Mn 257.610†	386681.3	352374.4	555.30	µg/L	555.30	ppb	09:21:24
2	Mo 202.031†	36.7	0.5	0.5822	µg/L	0.5822	ppb	09:21:44
2	Ni 231.604†	1065.0	1175.7	33.082	µg/L	33.082	ppb	09:21:44
2	P 214.914†	868.5	660.8	415.33	µg/L	415.33	ppb	09:21:44

2	Pb 220.353†	39.3	99.3	13.423 µg/L	13.423 ppb	09:21:44
2	S 181.975 Axial†	538.9	399.4	480.65 µg/L	480.65 ppb	09:21:44
2	Sb 206.836†	155.2	-13.0	-7.9821 µg/L	-7.9821 ppb	09:21:44
2	Se 196.026†	-51.9	-23.6	1.9156 µg/L	1.9156 ppb	09:21:44
2	SiO2†	21170.0	18251.5	3077.9 µg/L	3077.9 ppb	09:21:24
2	Si 251.611†	28471.0	25986.9	1435.0 µg/L	1435.0 ppb	09:21:24
2	Sn 189.927†	45.3	-6.2	0.1638 µg/L	0.1638 ppb	09:21:44
2	Ti 334.940†	30368.4	28431.5	121.61 µg/L	121.61 ppb	09:21:24
2	Tl 190.801†	-97.2	-10.4	0.7723 µg/L	0.7723 ppb	09:21:44
2	U 367.007†	1439.1	429.6	30.82 µg/L	30.82 ppb	09:21:24
2	V 292.402†	1117.3	1151.3	21.061 µg/L	21.061 ppb	09:21:44
2	Zn 213.857†	12123.0	10164.0	74.082 µg/L	74.082 ppb	09:21:24
3	Sc RADIAL	25015.7	25015.7	113 %		09:20:52
3	Al 396.153Radial†	38938.7	34463.3	11084 µg/L	11084 ppb	09:20:52
3	Ca 317.933Radial†	71574.3	62878.8	13466 µg/L	13466 ppb	09:20:52
3	Fe 238.204 Radial†	173723.7	153302.5	29838 µg/L	29838 ppb	09:20:47
3	K 766.490 Radial†	1652.6	1037.0	937.49 µg/L	937.49 ppb	09:20:52
3	Mg 279.077 IEC†	5447.0	4751.7	7765.4 µg/L	7765.4 ppb	09:20:52
3	Na 589.592 Radial†	196.9	46.2	32.056 µg/L	32.056 ppb	09:20:52
3	Sr 421.552†	8473.6	7218.7	42.211 µg/L	42.211 ppb	09:20:52
3	Sc 361.383	401247.9	401247.9	109.57 %		09:21:50
3	Y 371.029	396230.7	396230.7	110.11 %		09:21:50
3	Ag 328.068†	-1132.4	-349.8	0.8504 µg/L	0.8504 ppb	09:21:50
3	As 188.979†	-1.3	11.6	6.7269 µg/L	6.7269 ppb	09:22:10
3	B 249.677†	-3223.9	-3115.5	12.637 µg/L	12.637 ppb	09:21:50
3	Ba 233.527†	9662.8	8834.4	73.624 µg/L	73.624 ppb	09:22:10
3	Be 313.107†	-2920.3	908.6	0.9553 µg/L	0.9553 ppb	09:21:50
3	Cd 226.502†	20.2	341.5	0.2755 µg/L	0.2755 ppb	09:22:10
3	Co 228.616†	457.6	640.1	14.436 µg/L	14.436 ppb	09:22:10
3	Cr 267.716†	1059.6	845.2	17.035 µg/L	17.035 ppb	09:22:10
3	Cu 324.752†	6485.9	3999.4	31.227 µg/L	31.227 ppb	09:21:50
3	Mn 257.610†	384364.8	350339.7	552.13 µg/L	552.13 ppb	09:21:50
3	Mo 202.031†	45.7	8.8	1.0590 µg/L	1.0590 ppb	09:22:10
3	Ni 231.604†	1058.6	1170.1	32.935 µg/L	32.935 ppb	09:22:10
3	P 214.914†	869.0	661.4	415.36 µg/L	415.36 ppb	09:22:10
3	Pb 220.353†	56.8	115.4	15.420 µg/L	15.420 ppb	09:22:10
3	S 181.975 Axial†	537.1	397.8	478.62 µg/L	478.62 ppb	09:22:10
3	Sb 206.836†	169.2	-0.2	-4.3776 µg/L	-4.3776 ppb	09:22:10
3	Se 196.026†	-49.3	-21.2	3.2453 µg/L	3.2453 ppb	09:22:10
3	SiO2†	21108.0	18199.3	3068.9 µg/L	3068.9 ppb	09:21:50
3	Si 251.611†	28212.8	25757.1	1422.2 µg/L	1422.2 ppb	09:21:50
3	Sn 189.927†	53.3	1.1	1.0823 µg/L	1.0823 ppb	09:22:10
3	Ti 334.940†	30247.0	28326.9	121.18 µg/L	121.18 ppb	09:21:50
3	Tl 190.801†	-106.1	-18.6	-0.9354 µg/L	-0.9354 ppb	09:22:10
3	U 367.007†	1410.1	403.4	19.75 µg/L	19.75 ppb	09:21:50
3	V 292.402†	1116.4	1150.8	21.150 µg/L	21.150 ppb	09:22:10
3	Zn 213.857†	11991.8	10046.7	73.137 µg/L	73.137 ppb	09:21:50

Mean Data: 454474006|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	401568.2	109.66	%	0.131				0.12%
Sc RADIAL	25120.7	114	%	0.49				0.43%
Y 371.029	396617.7	110.21	%	0.155				0.14%
Ag 328.068†	-352.4	0.7681	µg/L	0.43720	0.7681	ppb	0.43720	56.92%
Al 396.153Radial†	34382.7	11058	µg/L	29.79	11058	ppb	29.79	0.27%
As 188.979†	8.0	5.1058	µg/L	1.40575	5.1058	ppb	1.40575	27.53%
B 249.677†	-3086.8	12.293	µg/L	0.3344	12.293	ppb	0.3344	2.72%
Ba 233.527†	8842.5	73.701	µg/L	0.0918	73.701	ppb	0.0918	0.12%
Be 313.107†	947.4	0.9891	µg/L	0.04529	0.9891	ppb	0.04529	4.58%
Ca 317.933Radial†	62638.1	13414	µg/L	45.76	13414	ppb	45.76	0.34%
Cd 226.502†	344.9	0.3474	µg/L	0.06770	0.3474	ppb	0.06770	19.49%
Co 228.616†	637.5	14.378	µg/L	0.1482	14.378	ppb	0.1482	1.03%
Cr 267.716†	840.7	16.930	µg/L	0.1977	16.930	ppb	0.1977	1.17%
Cu 324.752†	4023.5	31.390	µg/L	0.3083	31.390	ppb	0.3083	0.98%
Fe 238.204 Radial†	151590.5	29504	µg/L	289.88	29504	ppb	289.88	0.98%
K 766.490 Radial†	1076.0	973.02	µg/L	31.472	973.02	ppb	31.472	3.23%
Mg 279.077 IEC†	4714.4	7704.5	µg/L	65.49	7704.5	ppb	65.49	0.85%
Mn 257.610†	351275.9	553.58	µg/L	1.600	553.58	ppb	1.600	0.29%
Mo 202.031†	7.5	0.9778	µg/L	0.36184	0.9778	ppb	0.36184	37.01%

Na 589.592 Radial†	26.7	2.4373 µg/L	44.96932	2.4373 ppb	44.96932	>999.9%
Ni 231.604†	1175.1	33.068 µg/L	0.1258	33.068 ppb	0.1258	0.38%
P 214.914†	668.3	420.20 µg/L	8.407	420.20 ppb	8.407	2.00%
Pb 220.353†	107.6	14.448 µg/L	0.9995	14.448 ppb	0.9995	6.92%
S 181.975 Axial†	400.0	481.41 µg/L	3.234	481.41 ppb	3.234	0.67%
Sb 206.836†	-2.9	-5.1231 µg/L	2.56875	-5.1231 ppb	2.56875	50.14%
Se 196.026†	-21.2	3.0792 µg/L	1.09010	3.0792 ppb	1.09010	35.40%
SiO2†	18222.2	3072.9 µg/L	4.57	3072.9 ppb	4.57	0.15%
Si 251.611†	25854.7	1427.6 µg/L	6.58	1427.6 ppb	6.58	0.46%
Sn 189.927†	-0.5	0.8750 µg/L	0.63346	0.8750 ppb	0.63346	72.40%
Sr 421.552†	7192.3	42.056 µg/L	0.3225	42.056 ppb	0.3225	0.77%
Ti 334.940†	28368.8	121.35 µg/L	0.233	121.35 ppb	0.233	0.19%
Tl 190.801†	-11.3	0.5872 µg/L	1.43905	0.5872 ppb	1.43905	245.07%
U 367.007†	429.5	30.23 µg/L	10.200	30.23 ppb	10.200	33.74%
V 292.402†	1134.2	20.870 µg/L	0.4119	20.870 ppb	0.4119	1.97%
Zn 213.857†	10100.5	73.582 µg/L	0.4750	73.582 ppb	0.4750	0.65%

Sequence No.: 18 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 09:22:18**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24666.6	24666.6	112	%			09:22:56
1	Al 396.153Radial†	16989.0	15301.6	4899.0	µg/L	4899.0	ppb	09:22:56
1	Ca 317.933Radial†	26888.3	23772.6	5091.0	µg/L	5091.0	ppb	09:22:56
1	Fe 238.204 Radial†	28854.8	25794.2	5020.4	µg/L	5020.4	ppb	09:22:56
1	K 766.490 Radial†	6263.9	5185.4	4712.0	µg/L	4712.0	ppb	09:22:56
1	Mg 279.077 IEC†	3599.7	3166.2	5174.3	µg/L	5174.3	ppb	09:22:56
1	Na 589.592 Radial†	7070.3	6201.4	9529.5	µg/L	9529.5	ppb	09:22:56
1	Sr 421.552†	90410.5	80669.9	474.28	µg/L	474.28	ppb	09:22:51
1	Sc 361.383	400116.2	400116.2	109.26	%			09:23:24
1	Y 371.029	391068.6	391068.6	108.67	%			09:23:24
1	Ag 328.068†	50769.9	47150.6	478.84	µg/L	478.84	ppb	09:23:24
1	As 188.979†	1236.3	1144.3	507.39	µg/L	507.39	ppb	09:23:44
1	B 249.677†	16152.0	14609.8	503.28	µg/L	503.28	ppb	09:23:24
1	Ba 233.527†	62585.9	57297.1	482.15	µg/L	482.15	ppb	09:23:24
1	Be 313.107†	633505.3	583387.8	485.00	µg/L	485.00	ppb	09:23:24
1	Cd 226.502†	51550.9	47504.9	492.51	µg/L	492.51	ppb	09:23:24
1	Co 228.616†	22663.0	20964.7	483.13	µg/L	483.13	ppb	09:23:44
1	Cr 267.716†	26334.4	23980.6	477.42	µg/L	477.42	ppb	09:23:44
1	Cu 324.752†	72480.3	64417.3	473.18	µg/L	473.18	ppb	09:23:24
1	Mn 257.610†	335394.0	306511.5	481.70	µg/L	481.70	ppb	09:23:24
1	Mo 202.031†	9218.0	8403.8	476.79	µg/L	476.79	ppb	09:23:44
1	Ni 231.604†	19159.3	17739.4	490.43	µg/L	490.43	ppb	09:23:44
1	P 214.914†	4100.5	3621.2	2396.7	µg/L	2396.7	ppb	09:23:44
1	Pb 220.353†	4253.4	3956.4	489.43	µg/L	489.43	ppb	09:23:44
1	S 181.975 Axial†	960.8	787.0	964.49	µg/L	964.49	ppb	09:23:44
1	Sb 206.836†	1961.9	1641.1	466.70	µg/L	466.70	ppb	09:23:44
1	Se 196.026†	1132.0	1059.8	503.15	µg/L	503.15	ppb	09:23:44
1	SiO2†	34304.6	30332.0	5103.1	µg/L	5103.1	ppb	09:23:24
1	Si 251.611†	47214.4	43221.0	2381.9	µg/L	2381.9	ppb	09:23:24
1	Sn 189.927†	4328.0	3913.6	487.93	µg/L	487.93	ppb	09:23:44
1	Ti 334.940†	120449.5	110962.6	472.39	µg/L	472.39	ppb	09:23:24
1	Tl 190.801†	2387.6	2263.6	485.56	µg/L	485.56	ppb	09:23:44
1	U 367.007†	2386.7	1300.9	435.4	µg/L	435.4	ppb	09:23:24
1	V 292.402†	39690.2	36458.2	481.92	µg/L	481.92	ppb	09:23:24
1	Zn 213.857†	70614.2	63731.6	482.12	µg/L	482.12	ppb	09:23:24
2	Sc RADIAL	24459.7	24459.7	111	%			09:23:06
2	Al 396.153Radial†	16874.0	15326.4	4907.0	µg/L	4907.0	ppb	09:23:06
2	Ca 317.933Radial†	26681.4	23789.3	5094.6	µg/L	5094.6	ppb	09:23:06
2	Fe 238.204 Radial†	28659.4	25836.2	5028.5	µg/L	5028.5	ppb	09:23:06
2	K 766.490 Radial†	6324.4	5287.4	4804.7	µg/L	4804.7	ppb	09:23:06
2	Mg 279.077 IEC†	3572.0	3168.5	5178.0	µg/L	5178.0	ppb	09:23:06
2	Na 589.592 Radial†	7058.1	6243.9	9594.9	µg/L	9594.9	ppb	09:23:06
2	Sr 421.552†	90764.1	81673.6	480.18	µg/L	480.18	ppb	09:23:01
2	Sc 361.383	399942.1	399942.1	109.21	%			09:23:50
2	Y 371.029	390963.6	390963.6	108.64	%			09:23:50
2	Ag 328.068†	50556.9	46975.9	477.07	µg/L	477.07	ppb	09:23:50
2	As 188.979†	1233.7	1142.4	506.53	µg/L	506.53	ppb	09:24:10
2	B 249.677†	16193.2	14654.1	504.79	µg/L	504.79	ppb	09:23:50
2	Ba 233.527†	62359.9	57115.1	480.61	µg/L	480.61	ppb	09:23:50
2	Be 313.107†	632968.3	583148.4	484.80	µg/L	484.80	ppb	09:23:50
2	Cd 226.502†	51371.1	47360.9	491.02	µg/L	491.02	ppb	09:23:50
2	Co 228.616†	22560.7	20880.0	481.17	µg/L	481.17	ppb	09:24:10
2	Cr 267.716†	26229.6	23895.1	475.72	µg/L	475.72	ppb	09:24:10
2	Cu 324.752†	72364.4	64340.0	472.61	µg/L	472.61	ppb	09:23:50
2	Mn 257.610†	334476.0	305804.6	480.59	µg/L	480.59	ppb	09:23:50
2	Mo 202.031†	9208.7	8398.9	476.52	µg/L	476.52	ppb	09:24:10
2	Ni 231.604†	19084.6	17678.7	488.75	µg/L	488.75	ppb	09:24:10
2	P 214.914†	4092.1	3615.2	2392.7	µg/L	2392.7	ppb	09:24:10

2	Pb 220.353†	4247.8	3953.0	489.01 µg/L	489.01 ppb	09:24:10
2	S 181.975 Axial†	961.9	788.4	966.18 µg/L	966.18 ppb	09:24:10
2	Sb 206.836†	1951.7	1632.5	464.28 µg/L	464.28 ppb	09:24:10
2	Se 196.026†	1121.3	1050.4	498.72 µg/L	498.72 ppb	09:24:10
2	SiO2†	34224.9	30272.6	5093.0 µg/L	5093.0 ppb	09:23:50
2	Si 251.611†	47122.7	43155.9	2378.3 µg/L	2378.3 ppb	09:23:50
2	Sn 189.927†	4337.4	3924.0	489.22 µg/L	489.22 ppb	09:24:10
2	Ti 334.940†	120321.7	110893.6	472.10 µg/L	472.10 ppb	09:23:50
2	Tl 190.801†	2393.9	2270.3	487.00 µg/L	487.00 ppb	09:24:10
2	U 367.007†	2381.5	1297.1	434.1 µg/L	434.1 ppb	09:23:50
2	V 292.402†	39693.3	36476.8	482.16 µg/L	482.16 ppb	09:23:50
2	Zn 213.857†	70353.7	63521.2	480.52 µg/L	480.52 ppb	09:23:50
3	Sc RADIAL	24601.7	24601.7	111 %		09:23:17
3	Al 396.153Radial†	16982.5	15335.8	4909.9 µg/L	4909.9 ppb	09:23:17
3	Ca 317.933Radial†	26868.5	23818.2	5100.8 µg/L	5100.8 ppb	09:23:17
3	Fe 238.204 Radial†	28700.6	25723.9	5006.7 µg/L	5006.7 ppb	09:23:17
3	K 766.490 Radial†	6218.2	5159.2	4688.2 µg/L	4688.2 ppb	09:23:17
3	Mg 279.077 IEC†	3590.7	3166.6	5175.0 µg/L	5175.0 ppb	09:23:17
3	Na 589.592 Radial†	7051.2	6200.9	9528.8 µg/L	9528.8 ppb	09:23:17
3	Sr 421.552†	90142.9	80643.1	474.12 µg/L	474.12 ppb	09:23:11
3	Sc 361.383	399705.2	399705.2	109.15 %		09:24:16
3	Y 371.029	390517.3	390517.3	108.52 %		09:24:16
3	Ag 328.068†	50797.3	47223.5	479.57 µg/L	479.57 ppb	09:24:16
3	As 188.979†	1237.3	1146.4	508.33 µg/L	508.33 ppb	09:24:36
3	B 249.677†	16303.7	14764.1	508.35 µg/L	508.35 ppb	09:24:16
3	Ba 233.527†	62577.9	57348.6	482.58 µg/L	482.58 ppb	09:24:16
3	Be 313.107†	634901.2	585263.0	486.56 µg/L	486.56 ppb	09:24:16
3	Cd 226.502†	51699.5	47689.6	494.43 µg/L	494.43 ppb	09:24:16
3	Co 228.616†	22719.2	21037.5	484.81 µg/L	484.81 ppb	09:24:36
3	Cr 267.716†	26340.1	24010.6	478.01 µg/L	478.01 ppb	09:24:36
3	Cu 324.752†	72611.7	64605.8	474.56 µg/L	474.56 ppb	09:24:16
3	Mn 257.610†	335733.2	307138.0	482.69 µg/L	482.69 ppb	09:24:16
3	Mo 202.031†	9268.7	8458.9	479.92 µg/L	479.92 ppb	09:24:36
3	Ni 231.604†	19213.9	17807.5	492.31 µg/L	492.31 ppb	09:24:36
3	P 214.914†	4084.4	3610.4	2389.5 µg/L	2389.5 ppb	09:24:36
3	Pb 220.353†	4292.8	3996.6	494.39 µg/L	494.39 ppb	09:24:36
3	S 181.975 Axial†	968.3	794.8	974.09 µg/L	974.09 ppb	09:24:36
3	Sb 206.836†	1967.2	1647.8	468.65 µg/L	468.65 ppb	09:24:36
3	Se 196.026†	1124.1	1053.7	500.24 µg/L	500.24 ppb	09:24:36
3	SiO2†	34277.5	30339.4	5104.2 µg/L	5104.2 ppb	09:24:16
3	Si 251.611†	47366.7	43405.0	2392.1 µg/L	2392.1 ppb	09:24:16
3	Sn 189.927†	4338.8	3927.6	489.68 µg/L	489.68 ppb	09:24:36
3	Ti 334.940†	120851.1	111443.9	474.44 µg/L	474.44 ppb	09:24:16
3	Tl 190.801†	2390.3	2268.3	486.56 µg/L	486.56 ppb	09:24:36
3	U 367.007†	2400.1	1315.4	440.6 µg/L	440.6 ppb	09:24:16
3	V 292.402†	39801.9	36597.9	483.77 µg/L	483.77 ppb	09:24:16
3	Zn 213.857†	70726.8	63901.2	483.40 µg/L	483.40 ppb	09:24:16

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	399921.2	109.21	%	0.056				0.05%
Sc RADIAL	24576.0	111	%	0.48				0.43%
Y 371.029	390849.8	108.61	%	0.081				0.07%
Ag 328.068†	47116.7	478.49	µg/L	1.287	478.49	ppb	1.287	0.27%
QC value within limits for Ag 328.068 Recovery = 95.70%								
Al 396.153Radial†	15321.3	4905.3	µg/L	5.63	4905.3	ppb	5.63	0.11%
QC value within limits for Al 396.153Radial Recovery = 98.11%								
As 188.979†	1144.4	507.41	µg/L	0.898	507.41	ppb	0.898	0.18%
QC value within limits for As 188.979 Recovery = 101.48%								
B 249.677†	14676.0	505.48	µg/L	2.602	505.48	ppb	2.602	0.51%
QC value within limits for B 249.677 Recovery = 101.10%								
Ba 233.527†	57253.6	481.78	µg/L	1.033	481.78	ppb	1.033	0.21%
QC value within limits for Ba 233.527 Recovery = 96.36%								
Be 313.107†	583933.1	485.45	µg/L	0.963	485.45	ppb	0.963	0.20%
QC value within limits for Be 313.107 Recovery = 97.09%								
Ca 317.933Radial†	23793.4	5095.5	µg/L	4.95	5095.5	ppb	4.95	0.10%
QC value within limits for Ca 317.933Radial Recovery = 101.91%								
Cd 226.502†	47518.4	492.65	µg/L	1.712	492.65	ppb	1.712	0.35%
QC value within limits for Cd 226.502 Recovery = 98.53%								

Co 228.616†	20960.7	483.03 µg/L	1.817	483.03 ppb	1.817	0.38%
QC value within limits for Co 228.616 Recovery = 96.61%						
Cr 267.716†	23962.1	477.05 µg/L	1.191	477.05 ppb	1.191	0.25%
QC value within limits for Cr 267.716 Recovery = 95.41%						
Cu 324.752†	64454.4	473.45 µg/L	1.004	473.45 ppb	1.004	0.21%
QC value within limits for Cu 324.752 Recovery = 94.69%						
Fe 238.204 Radial†	25784.7	5018.5 µg/L	11.05	5018.5 ppb	11.05	0.22%
QC value within limits for Fe 238.204 Radial Recovery = 100.37%						
K 766.490 Radial†	5210.7	4735.0 µg/L	61.56	4735.0 ppb	61.56	1.30%
QC value within limits for K 766.490 Radial Recovery = 94.70%						
Mg 279.077 IEC†	3167.1	5175.8 µg/L	1.97	5175.8 ppb	1.97	0.04%
QC value within limits for Mg 279.077 IEC Recovery = 103.52%						
Mn 257.610†	306484.7	481.66 µg/L	1.047	481.66 ppb	1.047	0.22%
QC value within limits for Mn 257.610 Recovery = 96.33%						
Mo 202.031†	8420.5	477.74 µg/L	1.889	477.74 ppb	1.889	0.40%
QC value within limits for Mo 202.031 Recovery = 95.55%						
Na 589.592 Radial†	6215.4	9551.1 µg/L	37.97	9551.1 ppb	37.97	0.40%
QC value within limits for Na 589.592 Radial Recovery = 95.51%						
Ni 231.604†	17741.9	490.49 µg/L	1.781	490.49 ppb	1.781	0.36%
QC value within limits for Ni 231.604 Recovery = 98.10%						
P 214.914†	3615.6	2393.0 µg/L	3.64	2393.0 ppb	3.64	0.15%
QC value within limits for P 214.914 Recovery = 95.72%						
Pb 220.353†	3968.7	490.94 µg/L	2.991	490.94 ppb	2.991	0.61%
QC value within limits for Pb 220.353 Recovery = 98.19%						
S 181.975 Axial†	790.1	968.25 µg/L	5.124	968.25 ppb	5.124	0.53%
QC value within limits for S 181.975 Axial Recovery = 96.83%						
Sb 206.836†	1640.4	466.54 µg/L	2.189	466.54 ppb	2.189	0.47%
QC value within limits for Sb 206.836 Recovery = 93.31%						
Se 196.026†	1054.6	500.70 µg/L	2.250	500.70 ppb	2.250	0.45%
QC value within limits for Se 196.026 Recovery = 100.14%						
SiO2†	30314.7	5100.1 µg/L	6.13	5100.1 ppb	6.13	0.12%
QC value within limits for SiO2 Recovery = 95.37%						
Si 251.611†	43260.6	2384.1 µg/L	7.11	2384.1 ppb	7.11	0.30%
QC value within limits for Si 251.611 Recovery = 95.36%						
Sn 189.927†	3921.7	488.94 µg/L	0.905	488.94 ppb	0.905	0.19%
QC value within limits for Sn 189.927 Recovery = 97.79%						
Sr 421.552†	80995.5	476.19 µg/L	3.454	476.19 ppb	3.454	0.73%
QC value within limits for Sr 421.552 Recovery = 95.24%						
Ti 334.940†	111100.1	472.97 µg/L	1.275	472.97 ppb	1.275	0.27%
QC value within limits for Ti 334.940 Recovery = 94.59%						
Tl 190.801†	2267.4	486.37 µg/L	0.738	486.37 ppb	0.738	0.15%
QC value within limits for Tl 190.801 Recovery = 97.27%						
U 367.007†	1304.5	436.7 µg/L	3.44	436.7 ppb	3.44	0.79%
QC value less than the lower limit for U 367.007 Recovery = 87.34%						
V 292.402†	36511.0	482.62 µg/L	1.007	482.62 ppb	1.007	0.21%
QC value within limits for V 292.402 Recovery = 96.52%						
Zn 213.857†	63718.0	482.01 µg/L	1.442	482.01 ppb	1.442	0.30%
QC value within limits for Zn 213.857 Recovery = 96.40%						

QC Failed. Continue with analysis.

Sequence No.: 19 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 09:24:45**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24386.1	24386.1	110	%			09:25:36
1	Al 396.153Radial†	-125.2	-19.4	-6.2561	µg/L	-6.2561	ppb	09:25:36
1	Ca 317.933Radial†	513.0	168.2	36.014	µg/L	36.014	ppb	09:25:36
1	Fe 238.204 Radial†	35.6	-2.8	-0.5477	µg/L	-0.5477	ppb	09:25:36
1	K 766.490 Radial†	556.4	82.2	74.679	µg/L	74.679	ppb	09:25:16
1	Mg 279.077 IEC†	72.1	9.2	15.024	µg/L	15.024	ppb	09:25:36
1	Na 589.592 Radial†	108.7	-29.2	-44.857	µg/L	-44.857	ppb	09:25:36
1	Sr 421.552†	276.9	-9.7	-0.0579	µg/L	-0.0579	ppb	09:25:16
1	Sc 361.383	397780.0	397780.0	108.62	%			09:26:32
1	Y 371.029	391371.1	391371.1	108.76	%			09:26:32
1	Ag 328.068†	-669.0	67.8	0.6763	µg/L	0.6763	ppb	09:26:32
1	As 188.979†	-32.7	-17.3	-7.5978	µg/L	-7.5978	ppb	09:26:52
1	B 249.677†	254.0	60.6	2.0079	µg/L	2.0079	ppb	09:26:52
1	Ba 233.527†	-19.9	-2.8	-0.0233	µg/L	-0.0233	ppb	09:26:52
1	Be 313.107†	-3523.4	330.2	0.2791	µg/L	0.2791	ppb	09:26:32
1	Cd 226.502†	-309.5	38.2	0.3963	µg/L	0.3963	ppb	09:26:52
1	Co 228.616†	-189.9	47.6	1.0962	µg/L	1.0962	ppb	09:26:52
1	Cr 267.716†	133.6	1.1	0.0087	µg/L	0.0087	ppb	09:26:52
1	Cu 324.752†	1996.4	-82.2	-0.5933	µg/L	-0.5933	ppb	09:26:32
1	Mn 257.610†	431.1	-60.0	-0.0943	µg/L	-0.0943	ppb	09:26:52
1	Mo 202.031†	44.5	8.0	0.4550	µg/L	0.4550	ppb	09:26:52
1	Ni 231.604†	-228.2	-6.2	-0.1713	µg/L	-0.1713	ppb	09:26:52
1	P 214.914†	109.5	-30.9	-20.545	µg/L	-20.545	ppb	09:26:52
1	Pb 220.353†	-99.0	-27.6	-3.4293	µg/L	-3.4293	ppb	09:26:52
1	S 181.975 Axial†	100.1	-0.2	-0.2334	µg/L	-0.2334	ppb	09:26:52
1	Sb 206.836†	140.8	-25.0	-7.1640	µg/L	-7.1640	ppb	09:26:52
1	Se 196.026†	-6.1	18.2	8.5817	µg/L	8.5817	ppb	09:26:52
1	SiO2†	1149.9	-6.6	-1.1458	µg/L	-1.1458	ppb	09:26:52
1	Si 251.611†	72.7	75.1	4.1463	µg/L	4.1463	ppb	09:26:52
1	Sn 189.927†	39.0	-11.7	-1.4469	µg/L	-1.4469	ppb	09:26:52
1	Ti 334.940†	-706.6	71.0	0.2960	µg/L	0.2960	ppb	09:26:32
1	Tl 190.801†	-85.8	-0.6	-0.1293	µg/L	-0.1293	ppb	09:26:52
1	U 367.007†	1013.1	49.2	17.30	µg/L	17.30	ppb	09:26:32
1	V 292.402†	-130.9	11.4	0.1629	µg/L	0.1629	ppb	09:26:52
1	Zn 213.857†	1331.5	328.0	2.5003	µg/L	2.5003	ppb	09:26:52
2	Sc RADIAL	24497.7	24497.7	111	%			09:26:01
2	Al 396.153Radial†	-100.7	3.3	1.0681	µg/L	1.0681	ppb	09:26:01
2	Ca 317.933Radial†	521.2	173.4	37.145	µg/L	37.145	ppb	09:26:01
2	Fe 238.204 Radial†	41.0	1.9	0.3758	µg/L	0.3758	ppb	09:26:01
2	K 766.490 Radial†	467.8	-0.1	-0.0398	µg/L	-0.0398	ppb	09:25:41
2	Mg 279.077 IEC†	60.5	-1.5	-2.4899	µg/L	-2.4899	ppb	09:26:01
2	Na 589.592 Radial†	110.5	-27.9	-42.971	µg/L	-42.971	ppb	09:26:01
2	Sr 421.552†	282.7	-5.7	-0.0341	µg/L	-0.0341	ppb	09:25:41
2	Sc 361.383	398624.5	398624.5	108.85	%			09:26:58
2	Y 371.029	392536.6	392536.6	109.08	%			09:26:58
2	Ag 328.068†	-601.0	131.6	1.3163	µg/L	1.3163	ppb	09:26:58
2	As 188.979†	-17.6	-3.4	-1.5000	µg/L	-1.5000	ppb	09:27:18
2	B 249.677†	222.1	30.8	1.0225	µg/L	1.0225	ppb	09:27:18
2	Ba 233.527†	-4.8	11.2	0.0939	µg/L	0.0939	ppb	09:27:18
2	Be 313.107†	-3617.4	250.7	0.2159	µg/L	0.2159	ppb	09:26:58
2	Cd 226.502†	-312.9	35.6	0.3695	µg/L	0.3695	ppb	09:27:18
2	Co 228.616†	-213.5	26.3	0.6050	µg/L	0.6050	ppb	09:27:18
2	Cr 267.716†	138.8	5.6	0.0880	µg/L	0.0880	ppb	09:27:18
2	Cu 324.752†	2049.9	-36.9	-0.2531	µg/L	-0.2531	ppb	09:26:58
2	Mn 257.610†	471.8	-23.4	-0.0367	µg/L	-0.0367	ppb	09:27:18
2	Mo 202.031†	27.5	-7.7	-0.4341	µg/L	-0.4341	ppb	09:27:18
2	Ni 231.604†	-202.5	18.0	0.4961	µg/L	0.4961	ppb	09:27:18
2	P 214.914†	109.2	-31.4	-20.874	µg/L	-20.874	ppb	09:27:18

2	Pb 220.353†	-90.5	-19.6	-2.4410 µg/L	-2.4410 ppb	09:27:18
2	S 181.975 Axial†	102.8	2.1	2.5899 µg/L	2.5899 ppb	09:27:18
2	Sb 206.836†	171.9	3.4	0.9561 µg/L	0.9561 ppb	09:27:18
2	Se 196.026†	-28.5	-2.4	-1.1262 µg/L	-1.1262 ppb	09:27:18
2	SiO2†	1134.9	-22.6	-3.8061 µg/L	-3.8061 ppb	09:27:18
2	Si 251.611†	74.5	76.7	4.2464 µg/L	4.2464 ppb	09:27:18
2	Sn 189.927†	47.2	-4.2	-0.5181 µg/L	-0.5181 ppb	09:27:18
2	Ti 334.940†	-666.2	109.6	0.4549 µg/L	0.4549 ppb	09:26:58
2	Tl 190.801†	-81.9	3.0	0.6620 µg/L	0.6620 ppb	09:27:18
2	U 367.007†	1050.5	81.6	28.67 µg/L	28.67 ppb	09:26:58
2	V 292.402†	-127.1	15.1	0.2100 µg/L	0.2100 ppb	09:27:18
2	Zn 213.857†	1328.1	322.2	2.4531 µg/L	2.4531 ppb	09:27:18
3	Sc RADIAL	24290.3	24290.3	110 %		09:26:26
3	Al 396.153Radial†	-129.6	-23.8	-7.6961 µg/L	-7.6961 ppb	09:26:26
3	Ca 317.933Radial†	499.7	157.8	33.804 µg/L	33.804 ppb	09:26:26
3	Fe 238.204 Radial†	41.3	2.5	0.4886 µg/L	0.4886 ppb	09:26:26
3	K 766.490 Radial†	378.6	-77.5	-70.428 µg/L	-70.428 ppb	09:26:06
3	Mg 279.077 IEC†	59.3	-2.2	-3.5806 µg/L	-3.5806 ppb	09:26:26
3	Na 589.592 Radial†	110.3	-27.3	-41.965 µg/L	-41.965 ppb	09:26:26
3	Sr 421.552†	456.6	154.5	0.9081 µg/L	0.9081 ppb	09:26:06
3	Sc 361.383	403719.5	403719.5	110.24 %		09:27:23
3	Y 371.029	397634.0	397634.0	110.50 %		09:27:23
3	Ag 328.068†	-746.2	6.8	0.0551 µg/L	0.0551 ppb	09:27:23
3	As 188.979†	-28.0	-12.6	-5.5329 µg/L	-5.5329 ppb	09:27:43
3	B 249.677†	222.7	28.8	0.9542 µg/L	0.9542 ppb	09:27:43
3	Ba 233.527†	8.5	23.3	0.1959 µg/L	0.1959 ppb	09:27:43
3	Be 313.107†	-3596.6	311.5	0.2647 µg/L	0.2647 ppb	09:27:23
3	Cd 226.502†	-300.8	50.2	0.5210 µg/L	0.5210 ppb	09:27:43
3	Co 228.616†	-182.9	56.6	1.3033 µg/L	1.3033 ppb	09:27:43
3	Cr 267.716†	126.0	-7.6	-0.1695 µg/L	-0.1695 ppb	09:27:43
3	Cu 324.752†	2120.4	3.3	0.0375 µg/L	0.0375 ppb	09:27:23
3	Mn 257.610†	421.3	-74.7	-0.1172 µg/L	-0.1172 ppb	09:27:43
3	Mo 202.031†	48.6	11.2	0.6325 µg/L	0.6325 ppb	09:27:43
3	Ni 231.604†	-228.6	-3.4	-0.0954 µg/L	-0.0954 ppb	09:27:43
3	P 214.914†	92.1	-48.1	-32.048 µg/L	-32.048 ppb	09:27:43
3	Pb 220.353†	-83.7	-12.4	-1.5482 µg/L	-1.5482 ppb	09:27:43
3	S 181.975 Axial†	100.6	-1.0	-1.2795 µg/L	-1.2795 ppb	09:27:43
3	Sb 206.836†	163.9	-5.9	-1.6827 µg/L	-1.6827 ppb	09:27:43
3	Se 196.026†	-24.2	1.8	0.8382 µg/L	0.8382 ppb	09:27:43
3	SiO2†	1126.8	-43.2	-7.3315 µg/L	-7.3315 ppb	09:27:43
3	Si 251.611†	70.6	72.3	3.9874 µg/L	3.9874 ppb	09:27:43
3	Sn 189.927†	32.8	-17.8	-2.2098 µg/L	-2.2098 ppb	09:27:43
3	Ti 334.940†	-641.1	140.0	0.5875 µg/L	0.5875 ppb	09:27:23
3	Tl 190.801†	-88.4	-1.8	-0.3864 µg/L	-0.3864 ppb	09:27:43
3	U 367.007†	1044.1	63.6	22.36 µg/L	22.36 ppb	09:27:23
3	V 292.402†	-172.6	-24.6	-0.3035 µg/L	-0.3035 ppb	09:27:43
3	Zn 213.857†	1343.1	320.4	2.4423 µg/L	2.4423 ppb	09:27:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	400041.3	109.24	%	0.877				0.80%
Sc RADIAL	24391.3	110	%	0.47				0.43%
Y 371.029	393847.2	109.44	%	0.926				0.85%
Ag 328.068†	68.7	0.6826	µg/L	0.63062	0.6826	ppb	0.63062	92.39%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.3	-4.2947	µg/L	4.69978	-4.2947	ppb	4.69978	109.43%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-11.1	-4.8769	µg/L	3.10134	-4.8769	ppb	3.10134	63.59%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	40.1	1.3282	µg/L	0.58963	1.3282	ppb	0.58963	44.39%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	10.6	0.0888	µg/L	0.10966	0.0888	ppb	0.10966	123.44%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	297.5	0.2532	µg/L	0.03313	0.2532	ppb	0.03313	13.08%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	166.5	35.654	µg/L	1.6989	35.654	ppb	1.6989	4.76%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	41.3	0.4289	µg/L	0.08085	0.4289	ppb	0.08085	18.85%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	43.5	1.0015 µg/L	0.35865	1.0015 ppb	0.35865	35.81%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-0.3	-0.0243 µg/L	0.13190	-0.0243 ppb	0.13190	543.01%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-38.6	-0.2696 µg/L	0.31572	-0.2696 ppb	0.31572	117.08%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.5	0.1056 µg/L	0.56856	0.1056 ppb	0.56856	538.46%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	1.5	1.4039 µg/L	72.56431	1.4039 ppb	72.56431	>999.9%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.8	2.9844 µg/L	10.44054	2.9844 ppb	10.44054	349.84%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-52.7	-0.0827 µg/L	0.04148	-0.0827 ppb	0.04148	50.14%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	3.8	0.2178 µg/L	0.57149	0.2178 ppb	0.57149	262.39%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-28.1	-43.264 µg/L	1.4678	-43.264 ppb	1.4678	3.39%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	2.8	0.0765 µg/L	0.36539	0.0765 ppb	0.36539	477.77%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-36.8	-24.489 µg/L	6.5481	-24.489 ppb	6.5481	26.74%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-19.9	-2.4728 µg/L	0.94096	-2.4728 ppb	0.94096	38.05%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	0.3	0.3590 µg/L	2.00157	0.3590 ppb	2.00157	557.55%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-9.2	-2.6302 µg/L	4.14215	-2.6302 ppb	4.14215	157.48%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	5.8	2.7646 µg/L	5.13269	2.7646 ppb	5.13269	185.66%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	-24.2	-4.0944 µg/L	3.10292	-4.0944 ppb	3.10292	75.78%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	74.7	4.1267 µg/L	0.13064	4.1267 ppb	0.13064	3.17%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-11.2	-1.3916 µg/L	0.84720	-1.3916 ppb	0.84720	60.88%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	46.4	0.2720 µg/L	0.55100	0.2720 ppb	0.55100	202.56%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	106.9	0.4461 µg/L	0.14597	0.4461 ppb	0.14597	32.72%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.2	0.0487 µg/L	0.54639	0.0487 ppb	0.54639	>999.9%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	64.8	22.77 µg/L	5.699	22.77 ppb	5.699	25.02%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	0.6	0.0231 µg/L	0.28384	0.0231 ppb	0.28384	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	323.5	2.4652 µg/L	0.03086	2.4652 ppb	0.03086	1.25%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 10:32:20**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24284.6	24284.6	110	%			10:32:57
1	Al 396.153Radial†	17015.0	15564.4	4983.3	µg/L	4983.3	ppb	10:32:57
1	Ca 317.933Radial†	26662.2	23945.5	5128.1	µg/L	5128.1	ppb	10:32:57
1	Fe 238.204 Radial†	28657.6	26021.1	5064.5	µg/L	5064.5	ppb	10:32:57
1	K 766.490 Radial†	6292.3	5299.4	4815.6	µg/L	4815.6	ppb	10:32:57
1	Mg 279.077 IEC†	3552.6	3174.0	5187.1	µg/L	5187.1	ppb	10:32:57
1	Na 589.592 Radial†	7068.1	6298.9	9679.4	µg/L	9679.4	ppb	10:32:57
1	Sr 421.552†	89791.6	81380.1	478.45	µg/L	478.45	ppb	10:32:52
1	Sc 361.383	392824.3	392824.3	107.27	%			10:33:24
1	Y 371.029	383549.1	383549.1	106.58	%			10:33:24
1	Ag 328.068†	50358.6	47629.8	483.69	µg/L	483.69	ppb	10:33:24
1	As 188.979†	1234.3	1163.5	515.86	µg/L	515.86	ppb	10:33:44
1	B 249.677†	15971.6	14716.1	506.97	µg/L	506.97	ppb	10:33:24
1	Ba 233.527†	62306.5	58100.0	488.90	µg/L	488.90	ppb	10:33:24
1	Be 313.107†	629531.0	590445.9	490.87	µg/L	490.87	ppb	10:33:24
1	Cd 226.502†	51172.5	48028.0	497.94	µg/L	497.94	ppb	10:33:24
1	Co 228.616†	22475.5	21174.9	487.97	µg/L	487.97	ppb	10:33:44
1	Cr 267.716†	26108.6	24217.5	482.11	µg/L	482.11	ppb	10:33:44
1	Cu 324.752†	72212.3	65398.9	480.40	µg/L	480.40	ppb	10:33:24
1	Mn 257.610†	333817.3	310739.9	488.35	µg/L	488.35	ppb	10:33:24
1	Mo 202.031†	9166.6	8512.5	482.96	µg/L	482.96	ppb	10:33:44
1	Ni 231.604†	18967.0	17885.7	494.47	µg/L	494.47	ppb	10:33:44
1	P 214.914†	4054.9	3648.4	2414.7	µg/L	2414.7	ppb	10:33:44
1	Pb 220.353†	4231.2	4008.0	495.79	µg/L	495.79	ppb	10:33:44
1	S 181.975 Axial†	952.4	795.5	974.91	µg/L	974.91	ppb	10:33:44
1	Sb 206.836†	1952.6	1665.7	473.73	µg/L	473.73	ppb	10:33:44
1	Se 196.026†	1122.2	1070.0	507.96	µg/L	507.96	ppb	10:33:44
1	SiO2†	34197.6	30815.1	5184.4	µg/L	5184.4	ppb	10:33:24
1	Si 251.611†	46960.3	43786.3	2413.1	µg/L	2413.1	ppb	10:33:24
1	Sn 189.927†	4282.5	3944.8	491.83	µg/L	491.83	ppb	10:33:44
1	Ti 334.940†	119980.7	112572.0	479.23	µg/L	479.23	ppb	10:33:24
1	Tl 190.801†	2381.7	2298.6	493.09	µg/L	493.09	ppb	10:33:44
1	U 367.007†	2437.8	1389.1	466.3	µg/L	466.3	ppb	10:33:24
1	V 292.402†	39531.4	36984.5	488.88	µg/L	488.88	ppb	10:33:24
1	Zn 213.857†	70166.7	64514.1	488.05	µg/L	488.05	ppb	10:33:24
2	Sc RADIAL	24150.4	24150.4	109	%			10:33:07
2	Al 396.153Radial†	16927.3	15570.2	4985.1	µg/L	4985.1	ppb	10:33:07
2	Ca 317.933Radial†	26580.0	24005.1	5140.8	µg/L	5140.8	ppb	10:33:07
2	Fe 238.204 Radial†	28498.9	26020.8	5064.5	µg/L	5064.5	ppb	10:33:07
2	K 766.490 Radial†	6362.2	5395.2	4902.6	µg/L	4902.6	ppb	10:33:07
2	Mg 279.077 IEC†	3533.0	3174.1	5187.2	µg/L	5187.2	ppb	10:33:07
2	Na 589.592 Radial†	7059.5	6326.8	9722.3	µg/L	9722.3	ppb	10:33:07
2	Sr 421.552†	90451.2	82436.8	484.67	µg/L	484.67	ppb	10:33:02
2	Sc 361.383	393610.6	393610.6	107.48	%			10:33:50
2	Y 371.029	384235.0	384235.0	106.77	%			10:33:50
2	Ag 328.068†	50327.3	47506.9	482.45	µg/L	482.45	ppb	10:33:50
2	As 188.979†	1214.0	1142.3	506.55	µg/L	506.55	ppb	10:34:11
2	B 249.677†	16067.8	14775.9	508.96	µg/L	508.96	ppb	10:33:50
2	Ba 233.527†	62003.6	57702.1	485.55	µg/L	485.55	ppb	10:33:50
2	Be 313.107†	627273.7	587173.2	488.15	µg/L	488.15	ppb	10:33:50
2	Cd 226.502†	50841.8	47625.0	493.76	µg/L	493.76	ppb	10:33:50
2	Co 228.616†	22502.4	21158.1	487.58	µg/L	487.58	ppb	10:34:11
2	Cr 267.716†	26167.3	24223.5	482.24	µg/L	482.24	ppb	10:34:11
2	Cu 324.752†	71920.3	64992.7	477.42	µg/L	477.42	ppb	10:33:50
2	Mn 257.610†	332564.4	308952.5	485.54	µg/L	485.54	ppb	10:33:50
2	Mo 202.031†	9189.6	8516.8	483.20	µg/L	483.20	ppb	10:34:11
2	Ni 231.604†	19046.3	17924.1	495.53	µg/L	495.53	ppb	10:34:11
2	P 214.914†	4058.6	3644.4	2412.0	µg/L	2412.0	ppb	10:34:11

2	Pb 220.353†	4222.2	3991.8	493.79 µg/L	493.79 ppb	10:34:11
2	S 181.975 Axial†	953.4	794.7	973.92 µg/L	973.92 ppb	10:34:11
2	Sb 206.836†	1967.1	1675.5	476.55 µg/L	476.55 ppb	10:34:11
2	Se 196.026†	1109.6	1056.1	501.43 µg/L	501.43 ppb	10:34:11
2	SiO2†	34041.2	30605.8	5149.0 µg/L	5149.0 ppb	10:33:50
2	Si 251.611†	46885.0	43628.8	2404.4 µg/L	2404.4 ppb	10:33:50
2	Sn 189.927†	4308.4	3960.9	493.82 µg/L	493.82 ppb	10:34:11
2	Ti 334.940†	119636.7	112028.5	476.92 µg/L	476.92 ppb	10:33:50
2	Tl 190.801†	2381.5	2294.0	492.08 µg/L	492.08 ppb	10:34:11
2	U 367.007†	2422.6	1370.4	459.7 µg/L	459.7 ppb	10:33:50
2	V 292.402†	39397.1	36785.9	486.29 µg/L	486.29 ppb	10:33:50
2	Zn 213.857†	69824.7	64065.3	484.62 µg/L	484.62 ppb	10:33:50
3	Sc RADIAL	24236.5	24236.5	110 %		10:33:17
3	Al 396.153Radial†	17005.8	15586.7	4990.4 µg/L	4990.4 ppb	10:33:17
3	Ca 317.933Radial†	26692.9	24021.6	5144.4 µg/L	5144.4 ppb	10:33:17
3	Fe 238.204 Radial†	28684.5	26097.2	5079.4 µg/L	5079.4 ppb	10:33:17
3	K 766.490 Radial†	6266.1	5286.9	4804.2 µg/L	4804.2 ppb	10:33:17
3	Mg 279.077 IEC†	3566.7	3193.3	5218.6 µg/L	5218.6 ppb	10:33:17
3	Na 589.592 Radial†	7079.1	6321.6	9714.4 µg/L	9714.4 ppb	10:33:17
3	Sr 421.552†	90104.5	81827.1	481.08 µg/L	481.08 ppb	10:33:12
3	Sc 361.383	393692.1	393692.1	107.51 %		10:34:17
3	Y 371.029	384289.0	384289.0	106.79 %		10:34:17
3	Ag 328.068†	50532.2	47687.8	484.27 µg/L	484.27 ppb	10:34:17
3	As 188.979†	1217.2	1145.0	507.76 µg/L	507.76 ppb	10:34:37
3	B 249.677†	16088.3	14791.8	509.55 µg/L	509.55 ppb	10:34:17
3	Ba 233.527†	62268.2	57936.2	487.52 µg/L	487.52 ppb	10:34:17
3	Be 313.107†	630078.1	589661.1	490.22 µg/L	490.22 ppb	10:34:17
3	Cd 226.502†	51263.5	48007.5	497.72 µg/L	497.72 ppb	10:34:17
3	Co 228.616†	22426.8	21083.4	485.86 µg/L	485.86 ppb	10:34:37
3	Cr 267.716†	26111.2	24166.2	481.08 µg/L	481.08 ppb	10:34:37
3	Cu 324.752†	72110.9	65156.2	478.63 µg/L	478.63 ppb	10:34:17
3	Mn 257.610†	333937.1	310165.4	487.44 µg/L	487.44 ppb	10:34:17
3	Mo 202.031†	9182.7	8508.7	482.74 µg/L	482.74 ppb	10:34:37
3	Ni 231.604†	18995.3	17873.0	494.12 µg/L	494.12 ppb	10:34:37
3	P 214.914†	4075.0	3658.8	2421.6 µg/L	2421.6 ppb	10:34:37
3	Pb 220.353†	4226.6	3995.0	494.17 µg/L	494.17 ppb	10:34:37
3	S 181.975 Axial†	946.6	788.2	965.87 µg/L	965.87 ppb	10:34:37
3	Sb 206.836†	1957.4	1666.1	473.87 µg/L	473.87 ppb	10:34:37
3	Se 196.026†	1125.8	1071.0	508.47 µg/L	508.47 ppb	10:34:37
3	SiO2†	34108.4	30661.7	5158.5 µg/L	5158.5 ppb	10:34:17
3	Si 251.611†	47178.9	43893.2	2419.0 µg/L	2419.0 ppb	10:34:17
3	Sn 189.927†	4283.5	3936.9	490.85 µg/L	490.85 ppb	10:34:37
3	Ti 334.940†	120074.2	112412.4	478.54 µg/L	478.54 ppb	10:34:17
3	Tl 190.801†	2371.9	2284.6	490.08 µg/L	490.08 ppb	10:34:37
3	U 367.007†	2477.1	1420.7	477.3 µg/L	477.3 ppb	10:34:17
3	V 292.402†	39588.7	36956.6	488.52 µg/L	488.52 ppb	10:34:17
3	Zn 213.857†	70354.7	64544.8	488.28 µg/L	488.28 ppb	10:34:17

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	393375.7	107.42	%	0.131				0.12%
Sc RADIAL	24223.9	110	%	0.31				0.28%
Y 371.029	384024.4	106.71	%	0.115				0.11%
Ag 328.068†	47608.2	483.47	µg/L	0.934	483.47	ppb	0.934	0.19%
QC value within limits for Ag 328.068 Recovery = 96.69%								
Al 396.153Radial†	15573.8	4986.3	µg/L	3.73	4986.3	ppb	3.73	0.07%
QC value within limits for Al 396.153Radial Recovery = 99.73%								
As 188.979†	1150.3	510.06	µg/L	5.060	510.06	ppb	5.060	0.99%
QC value within limits for As 188.979 Recovery = 102.01%								
B 249.677†	14761.3	508.49	µg/L	1.352	508.49	ppb	1.352	0.27%
QC value within limits for B 249.677 Recovery = 101.70%								
Ba 233.527†	57912.8	487.33	µg/L	1.683	487.33	ppb	1.683	0.35%
QC value within limits for Ba 233.527 Recovery = 97.47%								
Be 313.107†	589093.4	489.75	µg/L	1.421	489.75	ppb	1.421	0.29%
QC value within limits for Be 313.107 Recovery = 97.95%								
Ca 317.933Radial†	23990.7	5137.8	µg/L	8.57	5137.8	ppb	8.57	0.17%
QC value within limits for Ca 317.933Radial Recovery = 102.76%								
Cd 226.502†	47886.8	496.47	µg/L	2.354	496.47	ppb	2.354	0.47%
QC value within limits for Cd 226.502 Recovery = 99.29%								

Co 228.616†	21138.8	487.14 µg/L	1.122	487.14 ppb	1.122	0.23%
QC value within limits for Co 228.616 Recovery = 97.43%						
Cr 267.716†	24202.4	481.81 µg/L	0.633	481.81 ppb	0.633	0.13%
QC value within limits for Cr 267.716 Recovery = 96.36%						
Cu 324.752†	65182.6	478.82 µg/L	1.502	478.82 ppb	1.502	0.31%
QC value within limits for Cu 324.752 Recovery = 95.76%						
Fe 238.204 Radial†	26046.4	5069.5 µg/L	8.58	5069.5 ppb	8.58	0.17%
QC value within limits for Fe 238.204 Radial Recovery = 101.39%						
K 766.490 Radial†	5327.2	4840.8 µg/L	53.82	4840.8 ppb	53.82	1.11%
QC value within limits for K 766.490 Radial Recovery = 96.82%						
Mg 279.077 IEC†	3180.5	5197.6 µg/L	18.18	5197.6 ppb	18.18	0.35%
QC value within limits for Mg 279.077 IEC Recovery = 103.95%						
Mn 257.610†	309952.6	487.11 µg/L	1.433	487.11 ppb	1.433	0.29%
QC value within limits for Mn 257.610 Recovery = 97.42%						
Mo 202.031†	8512.6	482.97 µg/L	0.230	482.97 ppb	0.230	0.05%
QC value within limits for Mo 202.031 Recovery = 96.59%						
Na 589.592 Radial†	6315.8	9705.3 µg/L	22.81	9705.3 ppb	22.81	0.24%
QC value within limits for Na 589.592 Radial Recovery = 97.05%						
Ni 231.604†	17894.3	494.71 µg/L	0.735	494.71 ppb	0.735	0.15%
QC value within limits for Ni 231.604 Recovery = 98.94%						
P 214.914†	3650.5	2416.1 µg/L	4.95	2416.1 ppb	4.95	0.21%
QC value within limits for P 214.914 Recovery = 96.64%						
Pb 220.353†	3998.3	494.59 µg/L	1.063	494.59 ppb	1.063	0.21%
QC value within limits for Pb 220.353 Recovery = 98.92%						
S 181.975 Axial†	792.8	971.57 µg/L	4.960	971.57 ppb	4.960	0.51%
QC value within limits for S 181.975 Axial Recovery = 97.16%						
Sb 206.836†	1669.1	474.72 µg/L	1.586	474.72 ppb	1.586	0.33%
QC value within limits for Sb 206.836 Recovery = 94.94%						
Se 196.026†	1065.7	505.95 µg/L	3.929	505.95 ppb	3.929	0.78%
QC value within limits for Se 196.026 Recovery = 101.19%						
SiO2†	30694.2	5164.0 µg/L	18.31	5164.0 ppb	18.31	0.35%
QC value within limits for SiO2 Recovery = 96.57%						
Si 251.611†	43769.4	2412.2 µg/L	7.36	2412.2 ppb	7.36	0.31%
QC value within limits for Si 251.611 Recovery = 96.49%						
Sn 189.927†	3947.5	492.16 µg/L	1.516	492.16 ppb	1.516	0.31%
QC value within limits for Sn 189.927 Recovery = 98.43%						
Sr 421.552†	81881.3	481.40 µg/L	3.119	481.40 ppb	3.119	0.65%
QC value within limits for Sr 421.552 Recovery = 96.28%						
Ti 334.940†	112337.6	478.23 µg/L	1.187	478.23 ppb	1.187	0.25%
QC value within limits for Ti 334.940 Recovery = 95.65%						
Tl 190.801†	2292.4	491.75 µg/L	1.529	491.75 ppb	1.529	0.31%
QC value within limits for Tl 190.801 Recovery = 98.35%						
U 367.007†	1393.4	467.7 µg/L	8.90	467.7 ppb	8.90	1.90%
QC value within limits for U 367.007 Recovery = 93.55%						
V 292.402†	36909.0	487.89 µg/L	1.405	487.89 ppb	1.405	0.29%
QC value within limits for V 292.402 Recovery = 97.58%						
Zn 213.857†	64374.8	486.99 µg/L	2.048	486.99 ppb	2.048	0.42%
QC value within limits for Zn 213.857 Recovery = 97.40%						

All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 10:34:45**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24079.8	24079.8	109	%			10:35:36
1	Al 396.153Radial†	-128.2	-23.6	-7.5945	µg/L	-7.5945	ppb	10:35:36
1	Ca 317.933Radial†	510.9	172.1	36.864	µg/L	36.864	ppb	10:35:36
1	Fe 238.204 Radial†	24.4	-12.7	-2.4656	µg/L	-2.4656	ppb	10:35:36
1	K 766.490 Radial†	542.1	75.4	68.532	µg/L	68.532	ppb	10:35:16
1	Mg 279.077 IEC†	55.3	-5.3	-8.7092	µg/L	-8.7092	ppb	10:35:36
1	Na 589.592 Radial†	103.8	-32.4	-49.802	µg/L	-49.802	ppb	10:35:36
1	Sr 421.552†	301.7	16.2	0.0943	µg/L	0.0943	ppb	10:35:16
1	Sc 361.383	394173.7	394173.7	107.64	%			10:36:32
1	Y 371.029	388586.5	388586.5	107.98	%			10:36:32
1	Ag 328.068†	-624.0	104.0	1.0334	µg/L	1.0334	ppb	10:36:32
1	As 188.979†	-19.6	-5.4	-2.3729	µg/L	-2.3729	ppb	10:36:53
1	B 249.677†	222.3	33.4	1.0957	µg/L	1.0957	ppb	10:36:53
1	Ba 233.527†	-12.0	4.3	0.0365	µg/L	0.0365	ppb	10:36:53
1	Be 313.107†	-3574.9	252.6	0.2181	µg/L	0.2181	ppb	10:36:32
1	Cd 226.502†	-295.9	48.2	0.5007	µg/L	0.5007	ppb	10:36:53
1	Co 228.616†	-201.5	35.2	0.8101	µg/L	0.8101	ppb	10:36:53
1	Cr 267.716†	116.8	-13.4	-0.2921	µg/L	-0.2921	ppb	10:36:53
1	Cu 324.752†	2064.1	-2.5	0.0010	µg/L	0.0010	ppb	10:36:32
1	Mn 257.610†	408.7	-77.2	-0.1213	µg/L	-0.1213	ppb	10:36:53
1	Mo 202.031†	43.0	7.0	0.3961	µg/L	0.3961	ppb	10:36:53
1	Ni 231.604†	-222.3	-2.6	-0.0723	µg/L	-0.0723	ppb	10:36:53
1	P 214.914†	117.0	-23.0	-15.322	µg/L	-15.322	ppb	10:36:53
1	Pb 220.353†	-79.4	-10.2	-1.2878	µg/L	-1.2878	ppb	10:36:53
1	S 181.975 Axial†	96.8	-2.4	-2.9755	µg/L	-2.9755	ppb	10:36:53
1	Sb 206.836†	157.2	-8.6	-2.4488	µg/L	-2.4488	ppb	10:36:53
1	Se 196.026†	-9.1	15.3	7.2275	µg/L	7.2275	ppb	10:36:53
1	SiO2†	1158.9	11.5	1.9174	µg/L	1.9174	ppb	10:36:53
1	Si 251.611†	61.8	65.6	3.6229	µg/L	3.6229	ppb	10:36:53
1	Sn 189.927†	33.8	-16.1	-2.0035	µg/L	-2.0035	ppb	10:36:53
1	Ti 334.940†	-623.3	142.4	0.5936	µg/L	0.5936	ppb	10:36:32
1	Tl 190.801†	-82.0	2.1	0.4727	µg/L	0.4727	ppb	10:36:53
1	U 367.007†	1048.3	90.5	31.81	µg/L	31.81	ppb	10:36:32
1	V 292.402†	-175.7	-31.4	-0.3886	µg/L	-0.3886	ppb	10:36:53
1	Zn 213.857†	1437.6	437.8	3.3365	µg/L	3.3365	ppb	10:36:53
2	Sc RADIAL	23987.4	23987.4	109	%			10:36:01
2	Al 396.153Radial†	-106.4	-4.0	-1.2677	µg/L	-1.2677	ppb	10:36:01
2	Ca 317.933Radial†	513.3	176.2	37.728	µg/L	37.728	ppb	10:36:01
2	Fe 238.204 Radial†	30.8	-6.7	-1.3120	µg/L	-1.3120	ppb	10:36:01
2	K 766.490 Radial†	485.7	25.4	23.132	µg/L	23.132	ppb	10:35:41
2	Mg 279.077 IEC†	71.5	9.7	15.866	µg/L	15.866	ppb	10:36:01
2	Na 589.592 Radial†	94.4	-40.6	-62.506	µg/L	-62.506	ppb	10:36:01
2	Sr 421.552†	283.4	0.4	0.0015	µg/L	0.0015	ppb	10:35:41
2	Sc 361.383	396402.4	396402.4	108.25	%			10:36:58
2	Y 371.029	390393.7	390393.7	108.48	%			10:36:58
2	Ag 328.068†	-590.3	138.3	1.3792	µg/L	1.3792	ppb	10:36:58
2	As 188.979†	-16.1	-2.0	-0.8992	µg/L	-0.8992	ppb	10:37:18
2	B 249.677†	226.0	35.6	1.1735	µg/L	1.1735	ppb	10:37:18
2	Ba 233.527†	0.1	15.6	0.1315	µg/L	0.1315	ppb	10:37:18
2	Be 313.107†	-3458.1	379.2	0.3244	µg/L	0.3244	ppb	10:36:58
2	Cd 226.502†	-308.5	38.1	0.3959	µg/L	0.3959	ppb	10:37:18
2	Co 228.616†	-201.2	36.5	0.8412	µg/L	0.8412	ppb	10:37:18
2	Cr 267.716†	123.0	-8.3	-0.1933	µg/L	-0.1933	ppb	10:37:18
2	Cu 324.752†	2123.4	41.5	0.3271	µg/L	0.3271	ppb	10:36:58
2	Mn 257.610†	450.9	-40.3	-0.0634	µg/L	-0.0634	ppb	10:37:18
2	Mo 202.031†	33.2	-2.3	-0.1279	µg/L	-0.1279	ppb	10:37:18
2	Ni 231.604†	-219.3	1.3	0.0359	µg/L	0.0359	ppb	10:37:18
2	P 214.914†	114.1	-26.2	-17.469	µg/L	-17.469	ppb	10:37:18

2	Pb 220.353†	-84.6	-14.7	-1.8409 µg/L	-1.8409 ppb	10:37:18
2	S 181.975 Axial†	99.0	-0.9	-1.0695 µg/L	-1.0695 ppb	10:37:18
2	Sb 206.836†	162.8	-4.2	-1.1964 µg/L	-1.1964 ppb	10:37:18
2	Se 196.026†	-13.1	11.7	5.5209 µg/L	5.5209 ppb	10:37:18
2	SiO2†	1148.9	-3.9	-0.6497 µg/L	-0.6497 ppb	10:37:18
2	Si 251.611†	89.6	91.0	5.0346 µg/L	5.0346 ppb	10:37:18
2	Sn 189.927†	37.0	-13.3	-1.6528 µg/L	-1.6528 ppb	10:37:18
2	Ti 334.940†	-701.4	73.6	0.2984 µg/L	0.2984 ppb	10:36:58
2	Tl 190.801†	-74.7	9.3	2.0073 µg/L	2.0073 ppb	10:37:18
2	U 367.007†	1067.8	103.0	36.22 µg/L	36.22 ppb	10:36:58
2	V 292.402†	-160.6	-16.5	-0.1962 µg/L	-0.1962 ppb	10:37:18
2	Zn 213.857†	1438.2	430.8	3.2822 µg/L	3.2822 ppb	10:37:18
3	Sc RADIAL	24031.9	24031.9	109 %		10:36:26
3	Al 396.153Radial†	-134.8	-29.9	-9.5823 µg/L	-9.5823 ppb	10:36:26
3	Ca 317.933Radial†	514.0	175.9	37.677 µg/L	37.677 ppb	10:36:26
3	Fe 238.204 Radial†	50.0	10.9	2.1248 µg/L	2.1248 ppb	10:36:26
3	K 766.490 Radial†	576.1	107.7	97.870 µg/L	97.870 ppb	10:36:06
3	Mg 279.077 IEC†	61.3	0.3	0.4316 µg/L	0.4316 ppb	10:36:26
3	Na 589.592 Radial†	108.7	-27.7	-42.554 µg/L	-42.554 ppb	10:36:26
3	Sr 421.552†	275.6	-7.3	-0.0433 µg/L	-0.0433 ppb	10:36:06
3	Sc 361.383	391635.0	391635.0	106.94 %		10:37:23
3	Y 371.029	385931.3	385931.3	107.24 %		10:37:23
3	Ag 328.068†	-654.4	71.8	0.7157 µg/L	0.7157 ppb	10:37:23
3	As 188.979†	-22.0	-7.7	-3.4075 µg/L	-3.4075 ppb	10:37:43
3	B 249.677†	210.5	23.6	0.7918 µg/L	0.7918 ppb	10:37:43
3	Ba 233.527†	-8.3	7.8	0.0656 µg/L	0.0656 ppb	10:37:43
3	Be 313.107†	-3391.8	402.4	0.3391 µg/L	0.3391 ppb	10:37:23
3	Cd 226.502†	-310.3	33.0	0.3414 µg/L	0.3414 ppb	10:37:43
3	Co 228.616†	-223.5	13.4	0.3074 µg/L	0.3074 ppb	10:37:43
3	Cr 267.716†	118.0	-11.6	-0.2457 µg/L	-0.2457 ppb	10:37:43
3	Cu 324.752†	2065.8	11.5	0.0958 µg/L	0.0958 ppb	10:37:23
3	Mn 257.610†	437.5	-47.8	-0.0749 µg/L	-0.0749 ppb	10:37:43
3	Mo 202.031†	26.5	-8.2	-0.4626 µg/L	-0.4626 ppb	10:37:43
3	Ni 231.604†	-243.6	-23.8	-0.6589 µg/L	-0.6589 ppb	10:37:43
3	P 214.914†	103.3	-35.1	-23.381 µg/L	-23.381 ppb	10:37:43
3	Pb 220.353†	-73.8	-5.5	-0.6911 µg/L	-0.6911 ppb	10:37:43
3	S 181.975 Axial†	96.6	-2.0	-2.4645 µg/L	-2.4645 ppb	10:37:43
3	Sb 206.836†	140.9	-22.8	-6.5364 µg/L	-6.5364 ppb	10:37:43
3	Se 196.026†	-14.5	10.2	4.8299 µg/L	4.8299 ppb	10:37:43
3	SiO2†	1166.4	25.4	4.3124 µg/L	4.3124 ppb	10:37:43
3	Si 251.611†	69.1	72.8	4.0338 µg/L	4.0338 ppb	10:37:43
3	Sn 189.927†	42.1	-8.2	-1.0124 µg/L	-1.0124 ppb	10:37:43
3	Ti 334.940†	-656.5	107.7	0.4522 µg/L	0.4522 ppb	10:37:23
3	Tl 190.801†	-89.9	-5.8	-1.2288 µg/L	-1.2288 ppb	10:37:43
3	U 367.007†	998.9	50.6	17.75 µg/L	17.75 ppb	10:37:23
3	V 292.402†	-180.0	-36.4	-0.4692 µg/L	-0.4692 ppb	10:37:43
3	Zn 213.857†	1419.1	429.1	3.2731 µg/L	3.2731 ppb	10:37:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	394070.4	107.61	%	0.651				0.61%
Sc RADIAL	24033.0	109	%	0.21				0.19%
Y 371.029	388303.9	107.90	%	0.624				0.58%
Ag 328.068†	104.7	1.0428	µg/L	0.33180	1.0428	ppb	0.33180	31.82%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-19.1	-6.1482	µg/L	4.34188	-6.1482	ppb	4.34188	70.62%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-5.1	-2.2265	µg/L	1.26055	-2.2265	ppb	1.26055	56.61%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	30.8	1.0204	µg/L	0.20170	1.0204	ppb	0.20170	19.77%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	9.2	0.0778	µg/L	0.04867	0.0778	ppb	0.04867	62.52%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	344.8	0.2939	µg/L	0.06602	0.2939	ppb	0.06602	22.46%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	174.7	37.423	µg/L	0.4848	37.423	ppb	0.4848	1.30%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	39.8	0.4126	µg/L	0.08094	0.4126	ppb	0.08094	19.62%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	28.4	0.6529 µg/L	0.29964	0.6529 ppb	0.29964	45.89%	
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-11.1	-0.2437 µg/L	0.04940	-0.2437 ppb	0.04940	20.27%	
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	16.8	0.1413 µg/L	0.16774	0.1413 ppb	0.16774	118.72%	
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-2.8	-0.5509 µg/L	2.38796	-0.5509 ppb	2.38796	433.45%	
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	69.5	63.178 µg/L	37.6553	63.178 ppb	37.6553	59.60%	
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	1.5	2.5295 µg/L	12.42128	2.5295 ppb	12.42128	491.05%	
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-55.1	-0.0865 µg/L	0.03067	-0.0865 ppb	0.03067	35.44%	
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-1.1	-0.0648 µg/L	0.43282	-0.0648 ppb	0.43282	667.65%	
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-33.6	-51.621 µg/L	10.0994	-51.621 ppb	10.0994	19.56%	
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-8.4	-0.2318 µg/L	0.37384	-0.2318 ppb	0.37384	161.29%	
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-28.1	-18.724 µg/L	4.1734	-18.724 ppb	4.1734	22.29%	
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-10.1	-1.2733 µg/L	0.57505	-1.2733 ppb	0.57505	45.16%	
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-1.8	-2.1698 µg/L	0.98659	-2.1698 ppb	0.98659	45.47%	
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	-11.8	-3.3939 µg/L	2.79260	-3.3939 ppb	2.79260	82.28%	
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	12.4	5.8595 µg/L	1.23414	5.8595 ppb	1.23414	21.06%	
QC value within limits for Se 196.026 Recovery = Not calculated							
SiO2†	11.0	1.8600 µg/L	2.48159	1.8600 ppb	2.48159	133.42%	
QC value within limits for SiO2 Recovery = Not calculated							
Si 251.611†	76.5	4.2304 µg/L	0.72611	4.2304 ppb	0.72611	17.16%	
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-12.5	-1.5562 µg/L	0.50254	-1.5562 ppb	0.50254	32.29%	
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	3.1	0.0175 µg/L	0.07021	0.0175 ppb	0.07021	400.91%	
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	107.9	0.4481 µg/L	0.14764	0.4481 ppb	0.14764	32.95%	
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	1.9	0.4171 µg/L	1.61874	0.4171 ppb	1.61874	388.13%	
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 367.007†	81.4	28.60 µg/L	9.647	28.60 ppb	9.647	33.73%	
QC value within limits for U 367.007 Recovery = Not calculated							
V 292.402†	-28.1	-0.3513 µg/L	0.14027	-0.3513 ppb	0.14027	39.92%	
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	432.6	3.2973 µg/L	0.03432	3.2973 ppb	0.03432	1.04%	
QC value within limits for Zn 213.857 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 3 Autosampler Location: 151
Sample ID: 1204072647|1782317|1| Date Collected: 7/23/2018 10:44:01
Analyst: HSC Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 5 Auto Dilution Factor: 1

Replicate Data: 1204072647|1782317|1|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25488.1	25488.1	115	%			10:44:37
1	Al 396.153Radial†	381524.3	330605.3	106300	µg/L	106300	ppb	10:44:32
1	Ca 317.933Radial†	925715.6	801643.3	171680	µg/L	171680	ppb	10:44:32
1	Fe 238.204 Radial†	1687033.6	1461428.1	284440	µg/L	284440	ppb	10:44:32
1	K 766.490 Radial†	18758.4	15828.6	14346	µg/L	14346	ppb	10:44:37
1	Mg 279.077 IEC†	73458.3	63580.2	103910	µg/L	103910	ppb	10:44:37
1	Na 589.592 Radial†	4272.4	3573.6	5123.1	µg/L	5123.1	ppb	10:44:37
1	Sr 421.552†	204952.2	177287.9	1039.5	µg/L	1039.5	ppb	10:44:37
1	Sc 361.383	398504.5	398504.5	108.82	%			10:45:07
1	Y 371.029	417876.8	417876.8	116.12	%			10:45:07
1	Ag 328.068†	5538.7	5773.4	101.16	µg/L	101.16	ppb	10:45:07
1	As 188.979†	1365.6	1267.7	576.81	µg/L	576.81	ppb	10:45:27
1	B 249.677†	-15882.9	-14768.8	615.10	µg/L	615.10	ppb	10:45:07
1	Ba 233.527†	129491.9	119011.9	994.72	µg/L	994.72	ppb	10:45:07
1	Be 313.107†	621426.3	574632.8	480.02	µg/L	480.02	ppb	10:45:07
1	Cd 226.502†	51058.8	47243.5	459.23	µg/L	459.23	ppb	10:45:07
1	Co 228.616†	26656.5	24718.3	567.36	µg/L	567.36	ppb	10:45:27
1	Cr 267.716†	34912.5	31960.9	639.23	µg/L	639.23	ppb	10:45:07
1	Cu 324.752†	120029.6	108381.0	813.23	µg/L	813.23	ppb	10:45:07
1	Mn 257.610†	3602247.6	3309823.9	5216.3	µg/L	5216.3	ppb	10:45:07
1	Mo 202.031†	9315.6	8527.6	489.07	µg/L	489.07	ppb	10:45:27
1	Ni 231.604†	28477.8	26373.5	734.62	µg/L	734.62	ppb	10:45:27
1	P 214.914†	8697.6	7861.0	4984.7	µg/L	4984.7	ppb	10:45:27
1	Pb 220.353†	5032.7	4688.4	591.58	µg/L	591.58	ppb	10:45:27
1	S 181.975 Axial†	68309.0	62680.1	76930	µg/L	76930	ppb	10:45:07
1	Sb 206.836†	1996.0	1679.6	436.73	µg/L	436.73	ppb	10:45:27
1	Se 196.026†	791.1	750.8	481.34	µg/L	481.34	ppb	10:45:27
1	SiO2†	274408.9	251102.4	42350	µg/L	42350	ppb	10:45:07
1	Si 251.611†	390305.5	358678.9	19807	µg/L	19807	ppb	10:45:07
1	Sn 189.927†	4185.8	3799.0	480.36	µg/L	480.36	ppb	10:45:27
1	Ti 334.940†	305363.5	281334.9	1205.0	µg/L	1205.0	ppb	10:45:07
1	Tl 190.801†	2206.6	2106.0	479.11	µg/L	479.11	ppb	10:45:27
1	U 367.007†	5649.2	4307.9	326.4	µg/L	326.4	ppb	10:45:07
1	V 292.402†	51953.4	47874.4	688.44	µg/L	688.44	ppb	10:45:07
1	Zn 213.857†	156893.2	143278.9	1056.1	µg/L	1056.1	ppb	10:45:07
2	Sc RADIAL	25689.1	25689.1	116	%			10:44:48
2	Al 396.153Radial†	384915.1	330933.5	106410	µg/L	106410	ppb	10:44:42
2	Ca 317.933Radial†	928185.6	797491.2	170790	µg/L	170790	ppb	10:44:42
2	Fe 238.204 Radial†	1694066.5	1456037.2	283390	µg/L	283390	ppb	10:44:42
2	K 766.490 Radial†	18875.9	15802.4	14323	µg/L	14323	ppb	10:44:48
2	Mg 279.077 IEC†	73816.0	63389.8	103590	µg/L	103590	ppb	10:44:48
2	Na 589.592 Radial†	4297.7	3566.3	5113.3	µg/L	5113.3	ppb	10:44:48
2	Sr 421.552†	206854.6	177533.7	1040.9	µg/L	1040.9	ppb	10:44:48
2	Sc 361.383	401354.9	401354.9	109.60	%			10:45:35
2	Y 371.029	420325.1	420325.1	116.80	%			10:45:35
2	Ag 328.068†	5570.4	5766.3	100.92	µg/L	100.92	ppb	10:45:35
2	As 188.979†	1363.0	1256.4	571.79	µg/L	571.79	ppb	10:45:55
2	B 249.677†	-15771.5	-14563.5	617.85	µg/L	617.85	ppb	10:45:35
2	Ba 233.527†	130296.4	118900.9	993.81	µg/L	993.81	ppb	10:45:35
2	Be 313.107†	624926.9	573771.3	479.29	µg/L	479.29	ppb	10:45:35
2	Cd 226.502†	51351.4	47177.2	458.66	µg/L	458.66	ppb	10:45:35
2	Co 228.616†	26601.8	24494.5	562.20	µg/L	562.20	ppb	10:45:55
2	Cr 267.716†	35015.4	31826.9	636.54	µg/L	636.54	ppb	10:45:35
2	Cu 324.752†	120882.6	108375.9	813.14	µg/L	813.14	ppb	10:45:35
2	Mn 257.610†	3624608.2	3306717.2	5211.4	µg/L	5211.4	ppb	10:45:35
2	Mo 202.031†	9333.7	8483.3	486.54	µg/L	486.54	ppb	10:45:55
2	Ni 231.604†	28436.2	26149.8	728.42	µg/L	728.42	ppb	10:45:55
2	P 214.914†	8666.2	7775.5	4928.9	µg/L	4928.9	ppb	10:45:55

2	Pb 220.353†	4990.2	4616.6	582.69 µg/L	582.69 ppb	10:45:55
2	S 181.975 Axial†	68712.5	62602.5	76835 µg/L	76835 ppb	10:45:35
2	Sb 206.836†	1993.5	1664.3	432.52 µg/L	432.52 ppb	10:45:55
2	Se 196.026†	772.8	728.9	470.56 µg/L	470.56 ppb	10:45:55
2	SiO2†	276314.8	251050.6	42342 µg/L	42342 ppb	10:45:35
2	Si 251.611†	392487.1	358122.3	19776 µg/L	19776 ppb	10:45:35
2	Sn 189.927†	4178.1	3764.6	476.07 µg/L	476.07 ppb	10:45:55
2	Ti 334.940†	307284.7	281095.0	1204.0 µg/L	1204.0 ppb	10:45:35
2	Tl 190.801†	2220.0	2103.9	478.56 µg/L	478.56 ppb	10:45:55
2	U 367.007†	5725.9	4341.0	342.5 µg/L	342.5 ppb	10:45:35
2	V 292.402†	52292.0	47844.3	687.82 µg/L	687.82 ppb	10:45:35
2	Zn 213.857†	157572.3	142874.7	1053.2 µg/L	1053.2 ppb	10:45:35
3	Sc RADIAL	25419.7	25419.7	115 %		10:44:58
3	Al 396.153Radial†	386235.2	335586.8	107910 µg/L	107910 ppb	10:44:53
3	Ca 317.933Radial†	928348.1	806088.4	172630 µg/L	172630 ppb	10:44:53
3	Fe 238.204 Radial†	1696066.9	1473208.1	286730 µg/L	286730 ppb	10:44:53
3	K 766.490 Radial†	18746.1	15861.6	14376 µg/L	14376 ppb	10:44:58
3	Mg 279.077 IEC†	72954.7	63314.0	103470 µg/L	103470 ppb	10:44:58
3	Na 589.592 Radial†	4299.7	3607.2	5171.8 µg/L	5171.8 ppb	10:44:58
3	Sr 421.552†	205239.6	178015.3	1043.7 µg/L	1043.7 ppb	10:44:58
3	Sc 361.383	402464.5	402464.5	109.90 %		10:46:02
3	Y 371.029	421127.3	421127.3	117.02 %		10:46:02
3	Ag 328.068†	5569.9	5751.7	101.28 µg/L	101.28 ppb	10:46:02
3	As 188.979†	1367.0	1256.6	572.04 µg/L	572.04 ppb	10:46:23
3	B 249.677†	-15771.1	-14523.5	632.22 µg/L	632.22 ppb	10:46:02
3	Ba 233.527†	129989.1	118293.5	988.62 µg/L	988.62 ppb	10:46:02
3	Be 313.107†	623628.4	571017.7	477.02 µg/L	477.02 ppb	10:46:02
3	Cd 226.502†	51121.3	46838.7	454.78 µg/L	454.78 ppb	10:46:02
3	Co 228.616†	26533.9	24365.8	559.22 µg/L	559.22 ppb	10:46:23
3	Cr 267.716†	34934.4	31665.2	633.41 µg/L	633.41 ppb	10:46:02
3	Cu 324.752†	120593.0	107808.3	809.16 µg/L	809.16 ppb	10:46:02
3	Mn 257.610†	3613139.7	3287164.0	5180.9 µg/L	5180.9 ppb	10:46:02
3	Mo 202.031†	9288.7	8418.9	482.95 µg/L	482.95 ppb	10:46:23
3	Ni 231.604†	28315.7	25968.6	723.48 µg/L	723.48 ppb	10:46:23
3	P 214.914†	8622.2	7713.7	4885.1 µg/L	4885.1 ppb	10:46:23
3	Pb 220.353†	5037.0	4646.7	586.60 µg/L	586.60 ppb	10:46:23
3	S 181.975 Axial†	68236.8	61996.8	76089 µg/L	76089 ppb	10:46:02
3	Sb 206.836†	2004.2	1669.1	433.44 µg/L	433.44 ppb	10:46:23
3	Se 196.026†	785.2	738.2	476.43 µg/L	476.43 ppb	10:46:23
3	SiO2†	275263.0	249398.4	42062 µg/L	42062 ppb	10:46:02
3	Si 251.611†	391232.7	355993.6	19658 µg/L	19658 ppb	10:46:02
3	Sn 189.927†	4181.7	3757.5	475.22 µg/L	475.22 ppb	10:46:23
3	Ti 334.940†	306950.5	280018.0	1199.5 µg/L	1199.5 ppb	10:46:02
3	Tl 190.801†	2200.7	2080.7	473.88 µg/L	473.88 ppb	10:46:23
3	U 367.007†	5650.9	4258.3	299.6 µg/L	299.6 ppb	10:46:02
3	V 292.402†	52086.3	47525.5	684.29 µg/L	684.29 ppb	10:46:02
3	Zn 213.857†	157182.6	142123.7	1047.1 µg/L	1047.1 ppb	10:46:02

Mean Data: 1204072647|1782317|1|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	400774.6	109.44	%	0.558				0.51%
Sc RADIAL	25532.3	116	%	0.63				0.55%
Y 371.029	419776.4	116.65	%	0.471				0.40%
Ag 328.068†	5763.8	101.12	µg/L	0.183	101.12	ppb	0.183	0.18%
Al 396.153Radial†	332375.2	106870	µg/L	896.20	106870	ppb	896.20	0.84%
As 188.979†	1260.2	573.55	µg/L	2.833	573.55	ppb	2.833	0.49%
B 249.677†	-14618.6	621.72	µg/L	9.192	621.72	ppb	9.192	1.48%
Ba 233.527†	118735.4	992.38	µg/L	3.293	992.38	ppb	3.293	0.33%
Be 313.107†	573140.6	478.78	µg/L	1.564	478.78	ppb	1.564	0.33%
Ca 317.933Radial†	801741.0	171700	µg/L	920.74	171700	ppb	920.74	0.54%
Cd 226.502†	47086.5	457.56	µg/L	2.424	457.56	ppb	2.424	0.53%
Co 228.616†	24526.2	562.93	µg/L	4.116	562.93	ppb	4.116	0.73%
Cr 267.716†	31817.6	636.39	µg/L	2.916	636.39	ppb	2.916	0.46%
Cu 324.752†	108188.4	811.85	µg/L	2.326	811.85	ppb	2.326	0.29%
Fe 238.204 Radial†	1463557.8	284860	µg/L	1709.12	284860	ppb	1709.12	0.60%
K 766.490 Radial†	15830.9	14348	µg/L	26.74	14348	ppb	26.74	0.19%
Mg 279.077 IEC†	63428.0	103660	µg/L	224.16	103660	ppb	224.16	0.22%
Mn 257.610†	3301235.0	5202.9	µg/L	19.19	5202.9	ppb	19.19	0.37%
Mo 202.031†	8476.6	486.18	µg/L	3.076	486.18	ppb	3.076	0.63%

Na 589.592 Radial†	3582.4	5136.0 µg/L	31.32	5136.0 ppb	31.32	0.61%
Ni 231.604†	26164.0	728.84 µg/L	5.587	728.84 ppb	5.587	0.77%
P 214.914†	7783.4	4932.9 µg/L	49.94	4932.9 ppb	49.94	1.01%
Pb 220.353†	4650.6	586.96 µg/L	4.454	586.96 ppb	4.454	0.76%
S 181.975 Axial†	62426.5	76618 µg/L	460.26	76618 ppb	460.26	0.60%
Concentration greater than upper limit for S 181.975 Axial.						
Sb 206.836†	1671.0	434.23 µg/L	2.215	434.23 ppb	2.215	0.51%
Se 196.026†	739.3	476.11 µg/L	5.398	476.11 ppb	5.398	1.13%
SiO2†	250517.2	42252 µg/L	164.04	42252 ppb	164.04	0.39%
Si 251.611†	357598.2	19747 µg/L	78.44	19747 ppb	78.44	0.40%
Sn 189.927†	3773.7	477.22 µg/L	2.752	477.22 ppb	2.752	0.58%
Sr 421.552†	177612.3	1041.4 µg/L	2.17	1041.4 ppb	2.17	0.21%
Ti 334.940†	280816.0	1202.8 µg/L	2.95	1202.8 ppb	2.95	0.25%
Tl 190.801†	2096.9	477.18 µg/L	2.873	477.18 ppb	2.873	0.60%
U 367.007†	4302.4	322.8 µg/L	21.69	322.8 ppb	21.69	6.72%
V 292.402†	47748.0	686.85 µg/L	2.241	686.85 ppb	2.241	0.33%
Zn 213.857†	142759.1	1052.1 µg/L	4.58	1052.1 ppb	4.58	0.44%

Sequence No.: 4 Autosampler Location: 152
Sample ID: 1204072647|1782317|10| Date Collected: 7/23/2018 10:46:31
Analyst: HSC Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time: 5 Auto Dilution Factor: 1

Replicate Data: 1204072647|1782317|10|

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	25008.3	25008.3	113	%			10:47:07
1	Al 396.153Radial†	54126.8	47883.2	15377	µg/L	15377	ppb	10:47:07
1	Ca 317.933Radial†	113581.5	99986.1	21413	µg/L	21413	ppb	10:47:07
1	Fe 238.204 Radial†	192380.6	169820.1	33052	µg/L	33052	ppb	10:47:02
1	K 766.490 Radial†	7525.8	6223.0	5651.1	µg/L	5651.1	ppb	10:47:07
1	Mg 279.077 IEC†	10424.3	9147.6	14949	µg/L	14949	ppb	10:47:07
1	Na 589.592 Radial†	3734.0	3169.3	4830.2	µg/L	4830.2	ppb	10:47:07
1	Sr 421.552†	102251.4	90018.5	528.96	µg/L	528.96	ppb	10:47:02
1	Sc 361.383	404840.3	404840.3	110.55	%			10:47:34
1	Y 371.029	400150.4	400150.4	111.20	%			10:47:34
1	Ag 328.068†	8884.2	8720.0	93.828	µg/L	93.828	ppb	10:47:34
1	As 188.979†	1222.1	1118.2	497.45	µg/L	497.45	ppb	10:47:54
1	B 249.677†	13277.8	11837.4	520.36	µg/L	520.36	ppb	10:47:34
1	Ba 233.527†	69601.6	62974.9	529.25	µg/L	529.25	ppb	10:47:34
1	Be 313.107†	633272.5	576411.4	479.43	µg/L	479.43	ppb	10:47:34
1	Cd 226.502†	51284.2	46713.1	481.22	µg/L	481.22	ppb	10:47:34
1	Co 228.616†	22787.6	20835.3	479.92	µg/L	479.92	ppb	10:47:54
1	Cr 267.716†	26890.8	24202.6	482.11	µg/L	482.11	ppb	10:47:54
1	Cu 324.752†	77064.6	67790.0	499.68	µg/L	499.68	ppb	10:47:34
1	Mn 257.610†	672746.1	608087.1	957.13	µg/L	957.13	ppb	10:47:34
1	Mo 202.031†	9433.2	8500.0	482.78	µg/L	482.78	ppb	10:47:54
1	Ni 231.604†	19632.0	17962.4	497.14	µg/L	497.14	ppb	10:47:54
1	P 214.914†	1714.4	1419.1	908.01	µg/L	908.01	ppb	10:47:54
1	Pb 220.353†	4310.3	3962.5	491.35	µg/L	491.35	ppb	10:47:54
1	S 181.975 Axial†	10538.6	9440.5	11589	µg/L	11589	ppb	10:47:54
1	Sb 206.836†	1983.0	1639.1	462.34	µg/L	462.34	ppb	10:47:54
1	Se 196.026†	1072.5	994.0	484.49	µg/L	484.49	ppb	10:47:54
1	SiO2†	90600.9	80889.3	13641	µg/L	13641	ppb	10:47:34
1	Si 251.611†	127409.8	115258.9	6363.6	µg/L	6363.6	ppb	10:47:34
1	Sn 189.927†	4353.3	3890.3	485.71	µg/L	485.71	ppb	10:47:54
1	Ti 334.940†	140728.0	128019.5	545.72	µg/L	545.72	ppb	10:47:34
1	Tl 190.801†	2368.9	2221.2	479.24	µg/L	479.24	ppb	10:47:54
1	U 367.007†	2787.1	1637.6	437.0	µg/L	437.0	ppb	10:47:34
1	V 292.402†	41460.3	37635.5	503.09	µg/L	503.09	ppb	10:47:34
1	Zn 213.857†	78281.1	69912.7	526.10	µg/L	526.10	ppb	10:47:34
2	Sc RADIAL	24692.9	24692.9	112	%			10:47:17
2	Al 396.153Radial†	53580.9	48005.4	15417	µg/L	15417	ppb	10:47:17
2	Ca 317.933Radial†	112527.8	100324.7	21485	µg/L	21485	ppb	10:47:17
2	Fe 238.204 Radial†	191757.0	171431.8	33366	µg/L	33366	ppb	10:47:12
2	K 766.490 Radial†	7462.0	6250.8	5676.2	µg/L	5676.2	ppb	10:47:17
2	Mg 279.077 IEC†	10275.8	9132.4	14925	µg/L	14925	ppb	10:47:17
2	Na 589.592 Radial†	3722.6	3201.1	4878.9	µg/L	4878.9	ppb	10:47:17
2	Sr 421.552†	101776.6	90746.9	533.24	µg/L	533.24	ppb	10:47:12
2	Sc 361.383	402529.8	402529.8	109.92	%			10:48:00
2	Y 371.029	397101.4	397101.4	110.35	%			10:48:00
2	Ag 328.068†	8798.8	8688.5	93.553	µg/L	93.553	ppb	10:48:00
2	As 188.979†	1220.8	1123.4	499.74	µg/L	499.74	ppb	10:48:21
2	B 249.677†	13286.5	11914.3	524.14	µg/L	524.14	ppb	10:48:00
2	Ba 233.527†	69420.8	63171.8	530.89	µg/L	530.89	ppb	10:48:00
2	Be 313.107†	630401.8	577087.9	479.99	µg/L	479.99	ppb	10:48:00
2	Cd 226.502†	51266.5	46963.3	483.78	µg/L	483.78	ppb	10:48:00
2	Co 228.616†	22671.0	20847.6	480.20	µg/L	480.20	ppb	10:48:21
2	Cr 267.716†	26756.9	24220.4	482.47	µg/L	482.47	ppb	10:48:21
2	Cu 324.752†	76667.9	67829.2	499.99	µg/L	499.99	ppb	10:48:00
2	Mn 257.610†	671386.4	610343.2	960.69	µg/L	960.69	ppb	10:48:00
2	Mo 202.031†	9388.1	8508.0	483.24	µg/L	483.24	ppb	10:48:21
2	Ni 231.604†	19535.3	17976.4	497.53	µg/L	497.53	ppb	10:48:21
2	P 214.914†	1677.5	1394.4	891.29	µg/L	891.29	ppb	10:48:21

2	Pb 220.353†	4284.8	3961.6	491.25 µg/L	491.25 ppb	10:48:21
2	S 181.975 Axial†	10468.9	9431.9	11579 µg/L	11579 ppb	10:48:21
2	Sb 206.836†	1957.4	1626.2	458.58 µg/L	458.58 ppb	10:48:21
2	Se 196.026†	1076.8	1003.4	489.08 µg/L	489.08 ppb	10:48:21
2	SiO2†	90261.9	81051.4	13668 µg/L	13668 ppb	10:48:00
2	Si 251.611†	127034.5	115579.1	6381.3 µg/L	6381.3 ppb	10:48:00
2	Sn 189.927†	4328.1	3890.0	485.69 µg/L	485.69 ppb	10:48:21
2	Ti 334.940†	140262.2	128326.4	547.03 µg/L	547.03 ppb	10:48:00
2	Tl 190.801†	2362.9	2228.0	480.72 µg/L	480.72 ppb	10:48:21
2	U 367.007†	2781.2	1646.8	439.0 µg/L	439.0 ppb	10:48:00
2	V 292.402†	41183.4	37598.9	502.69 µg/L	502.69 ppb	10:48:00
2	Zn 213.857†	78171.6	70219.5	528.40 µg/L	528.40 ppb	10:48:00
3	Sc RADIAL	25086.5	25086.5	114 %		10:47:27
3	Al 396.153Radial†	54067.4	47681.9	15313 µg/L	15313 ppb	10:47:27
3	Ca 317.933Radial†	113991.1	100034.0	21423 µg/L	21423 ppb	10:47:27
3	Fe 238.204 Radial†	192071.7	169018.7	32896 µg/L	32896 ppb	10:47:22
3	K 766.490 Radial†	7486.2	6167.4	5600.5 µg/L	5600.5 ppb	10:47:27
3	Mg 279.077 IEC†	10434.4	9127.9	14917 µg/L	14917 ppb	10:47:27
3	Na 589.592 Radial†	3732.8	3157.9	4813.0 µg/L	4813.0 ppb	10:47:27
3	Sr 421.552†	101942.0	89464.7	525.71 µg/L	525.71 ppb	10:47:22
3	Sc 361.383	400046.8	400046.8	109.24 %		10:48:27
3	Y 371.029	394555.0	394555.0	109.64 %		10:48:27
3	Ag 328.068†	8675.2	8625.0	92.839 µg/L	92.839 ppb	10:48:27
3	As 188.979†	1218.0	1127.8	501.66 µg/L	501.66 ppb	10:48:47
3	B 249.677†	13176.6	11888.7	521.45 µg/L	521.45 ppb	10:48:27
3	Ba 233.527†	68843.9	63035.7	529.76 µg/L	529.76 ppb	10:48:27
3	Be 313.107†	625511.7	576171.1	479.23 µg/L	479.23 ppb	10:48:27
3	Cd 226.502†	50786.4	46813.3	482.28 µg/L	482.28 ppb	10:48:27
3	Co 228.616†	22628.8	20937.0	482.27 µg/L	482.27 ppb	10:48:47
3	Cr 267.716†	26741.7	24357.5	485.19 µg/L	485.19 ppb	10:48:47
3	Cu 324.752†	76061.0	67706.6	499.06 µg/L	499.06 ppb	10:48:27
3	Mn 257.610†	666376.7	609548.3	959.41 µg/L	959.41 ppb	10:48:27
3	Mo 202.031†	9370.1	8544.5	485.30 µg/L	485.30 ppb	10:48:47
3	Ni 231.604†	19520.4	18073.0	500.20 µg/L	500.20 ppb	10:48:47
3	P 214.914†	1679.7	1405.9	899.33 µg/L	899.33 ppb	10:48:47
3	Pb 220.353†	4287.0	3987.9	494.48 µg/L	494.48 ppb	10:48:47
3	S 181.975 Axial†	10455.7	9478.9	11636 µg/L	11636 ppb	10:48:47
3	Sb 206.836†	1978.5	1656.5	467.31 µg/L	467.31 ppb	10:48:47
3	Se 196.026†	1077.7	1010.3	492.16 µg/L	492.16 ppb	10:48:47
3	SiO2†	89461.9	80828.7	13631 µg/L	13631 ppb	10:48:27
3	Si 251.611†	126018.3	115366.1	6369.5 µg/L	6369.5 ppb	10:48:27
3	Sn 189.927†	4333.6	3919.5	489.33 µg/L	489.33 ppb	10:48:47
3	Ti 334.940†	139169.4	128118.0	546.14 µg/L	546.14 ppb	10:48:27
3	Tl 190.801†	2380.5	2257.5	486.99 µg/L	486.99 ppb	10:48:47
3	U 367.007†	2759.9	1643.0	439.5 µg/L	439.5 ppb	10:48:27
3	V 292.402†	40860.0	37535.4	501.78 µg/L	501.78 ppb	10:48:27
3	Zn 213.857†	77597.9	70135.7	527.80 µg/L	527.80 ppb	10:48:27

Mean Data: 1204072647|1782317|10|

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	402472.3	109.90	%	0.655				0.60%
Sc RADIAL	24929.2	113	%	0.94				0.84%
Y 371.029	397268.9	110.39	%	0.778				0.71%
Ag 328.068†	8677.9	93.407	µg/L	0.5104	93.407	ppb	0.5104	0.55%
Al 396.153Radial†	47856.8	15369	µg/L	52.59	15369	ppb	52.59	0.34%
As 188.979†	1123.1	499.61	µg/L	2.106	499.61	ppb	2.106	0.42%
B 249.677†	11880.1	521.98	µg/L	1.944	521.98	ppb	1.944	0.37%
Ba 233.527†	63060.8	529.97	µg/L	0.844	529.97	ppb	0.844	0.16%
Be 313.107†	576556.8	479.55	µg/L	0.395	479.55	ppb	0.395	0.08%
Ca 317.933Radial†	100114.9	21440	µg/L	39.23	21440	ppb	39.23	0.18%
Cd 226.502†	46829.9	482.43	µg/L	1.287	482.43	ppb	1.287	0.27%
Co 228.616†	20873.3	480.80	µg/L	1.281	480.80	ppb	1.281	0.27%
Cr 267.716†	24260.2	483.26	µg/L	1.685	483.26	ppb	1.685	0.35%
Cu 324.752†	67775.3	499.57	µg/L	0.474	499.57	ppb	0.474	0.09%
Fe 238.204 Radial†	170090.2	33105	µg/L	239.20	33105	ppb	239.20	0.72%
K 766.490 Radial†	6213.7	5642.6	µg/L	38.55	5642.6	ppb	38.55	0.68%
Mg 279.077 IEC†	9136.0	14930	µg/L	16.93	14930	ppb	16.93	0.11%
Mn 257.610†	609326.2	959.08	µg/L	1.805	959.08	ppb	1.805	0.19%
Mo 202.031†	8517.5	483.77	µg/L	1.343	483.77	ppb	1.343	0.28%

Na 589.592 Radial†	3176.1	4840.7 µg/L	34.16	4840.7 ppb	34.16	0.71%
Ni 231.604†	18003.9	498.29 µg/L	1.662	498.29 ppb	1.662	0.33%
P 214.914†	1406.5	899.54 µg/L	8.360	899.54 ppb	8.360	0.93%
Pb 220.353†	3970.7	492.36 µg/L	1.840	492.36 ppb	1.840	0.37%
S 181.975 Axial†	9450.4	11601 µg/L	30.82	11601 ppb	30.82	0.27%
Sb 206.836†	1640.6	462.74 µg/L	4.382	462.74 ppb	4.382	0.95%
Se 196.026†	1002.5	488.57 µg/L	3.859	488.57 ppb	3.859	0.79%
SiO2†	80923.1	13647 µg/L	19.44	13647 ppb	19.44	0.14%
Si 251.611†	115401.4	6371.5 µg/L	9.00	6371.5 ppb	9.00	0.14%
Sn 189.927†	3900.0	486.91 µg/L	2.098	486.91 ppb	2.098	0.43%
Sr 421.552†	90076.7	529.30 µg/L	3.781	529.30 ppb	3.781	0.71%
Ti 334.940†	128154.6	546.29 µg/L	0.668	546.29 ppb	0.668	0.12%
Tl 190.801†	2235.5	482.32 µg/L	4.113	482.32 ppb	4.113	0.85%
U 367.007†	1642.5	438.5 µg/L	1.31	438.5 ppb	1.31	0.30%
V 292.402†	37589.9	502.52 µg/L	0.671	502.52 ppb	0.671	0.13%
Zn 213.857†	70089.3	527.43 µg/L	1.194	527.43 ppb	1.194	0.23%

Sequence No.: 5 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/23/2018 10:48:55**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24924.4	24924.4	113	%			10:49:33
1	Al 396.153Radial†	17040.6	15190.0	4863.2	µg/L	4863.2	ppb	10:49:33
1	Ca 317.933Radial†	26801.0	23446.2	5021.1	µg/L	5021.1	ppb	10:49:33
1	Fe 238.204 Radial†	28657.2	25351.9	4934.3	µg/L	4934.3	ppb	10:49:33
1	K 766.490 Radial†	6345.0	5199.3	4724.6	µg/L	4724.6	ppb	10:49:33
1	Mg 279.077 IEC†	3576.6	3112.4	5086.3	µg/L	5086.3	ppb	10:49:33
1	Na 589.592 Radial†	7119.6	6179.5	9496.0	µg/L	9496.0	ppb	10:49:33
1	Sr 421.552†	89837.7	79325.2	466.37	µg/L	466.37	ppb	10:49:28
1	Sc 361.383	402995.6	402995.6	110.05	%			10:50:01
1	Y 371.029	393610.5	393610.5	109.38	%			10:50:01
1	Ag 328.068†	50349.3	46436.5	471.59	µg/L	471.59	ppb	10:50:01
1	As 188.979†	1229.0	1129.6	500.90	µg/L	500.90	ppb	10:50:21
1	B 249.677†	16067.2	14427.2	496.90	µg/L	496.90	ppb	10:50:01
1	Ba 233.527†	62015.2	56369.2	474.34	µg/L	474.34	ppb	10:50:01
1	Be 313.107†	627892.9	574145.0	477.31	µg/L	477.31	ppb	10:50:01
1	Cd 226.502†	51033.7	46697.8	484.15	µg/L	484.15	ppb	10:50:01
1	Co 228.616†	22609.2	20767.6	478.59	µg/L	478.59	ppb	10:50:21
1	Cr 267.716†	26245.5	23727.6	472.38	µg/L	472.38	ppb	10:50:21
1	Cu 324.752†	71899.3	63415.3	465.81	µg/L	465.81	ppb	10:50:01
1	Mn 257.610†	332796.9	301958.3	474.55	µg/L	474.55	ppb	10:50:01
1	Mo 202.031†	9256.7	8378.7	475.37	µg/L	475.37	ppb	10:50:21
1	Ni 231.604†	19118.5	17577.1	485.94	µg/L	485.94	ppb	10:50:21
1	P 214.914†	4086.4	3581.7	2370.6	µg/L	2370.6	ppb	10:50:21
1	Pb 220.353†	4256.3	3931.2	486.31	µg/L	486.31	ppb	10:50:21
1	S 181.975 Axial†	969.5	788.7	966.58	µg/L	966.58	ppb	10:50:21
1	Sb 206.836†	1976.9	1641.8	466.99	µg/L	466.99	ppb	10:50:21
1	Se 196.026†	1123.6	1044.8	496.03	µg/L	496.03	ppb	10:50:21
1	SiO2†	34180.4	29994.8	5046.2	µg/L	5046.2	ppb	10:50:01
1	Si 251.611†	47181.8	42882.6	2363.3	µg/L	2363.3	ppb	10:50:01
1	Sn 189.927†	4327.7	3885.1	484.37	µg/L	484.37	ppb	10:50:21
1	Ti 334.940†	119627.1	109427.7	465.85	µg/L	465.85	ppb	10:50:01
1	Tl 190.801†	2393.9	2253.7	483.41	µg/L	483.41	ppb	10:50:21
1	U 367.007†	2383.7	1282.6	429.4	µg/L	429.4	ppb	10:50:01
1	V 292.402†	39481.4	36008.9	476.02	µg/L	476.02	ppb	10:50:01
1	Zn 213.857†	69957.4	62673.0	474.09	µg/L	474.09	ppb	10:50:01
2	Sc RADIAL	25219.6	25219.6	114	%			10:49:43
2	Al 396.153Radial†	17204.4	15156.7	4852.5	µg/L	4852.5	ppb	10:49:43
2	Ca 317.933Radial†	27157.5	23480.4	5028.5	µg/L	5028.5	ppb	10:49:43
2	Fe 238.204 Radial†	29068.3	25414.7	4946.5	µg/L	4946.5	ppb	10:49:43
2	K 766.490 Radial†	6279.3	5075.9	4612.5	µg/L	4612.5	ppb	10:49:43
2	Mg 279.077 IEC†	3611.3	3105.7	5075.4	µg/L	5075.4	ppb	10:49:43
2	Na 589.592 Radial†	7150.8	6133.1	9424.6	µg/L	9424.6	ppb	10:49:43
2	Sr 421.552†	90325.6	78820.9	463.41	µg/L	463.41	ppb	10:49:38
2	Sc 361.383	401922.0	401922.0	109.75	%			10:50:27
2	Y 371.029	391977.5	391977.5	108.92	%			10:50:27
2	Ag 328.068†	50057.6	46292.9	470.13	µg/L	470.13	ppb	10:50:27
2	As 188.979†	1233.0	1136.3	503.82	µg/L	503.82	ppb	10:50:47
2	B 249.677†	16040.4	14441.7	497.42	µg/L	497.42	ppb	10:50:27
2	Ba 233.527†	61929.1	56441.3	474.94	µg/L	474.94	ppb	10:50:27
2	Be 313.107†	625407.6	573404.7	476.70	µg/L	476.70	ppb	10:50:27
2	Cd 226.502†	50806.8	46614.9	483.29	µg/L	483.29	ppb	10:50:27
2	Co 228.616†	22647.8	20857.6	480.67	µg/L	480.67	ppb	10:50:47
2	Cr 267.716†	26261.3	23805.7	473.93	µg/L	473.93	ppb	10:50:47
2	Cu 324.752†	71687.3	63396.7	465.68	µg/L	465.68	ppb	10:50:27
2	Mn 257.610†	331722.5	301787.1	474.28	µg/L	474.28	ppb	10:50:27
2	Mo 202.031†	9241.8	8387.6	475.87	µg/L	475.87	ppb	10:50:47
2	Ni 231.604†	19122.9	17627.5	487.33	µg/L	487.33	ppb	10:50:47
2	P 214.914†	4057.0	3564.8	2359.3	µg/L	2359.3	ppb	10:50:47

2	Pb 220.353†	4241.1	3927.8	485.88 µg/L	485.88 ppb	10:50:47
2	S 181.975 Axial†	965.5	787.3	964.95 µg/L	964.95 ppb	10:50:47
2	Sb 206.836†	1963.2	1634.2	464.78 µg/L	464.78 ppb	10:50:47
2	Se 196.026†	1125.6	1049.3	498.16 µg/L	498.16 ppb	10:50:47
2	SiO2†	33984.3	29899.1	5030.0 µg/L	5030.0 ppb	10:50:27
2	Si 251.611†	46928.0	42765.9	2356.8 µg/L	2356.8 ppb	10:50:27
2	Sn 189.927†	4329.9	3897.6	485.91 µg/L	485.91 ppb	10:50:47
2	Ti 334.940†	119360.8	109475.3	466.05 µg/L	466.05 ppb	10:50:27
2	Tl 190.801†	2382.6	2249.2	482.45 µg/L	482.45 ppb	10:50:47
2	U 367.007†	2399.0	1302.4	436.3 µg/L	436.3 ppb	10:50:27
2	V 292.402†	39282.0	35923.0	474.91 µg/L	474.91 ppb	10:50:27
2	Zn 213.857†	69725.5	62631.5	473.76 µg/L	473.76 ppb	10:50:27
3	Sc RADIAL	25012.5	25012.5	113 %		10:49:53
3	Al 396.153Radial†	17001.1	15101.9	4835.1 µg/L	4835.1 ppb	10:49:53
3	Ca 317.933Radial†	26879.1	23431.6	5018.0 µg/L	5018.0 ppb	10:49:53
3	Fe 238.204 Radial†	28752.4	25346.6	4933.2 µg/L	4933.2 ppb	10:49:53
3	K 766.490 Radial†	6247.0	5093.0	4628.0 µg/L	4628.0 ppb	10:49:53
3	Mg 279.077 IEC†	3556.2	3083.2	5038.7 µg/L	5038.7 ppb	10:49:53
3	Na 589.592 Radial†	7060.3	6105.0	9381.4 µg/L	9381.4 ppb	10:49:53
3	Sr 421.552†	90186.6	79353.1	466.54 µg/L	466.54 ppb	10:49:48
3	Sc 361.383	406216.6	406216.6	110.93 %		10:50:53
3	Y 371.029	396257.8	396257.8	110.11 %		10:50:53
3	Ag 328.068†	50730.0	46416.9	471.39 µg/L	471.39 ppb	10:50:53
3	As 188.979†	1220.9	1113.4	493.75 µg/L	493.75 ppb	10:51:13
3	B 249.677†	16211.8	14441.8	497.39 µg/L	497.39 ppb	10:50:53
3	Ba 233.527†	62688.5	56529.3	475.69 µg/L	475.69 ppb	10:50:53
3	Be 313.107†	635200.9	576208.9	479.03 µg/L	479.03 ppb	10:50:53
3	Cd 226.502†	51487.5	46739.2	484.57 µg/L	484.57 ppb	10:50:53
3	Co 228.616†	22622.9	20617.0	475.11 µg/L	475.11 ppb	10:51:13
3	Cr 267.716†	26248.2	23540.9	468.66 µg/L	468.66 ppb	10:51:13
3	Cu 324.752†	72615.9	63543.3	466.76 µg/L	466.76 ppb	10:50:53
3	Mn 257.610†	336168.2	302599.5	475.55 µg/L	475.55 ppb	10:50:53
3	Mo 202.031†	9247.5	8303.7	471.11 µg/L	471.11 ppb	10:51:13
3	Ni 231.604†	19124.0	17444.3	482.26 µg/L	482.26 ppb	10:51:13
3	P 214.914†	4066.8	3534.5	2339.2 µg/L	2339.2 ppb	10:51:13
3	Pb 220.353†	4229.6	3876.5	479.54 µg/L	479.54 ppb	10:51:13
3	S 181.975 Axial†	955.3	768.8	942.20 µg/L	942.20 ppb	10:51:13
3	Sb 206.836†	1965.2	1617.0	459.91 µg/L	459.91 ppb	10:51:13
3	Se 196.026†	1129.4	1041.9	494.64 µg/L	494.64 ppb	10:51:13
3	SiO2†	34554.7	30085.9	5061.8 µg/L	5061.8 ppb	10:50:53
3	Si 251.611†	47487.7	42818.4	2359.8 µg/L	2359.8 ppb	10:50:53
3	Sn 189.927†	4322.0	3848.8	479.86 µg/L	479.86 ppb	10:51:13
3	Ti 334.940†	120915.2	109726.9	467.13 µg/L	467.13 ppb	10:50:53
3	Tl 190.801†	2397.5	2239.7	480.43 µg/L	480.43 ppb	10:51:13
3	U 367.007†	2405.2	1284.9	430.2 µg/L	430.2 ppb	10:50:53
3	V 292.402†	39829.4	36038.2	476.36 µg/L	476.36 ppb	10:50:53
3	Zn 213.857†	70546.2	62699.7	474.31 µg/L	474.31 ppb	10:50:53

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	403711.4	110.24	%	0.610				0.55%
Sc RADIAL	25052.2	113	%	0.69				0.60%
Y 371.029	393948.6	109.47	%	0.600				0.55%
Ag 328.068†	46382.1	471.03	µg/L	0.791	471.03	ppb	0.791	0.17%
QC value within limits for Ag 328.068 Recovery = 94.21%								
Al 396.153Radial†	15149.5	4850.2	µg/L	14.19	4850.2	ppb	14.19	0.29%
QC value within limits for Al 396.153Radial Recovery = 97.00%								
As 188.979†	1126.4	499.49	µg/L	5.183	499.49	ppb	5.183	1.04%
QC value within limits for As 188.979 Recovery = 99.90%								
B 249.677†	14436.9	497.24	µg/L	0.294	497.24	ppb	0.294	0.06%
QC value within limits for B 249.677 Recovery = 99.45%								
Ba 233.527†	56446.6	474.99	µg/L	0.675	474.99	ppb	0.675	0.14%
QC value within limits for Ba 233.527 Recovery = 95.00%								
Be 313.107†	574586.2	477.68	µg/L	1.206	477.68	ppb	1.206	0.25%
QC value within limits for Be 313.107 Recovery = 95.54%								
Ca 317.933Radial†	23452.7	5022.5	µg/L	5.37	5022.5	ppb	5.37	0.11%
QC value within limits for Ca 317.933Radial Recovery = 100.45%								
Cd 226.502†	46684.0	484.00	µg/L	0.656	484.00	ppb	0.656	0.14%
QC value within limits for Cd 226.502 Recovery = 96.80%								

Co 228.616†	20747.4	478.12 µg/L	2.806	478.12 ppb	2.806	0.59%
QC value within limits for Co 228.616 Recovery = 95.62%						
Cr 267.716†	23691.4	471.66 µg/L	2.709	471.66 ppb	2.709	0.57%
QC value within limits for Cr 267.716 Recovery = 94.33%						
Cu 324.752†	63451.8	466.08 µg/L	0.586	466.08 ppb	0.586	0.13%
QC value within limits for Cu 324.752 Recovery = 93.22%						
Fe 238.204 Radial†	25371.0	4938.0 µg/L	7.37	4938.0 ppb	7.37	0.15%
QC value within limits for Fe 238.204 Radial Recovery = 98.76%						
K 766.490 Radial†	5122.7	4655.1 µg/L	60.74	4655.1 ppb	60.74	1.30%
QC value within limits for K 766.490 Radial Recovery = 93.10%						
Mg 279.077 IEC†	3100.4	5066.8 µg/L	24.93	5066.8 ppb	24.93	0.49%
QC value within limits for Mg 279.077 IEC Recovery = 101.34%						
Mn 257.610†	302115.0	474.79 µg/L	0.672	474.79 ppb	0.672	0.14%
QC value within limits for Mn 257.610 Recovery = 94.96%						
Mo 202.031†	8356.6	474.12 µg/L	2.613	474.12 ppb	2.613	0.55%
QC value within limits for Mo 202.031 Recovery = 94.82%						
Na 589.592 Radial†	6139.2	9434.0 µg/L	57.88	9434.0 ppb	57.88	0.61%
QC value within limits for Na 589.592 Radial Recovery = 94.34%						
Ni 231.604†	17549.6	485.18 µg/L	2.617	485.18 ppb	2.617	0.54%
QC value within limits for Ni 231.604 Recovery = 97.04%						
P 214.914†	3560.3	2356.4 µg/L	15.88	2356.4 ppb	15.88	0.67%
QC value within limits for P 214.914 Recovery = 94.25%						
Pb 220.353†	3911.8	483.91 µg/L	3.791	483.91 ppb	3.791	0.78%
QC value within limits for Pb 220.353 Recovery = 96.78%						
S 181.975 Axial†	781.6	957.91 µg/L	13.629	957.91 ppb	13.629	1.42%
QC value within limits for S 181.975 Axial Recovery = 95.79%						
Sb 206.836†	1631.0	463.90 µg/L	3.623	463.90 ppb	3.623	0.78%
QC value within limits for Sb 206.836 Recovery = 92.78%						
Se 196.026†	1045.3	496.28 µg/L	1.774	496.28 ppb	1.774	0.36%
QC value within limits for Se 196.026 Recovery = 99.26%						
SiO2†	29993.2	5046.0 µg/L	15.90	5046.0 ppb	15.90	0.32%
QC value within limits for SiO2 Recovery = 94.36%						
Si 251.611†	42822.3	2359.9 µg/L	3.24	2359.9 ppb	3.24	0.14%
QC value within limits for Si 251.611 Recovery = 94.40%						
Sn 189.927†	3877.2	483.38 µg/L	3.147	483.38 ppb	3.147	0.65%
QC value within limits for Sn 189.927 Recovery = 96.68%						
Sr 421.552†	79166.4	465.44 µg/L	1.761	465.44 ppb	1.761	0.38%
QC value within limits for Sr 421.552 Recovery = 93.09%						
Ti 334.940†	109543.3	466.35 µg/L	0.686	466.35 ppb	0.686	0.15%
QC value within limits for Ti 334.940 Recovery = 93.27%						
Tl 190.801†	2247.5	482.10 µg/L	1.524	482.10 ppb	1.524	0.32%
QC value within limits for Tl 190.801 Recovery = 96.42%						
U 367.007†	1290.0	431.9 µg/L	3.78	431.9 ppb	3.78	0.87%
QC value less than the lower limit for U 367.007 Recovery = 86.39%						
V 292.402†	35990.0	475.76 µg/L	0.757	475.76 ppb	0.757	0.16%
QC value within limits for V 292.402 Recovery = 95.15%						
Zn 213.857†	62668.1	474.06 µg/L	0.276	474.06 ppb	0.276	0.06%
QC value within limits for Zn 213.857 Recovery = 94.81%						

QC Failed. Continue with analysis.

Sequence No.: 6 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/23/2018 10:51:22**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**
Wash Time: 5 **Auto Dilution Factor: 1**

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc RADIAL	24857.3	24857.3	113	%			10:52:13
1	Al 396.153Radial†	-131.5	-22.9	-7.3544	µg/L	-7.3544	ppb	10:52:13
1	Ca 317.933Radial†	536.2	179.9	38.536	µg/L	38.536	ppb	10:52:13
1	Fe 238.204 Radial†	51.7	10.9	2.1212	µg/L	2.1212	ppb	10:52:13
1	K 766.490 Radial†	510.2	31.6	28.704	µg/L	28.704	ppb	10:51:53
1	Mg 279.077 IEC†	64.0	0.8	1.2982	µg/L	1.2982	ppb	10:52:13
1	Na 589.592 Radial†	110.6	-29.3	-45.054	µg/L	-45.054	ppb	10:52:13
1	Sr 421.552†	281.4	-10.5	-0.0626	µg/L	-0.0626	ppb	10:51:53
1	Sc 361.383	405160.4	405160.4	110.64	%			10:53:10
1	Y 371.029	398923.2	398923.2	110.85	%			10:53:10
1	Ag 328.068†	-691.4	58.7	0.5886	µg/L	0.5886	ppb	10:53:10
1	As 188.979†	-10.6	3.2	1.3970	µg/L	1.3970	ppb	10:53:30
1	B 249.677†	268.4	69.4	2.3114	µg/L	2.3114	ppb	10:53:30
1	Ba 233.527†	15.4	29.5	0.2479	µg/L	0.2479	ppb	10:53:30
1	Be 313.107†	-3599.7	320.3	0.2695	µg/L	0.2695	ppb	10:53:10
1	Cd 226.502†	-290.1	60.9	0.6317	µg/L	0.6317	ppb	10:53:30
1	Co 228.616†	-200.5	41.2	0.9488	µg/L	0.9488	ppb	10:53:30
1	Cr 267.716†	118.5	-14.8	-0.3039	µg/L	-0.3039	ppb	10:53:30
1	Cu 324.752†	2075.4	-44.2	-0.3174	µg/L	-0.3174	ppb	10:53:10
1	Mn 257.610†	459.5	-41.6	-0.0652	µg/L	-0.0652	ppb	10:53:30
1	Mo 202.031†	36.2	-0.2	-0.0139	µg/L	-0.0139	ppb	10:53:30
1	Ni 231.604†	-248.9	-21.0	-0.5808	µg/L	-0.5808	ppb	10:53:30
1	P 214.914†	116.1	-26.7	-17.794	µg/L	-17.794	ppb	10:53:30
1	Pb 220.353†	-82.4	-11.0	-1.3651	µg/L	-1.3651	ppb	10:53:30
1	S 181.975 Axial†	111.2	8.1	9.9920	µg/L	9.9920	ppb	10:53:30
1	Sb 206.836†	172.5	1.3	0.3871	µg/L	0.3871	ppb	10:53:30
1	Se 196.026†	-9.5	15.2	7.1711	µg/L	7.1711	ppb	10:53:30
1	SiO2†	1207.0	25.7	4.3356	µg/L	4.3356	ppb	10:53:30
1	Si 251.611†	164.6	157.0	8.6821	µg/L	8.6821	ppb	10:53:30
1	Sn 189.927†	41.3	-10.2	-1.2629	µg/L	-1.2629	ppb	10:53:30
1	Ti 334.940†	-751.9	41.9	0.1748	µg/L	0.1748	ppb	10:53:10
1	Tl 190.801†	-89.5	-2.6	-0.5560	µg/L	-0.5560	ppb	10:53:30
1	U 367.007†	1014.5	33.5	11.76	µg/L	11.76	ppb	10:53:10
1	V 292.402†	-136.2	8.8	0.1218	µg/L	0.1218	ppb	10:53:30
1	Zn 213.857†	1504.7	462.2	3.5247	µg/L	3.5247	ppb	10:53:30
2	Sc RADIAL	24755.5	24755.5	112	%			10:52:38
2	Al 396.153Radial†	-109.5	-3.6	-1.1950	µg/L	-1.1950	ppb	10:52:38
2	Ca 317.933Radial†	560.7	203.8	43.639	µg/L	43.639	ppb	10:52:38
2	Fe 238.204 Radial†	43.8	4.0	0.7875	µg/L	0.7875	ppb	10:52:38
2	K 766.490 Radial†	496.0	20.7	18.862	µg/L	18.862	ppb	10:52:18
2	Mg 279.077 IEC†	56.2	-5.9	-9.7216	µg/L	-9.7216	ppb	10:52:38
2	Na 589.592 Radial†	109.2	-30.1	-46.358	µg/L	-46.358	ppb	10:52:38
2	Sr 421.552†	173.2	-106.0	-0.6244	µg/L	-0.6244	ppb	10:52:18
2	Sc 361.383	404690.9	404690.9	110.51	%			10:53:35
2	Y 371.029	398277.6	398277.6	110.68	%			10:53:35
2	Ag 328.068†	-728.7	24.3	0.2283	µg/L	0.2283	ppb	10:53:35
2	As 188.979†	-25.2	-10.0	-4.4000	µg/L	-4.4000	ppb	10:53:55
2	B 249.677†	249.2	52.3	1.7382	µg/L	1.7382	ppb	10:53:55
2	Ba 233.527†	11.6	26.1	0.2193	µg/L	0.2193	ppb	10:53:55
2	Be 313.107†	-3588.1	327.0	0.2799	µg/L	0.2799	ppb	10:53:35
2	Cd 226.502†	-279.0	70.6	0.7324	µg/L	0.7324	ppb	10:53:55
2	Co 228.616†	-198.2	43.1	0.9926	µg/L	0.9926	ppb	10:53:55
2	Cr 267.716†	127.6	-6.5	-0.1536	µg/L	-0.1536	ppb	10:53:55
2	Cu 324.752†	2051.2	-64.0	-0.4509	µg/L	-0.4509	ppb	10:53:35
2	Mn 257.610†	481.1	-21.5	-0.0338	µg/L	-0.0338	ppb	10:53:55
2	Mo 202.031†	45.4	8.1	0.4590	µg/L	0.4590	ppb	10:53:55
2	Ni 231.604†	-220.6	4.3	0.1184	µg/L	0.1184	ppb	10:53:55
2	P 214.914†	96.3	-44.5	-29.630	µg/L	-29.630	ppb	10:53:55

2	Pb 220.353†	-62.3	7.1	0.8592 µg/L	0.8592 ppb	10:53:55
2	S 181.975 Axial†	100.3	-1.6	-1.9117 µg/L	-1.9117 ppb	10:53:55
2	Sb 206.836†	158.5	-11.1	-3.1803 µg/L	-3.1803 ppb	10:53:55
2	Se 196.026†	-9.8	14.9	7.0574 µg/L	7.0574 ppb	10:53:55
2	SiO2†	1195.0	16.1	2.6948 µg/L	2.6948 ppb	10:53:55
2	Si 251.611†	177.3	168.7	9.3213 µg/L	9.3213 ppb	10:53:55
2	Sn 189.927†	47.0	-5.0	-0.6219 µg/L	-0.6219 ppb	10:53:55
2	Ti 334.940†	-652.7	130.9	0.5451 µg/L	0.5451 ppb	10:53:35
2	Tl 190.801†	-88.5	-1.8	-0.3633 µg/L	-0.3633 ppb	10:53:55
2	U 367.007†	1074.6	88.9	31.24 µg/L	31.24 ppb	10:53:35
2	V 292.402†	-138.7	6.4	0.1055 µg/L	0.1055 ppb	10:53:55
2	Zn 213.857†	1447.4	411.9	3.1383 µg/L	3.1383 ppb	10:53:55
3	Sc RADIAL	24790.8	24790.8	112 %		10:53:03
3	Al 396.153Radial†	-85.6	17.8	5.7104 µg/L	5.7104 ppb	10:53:03
3	Ca 317.933Radial†	566.8	208.5	44.652 µg/L	44.652 ppb	10:53:03
3	Fe 238.204 Radial†	60.9	19.2	3.7418 µg/L	3.7418 ppb	10:53:03
3	K 766.490 Radial†	499.6	23.3	21.200 µg/L	21.200 ppb	10:52:43
3	Mg 279.077 IEC†	74.4	10.2	16.669 µg/L	16.669 ppb	10:53:03
3	Na 589.592 Radial†	101.6	-37.1	-57.084 µg/L	-57.084 ppb	10:53:03
3	Sr 421.552†	273.4	-17.0	-0.1005 µg/L	-0.1005 ppb	10:52:43
3	Sc 361.383	404407.1	404407.1	110.43 %		10:54:00
3	Y 371.029	397968.7	397968.7	110.59 %		10:54:00
3	Ag 328.068†	-676.9	70.8	0.7113 µg/L	0.7113 ppb	10:54:00
3	As 188.979†	-18.3	-3.8	-1.6634 µg/L	-1.6634 ppb	10:54:20
3	B 249.677†	218.0	24.2	0.8159 µg/L	0.8159 ppb	10:54:20
3	Ba 233.527†	10.3	24.9	0.2094 µg/L	0.2094 ppb	10:54:20
3	Be 313.107†	-3490.7	413.0	0.3460 µg/L	0.3460 ppb	10:54:00
3	Cd 226.502†	-276.9	72.3	0.7504 µg/L	0.7504 ppb	10:54:20
3	Co 228.616†	-193.7	47.0	1.0831 µg/L	1.0831 ppb	10:54:20
3	Cr 267.716†	135.9	1.2	0.0159 µg/L	0.0159 ppb	10:54:20
3	Cu 324.752†	2084.3	-32.7	-0.2343 µg/L	-0.2343 ppb	10:54:00
3	Mn 257.610†	465.9	-35.0	-0.0547 µg/L	-0.0547 ppb	10:54:20
3	Mo 202.031†	36.3	-0.1	-0.0030 µg/L	-0.0030 ppb	10:54:20
3	Ni 231.604†	-179.5	41.4	1.1448 µg/L	1.1448 ppb	10:54:20
3	P 214.914†	104.5	-37.0	-24.648 µg/L	-24.648 ppb	10:54:20
3	Pb 220.353†	-82.3	-11.0	-1.3655 µg/L	-1.3655 ppb	10:54:20
3	S 181.975 Axial†	101.7	-0.2	-0.2811 µg/L	-0.2811 ppb	10:54:20
3	Sb 206.836†	177.8	6.4	1.8399 µg/L	1.8399 ppb	10:54:20
3	Se 196.026†	-30.7	-4.0	-1.8928 µg/L	-1.8928 ppb	10:54:20
3	SiO2†	1205.5	26.4	4.4607 µg/L	4.4607 ppb	10:54:20
3	Si 251.611†	140.6	135.5	7.4959 µg/L	7.4959 ppb	10:54:20
3	Sn 189.927†	42.7	-8.9	-1.1011 µg/L	-1.1011 ppb	10:54:20
3	Ti 334.940†	-698.8	88.7	0.3756 µg/L	0.3756 ppb	10:54:00
3	Tl 190.801†	-87.7	-1.1	-0.2366 µg/L	-0.2366 ppb	10:54:20
3	U 367.007†	1005.2	26.8	9.377 µg/L	9.377 ppb	10:54:00
3	V 292.402†	-157.7	-10.9	-0.1367 µg/L	-0.1367 ppb	10:54:20
3	Zn 213.857†	1494.7	455.7	3.4656 µg/L	3.4656 ppb	10:54:20

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	404752.8	110.53	%	0.104				0.09%
Sc RADIAL	24801.2	112	%	0.23				0.21%
Y 371.029	398389.8	110.71	%	0.135				0.12%
Ag 328.068†	51.3	0.5094	µg/L	0.25104	0.5094	ppb	0.25104	49.28%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-2.9	-0.9464	µg/L	6.53597	-0.9464	ppb	6.53597	690.64%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.5	-1.5555	µg/L	2.89998	-1.5555	ppb	2.89998	186.44%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	48.7	1.6218	µg/L	0.75450	1.6218	ppb	0.75450	46.52%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	26.8	0.2256	µg/L	0.01999	0.2256	ppb	0.01999	8.86%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	353.4	0.2984	µg/L	0.04150	0.2984	ppb	0.04150	13.91%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	197.4	42.276	µg/L	3.2781	42.276	ppb	3.2781	7.75%
QC value within limits for Ca 317.933Radial Recovery = Not calculated								
Cd 226.502†	67.9	0.7048	µg/L	0.06396	0.7048	ppb	0.06396	9.07%
QC value within limits for Cd 226.502 Recovery = Not calculated								

Co 228.616†	43.8	1.0082 µg/L	0.06851	1.0082 ppb	0.06851	6.80%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-6.7	-0.1472 µg/L	0.16002	-0.1472 ppb	0.16002	108.70%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-47.0	-0.3342 µg/L	0.10926	-0.3342 ppb	0.10926	32.69%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	11.4	2.2168 µg/L	1.47948	2.2168 ppb	1.47948	66.74%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	25.2	22.922 µg/L	5.1421	22.922 ppb	5.1421	22.43%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.7	2.7486 µg/L	13.25507	2.7486 ppb	13.25507	482.25%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-32.7	-0.0512 µg/L	0.01599	-0.0512 ppb	0.01599	31.22%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	2.6	0.1474 µg/L	0.26994	0.1474 ppb	0.26994	183.17%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-32.2	-49.499 µg/L	6.6012	-49.499 ppb	6.6012	13.34%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	8.2	0.2274 µg/L	0.86796	0.2274 ppb	0.86796	381.63%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-36.1	-24.024 µg/L	5.9422	-24.024 ppb	5.9422	24.73%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-5.0	-0.6238 µg/L	1.28430	-0.6238 ppb	1.28430	205.88%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	2.1	2.5997 µg/L	6.45360	2.5997 ppb	6.45360	248.24%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-1.1	-0.3178 µg/L	2.58329	-0.3178 ppb	2.58329	812.97%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	8.7	4.1119 µg/L	5.20051	4.1119 ppb	5.20051	126.47%
QC value within limits for Se 196.026 Recovery = Not calculated						
SiO2†	22.7	3.8304 µg/L	0.98541	3.8304 ppb	0.98541	25.73%
QC value within limits for SiO2 Recovery = Not calculated						
Si 251.611†	153.7	8.4998 µg/L	0.92624	8.4998 ppb	0.92624	10.90%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-8.0	-0.9953 µg/L	0.33332	-0.9953 ppb	0.33332	33.49%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-44.5	-0.2625 µg/L	0.31396	-0.2625 ppb	0.31396	119.61%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	87.2	0.3652 µg/L	0.18534	0.3652 ppb	0.18534	50.75%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-1.8	-0.3853 µg/L	0.16083	-0.3853 ppb	0.16083	41.74%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 367.007†	49.7	17.46 µg/L	11.995	17.46 ppb	11.995	68.70%
QC value within limits for U 367.007 Recovery = Not calculated						
V 292.402†	1.4	0.0302 µg/L	0.14473	0.0302 ppb	0.14473	479.16%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	443.2	3.3762 µg/L	0.20814	3.3762 ppb	0.20814	6.16%
QC value within limits for Zn 213.857 Recovery = Not calculated						

All analyte(s) passed QC.

ICPMS #14 Daily Performance

Sample ID: Sample
Sample Date/Time: Friday, July 20, 2018 10:18:41
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\Daily 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\Sample.1423
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default1.tun
Dual Detector Mode: Pulse
Acquisition Date/Time&Time Zone: Friday, July 20, 2018 10:18:41 Eastern Daylight Time
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	19559.9	19559.882	110.922	0.6
	Mg	24.0	123032.6	123032.604	1032.745	0.8
	Co	58.9	30032.6	30032.585	73.578	0.2
	Rh	102.9	30168.4	30168.373	248.345	0.8
	In	114.9	191356.3	191356.276	1339.964	0.7
	Pb	208.0	130664.9	130664.923	994.142	0.8
⌈>	Ba	137.9	173435.1	173435.144	1839.720	1.1
⌊	Ba++	69.0	816.7	0.005	0.000	1.9
⌈>	Ce	139.9	213059.0	213059.035	1905.218	0.9
⌊	CeO	155.9	1300.5	0.006	0.000	1.4
	Bkgd	220.0	0.1	0.100	0.137	136.9

Current Conditions

C Val	Description
1.01	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
900.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-14.00	Cell Rod Offset STD [CRO]
10.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
1.03	DRC Mode NEB
-8.50	DRC Mode QRO
-3.00	DRC Mode CRO
-13.00	DRC Mode Cell Entrance/Exit Voltage
0.10	Cell Gas A
375.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-7.00	KED Mode Cell Entrance Voltage
-23.00	KED Mode Cell Exit Voltage
3.00	KED Cell Gas A
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9.012	41	-12.5	3936.5
Mg	23.985	41	-14.5	68797.3
In	114.904	41	-12.0	33022.1
Ce	139.905	41	-10.0	32045.9
Pb	207.977	41	-7.5	23964.1
U	238.050	41	-7.0	46120.3

ICPMS #14 Instrument Tuning Report

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Pk. Width
Be	9.0	9.0	1625	2068	0.720
Mg	24.0	24.0	4609	2068	0.733
Mg	25.0	25.0	4801	2068	0.716
Mg	26.0	26.0	5008	2068	0.712
Co	58.9	58.9	11579	2068	0.730
Rh	102.9	102.9	20369	2069	0.757
In	114.9	114.9	22770	2069	0.767
Ce	139.9	139.9	27773	2080	0.672
Pb	206.0	205.9	40973	2080	0.716
Pb	207.0	207.0	41181	2078	0.742
Pb	208.0	208.0	41371	2075	0.747
U	238.1	238.0	47396	2090	0.625

ICPMS #14 - Summary Report

Sample ID: Cal Blank
Sample Date/Time: Saturday, July 21, 2018 00:24:18
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\Cal Blank.275

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7		ug/L		68.667	
Be	9		ug/L		1.667	
B	11		ug/L		538.677	
Na	23		ug/L		3743.824	
Mg	24		ug/L		208.002	
Al	27		ug/L		143.334	
P	31		ug/L		61.333	
K	39		ug/L		58373.040	
Ca	44		ug/L		162.001	
>Sc	45		ug/L		495980.813	
Ti	47		ug/L		4.667	
V	51		ug/L		5184.941	
Cr	52		ug/L		270.669	
Cr	53		ug/L		1918.796	
Mn	55		ug/L		90.667	
Fe	57		ug/L		64.000	
Co	59		ug/L		30.000	
Ni	60		ug/L		14.000	
Cu	63		ug/L		58.000	
Cu	65		ug/L		28.000	
Zn	66		ug/L		102.000	
Zn	67		ug/L		26.667	
Zn	68		ug/L		78.000	
>Ge	74		ug/L		267323.639	
As	75		ug/L		349.782	
Se	77		ug/L		136.001	
Se	78		ug/L		111.284	
Se	82		ug/L		9.333	
Kr	83		ug/L		10.400	
Sr	88		ug/L		53.333	
Zr	90		ug/L		134.001	
Mo	98		ug/L		40.676	
Ag	107		ug/L		7.333	
Cd	111		ug/L		7.333	
Cd	114		ug/L		8.385	
>In	115		ug/L		219864.042	
Sn	120		ug/L		196.592	
Sb	121		ug/L		94.667	
Sb	123		ug/L		64.578	
Ba	135		ug/L		9.333	
Ba	137		ug/L		16.667	
>Lu	175		ug/L		374140.292	
Tl	205		ug/L		36.000	
Pb	208		ug/L		389.335	
Th	232		ug/L		1352.064	
U	238		ug/L		117.667	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9984
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	44					
| >	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
| >	Ge	74					
|	As	75					
|	Se	77					
|	Se	78					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
| >	Lu	175					
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Saturday, July 21, 2018 00:27:35
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\Standard 1.276

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**10.000**	**ug/L**	2.698	5982.587	0.012
Be	9	**10.000**	**ug/L**	3.805	1741.773	0.004
B	11	**20.000**	**ug/L**	3.770	1574.087	0.002
Na	23	**1000.000**	**ug/L**	1.403	809355.064	1.629
Mg	24	**1000.000**	**ug/L**	3.036	389570.460	0.787
Al	27	**1000.000**	**ug/L**	0.973	174840.322	0.353
P	31	**1000.000**	**ug/L**	1.470	12119.139	0.024
K	39	**1000.000**	**ug/L**	0.232	437245.797	0.766
Ca	44	**1000.000**	**ug/L**	0.913	16561.595	0.033
>Sc	45		**ug/L**		494641.760	494641.760
Ti	47	**10.000**	**ug/L**	4.697	809.356	0.002
V	51	**10.000**	**ug/L**	0.633	25326.432	0.041
Cr	52	**10.000**	**ug/L**	3.037	21978.897	0.044
Cr	53		**ug/L**		4914.846	0.006
Mn	55	**10.000**	**ug/L**	1.574	13940.799	0.028
Fe	57	**1000.000**	**ug/L**	1.950	45539.135	0.092
Co	59	**10.000**	**ug/L**	1.270	32494.915	0.066
Ni	60	**10.000**	**ug/L**	1.877	8816.720	0.018
Cu	63		**ug/L**		23928.024	0.048
Cu	65	**10.000**	**ug/L**	2.679	11810.881	0.024
Zn	66	**10.000**	**ug/L**	1.156	3980.555	0.015
Zn	67		**ug/L**		630.681	0.002
Zn	68		**ug/L**		3041.657	0.011
>Ge	74		**ug/L**		264243.708	264243.708
As	75	**10.000**	**ug/L**	1.162	2706.701	0.009
Se	77		**ug/L**		193.335	0.000
Se	78	**10.000**	**ug/L**	8.990	401.059	0.001
Se	82		**ug/L**		153.334	0.001
Kr	83		**ug/L**		9.200	-0.000
Sr	88	**10.000**	**ug/L**	0.262	21271.158	0.097
Zr	90	**10.000**	**ug/L**	1.532	26370.987	0.120
Mo	98	**10.000**	**ug/L**	1.749	16950.729	0.077
Ag	107	**10.000**	**ug/L**	2.287	35375.759	0.161
Cd	111	**10.000**	**ug/L**	0.932	5506.394	0.025
Cd	114		**ug/L**		13718.408	0.063
>In	115		**ug/L**		219081.758	219081.758
Sn	120	**10.000**	**ug/L**	0.509	19447.785	0.088
Sb	121	**10.000**	**ug/L**	1.049	14540.730	0.066
Sb	123		**ug/L**		11089.214	0.050
Ba	135		**ug/L**		3501.096	0.009
Ba	137	**10.000**	**ug/L**	5.815	6182.674	0.016
>Lu	175		**ug/L**		379064.748	379064.748
Tl	205	**10.000**	**ug/L**	0.952	64978.108	0.171
Pb	208	**10.000**	**ug/L**	1.477	94371.329	0.248
Th	232	**10.000**	**ug/L**	1.555	81257.802	0.211
U	238	**10.000**	**ug/L**	0.466	76160.483	0.201

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	44					
| >	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
| >	Ge	74					
|	As	75					
|	Se	77					
|	Se	78					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
| >	Lu	175					
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Saturday, July 21, 2018 00:30:50
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\Standard 2.277

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**99.981**	**ug/L**	2.143	59899.363	0.117
Be	9	**99.972**	**ug/L**	0.354	17457.327	0.034
B	11	**200.002**	**ug/L**	2.379	11256.434	0.021
Na	23	**10002.487**	**ug/L**	0.672	8526188.353	16.709
Mg	24	**10004.562**	**ug/L**	2.182	4209988.595	8.254
Al	27	**9998.276**	**ug/L**	0.714	1770778.801	3.471
P	31	**9998.449**	**ug/L**	1.009	122492.924	0.240
K	39	**10005.394**	**ug/L**	1.243	4193344.328	8.104
Ca	44	**9997.501**	**ug/L**	0.186	165126.883	0.323
>Sc	45		**ug/L**		510064.797	510064.797
Ti	47	**100.001**	**ug/L**	1.994	8310.750	0.016
V	51	**99.932**	**ug/L**	1.008	199849.561	0.381
Cr	52	**99.971**	**ug/L**	0.765	217769.944	0.426
Cr	53		**ug/L**		27392.905	0.050
Mn	55	**99.980**	**ug/L**	0.441	140150.151	0.275
Fe	57	**9996.297**	**ug/L**	0.743	452163.091	0.886
Co	59	**99.967**	**ug/L**	0.984	323982.457	0.635
Ni	60	**99.955**	**ug/L**	1.379	86831.124	0.170
Cu	63		**ug/L**		234684.002	0.460
Cu	65	**99.961**	**ug/L**	1.185	116977.722	0.229
Zn	66	**99.906**	**ug/L**	2.150	36148.351	0.134
Zn	67		**ug/L**		6058.618	0.022
Zn	68		**ug/L**		27481.086	0.102
>Ge	74		**ug/L**		268933.170	268933.170
As	75	**99.984**	**ug/L**	1.154	24002.815	0.088
Se	77		**ug/L**		970.700	0.003
Se	78	**99.950**	**ug/L**	0.445	2932.983	0.010
Se	82		**ug/L**		1388.734	0.005
Kr	83		**ug/L**		8.267	-0.000
Sr	88	**99.994**	**ug/L**	1.819	213919.964	0.963
Zr	90	**100.023**	**ug/L**	1.114	272402.632	1.226
Mo	98	**100.005**	**ug/L**	2.133	172323.147	0.776
Ag	107	**99.973**	**ug/L**	0.494	349029.650	1.572
Cd	111	**99.987**	**ug/L**	0.673	55031.798	0.248
Cd	114		**ug/L**		134770.325	0.607
>In	115		**ug/L**		222067.915	222067.915
Sn	120	**99.974**	**ug/L**	1.098	190437.706	0.857
Sb	121	**99.992**	**ug/L**	1.339	145334.318	0.654
Sb	123		**ug/L**		111850.920	0.503
Ba	135		**ug/L**		34585.149	0.089
Ba	137	**99.974**	**ug/L**	0.332	61615.932	0.158
>Lu	175		**ug/L**		388791.650	388791.650
Tl	205	**99.970**	**ug/L**	0.704	646793.245	1.664
Pb	208	**99.969**	**ug/L**	0.771	935048.996	2.404
Th	232	**100.009**	**ug/L**	1.421	828454.703	2.127
U	238	**99.986**	**ug/L**	1.136	769239.719	1.978

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	44					
| >	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
| >	Ge	74					
|	As	75					
|	Se	77					
|	Se	78					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
| >	Lu	175					
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Saturday, July 21, 2018 00:34:06
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 1.278

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**50.525**	**ug/L**	1.906	29966.065	0.059
Be	9	**51.979**	**ug/L**	1.556	8976.820	0.018
B	11	**104.610**	**ug/L**	2.466	6083.962	0.011
Na	23	**4930.499**	**ug/L**	0.883	4158365.869	8.236
Mg	24	**4574.601**	**ug/L**	0.503	1903991.981	3.774
Al	27	**4950.980**	**ug/L**	0.790	867216.569	1.719
P	31	**4913.164**	**ug/L**	0.374	59561.248	0.118
K	39	**4532.869**	**ug/L**	1.404	1911186.413	3.671
Ca	44	**4875.714**	**ug/L**	1.916	79717.151	0.158
>Sc	45		**ug/L**		504422.713	504422.713
Ti	47	**48.196**	**ug/L**	4.044	3963.884	0.008
V	51	**48.968**	**ug/L**	0.885	99535.561	0.187
Cr	52	**50.343**	**ug/L**	0.763	108587.130	0.215
Cr	53		**ug/L**		14790.987	0.025
Mn	55	**50.224**	**ug/L**	1.866	69664.133	0.138
Fe	57	**4913.661**	**ug/L**	0.526	219835.918	0.436
Co	59	**50.664**	**ug/L**	1.145	162387.139	0.322
Ni	60	**50.737**	**ug/L**	0.122	43595.757	0.086
Cu	63		**ug/L**		116853.306	0.232
Cu	65	**50.788**	**ug/L**	1.218	58785.371	0.116
Zn	66	**51.194**	**ug/L**	1.733	18397.172	0.069
Zn	67		**ug/L**		2956.973	0.011
Zn	68		**ug/L**		14057.581	0.052
>Ge	74		**ug/L**		266393.085	266393.085
As	75	**50.452**	**ug/L**	0.572	12170.739	0.044
Se	77		**ug/L**		552.677	0.002
Se	78	**51.101**	**ug/L**	1.557	1539.427	0.005
Se	82		**ug/L**		695.350	0.003
Kr	83		**ug/L**		8.400	-0.000
Sr	88	**50.075**	**ug/L**	3.291	107372.764	0.482
Zr	90	**48.208**	**ug/L**	2.587	131643.234	0.591
Mo	98	**49.283**	**ug/L**	2.212	85124.000	0.382
Ag	107	**49.129**	**ug/L**	2.326	171885.957	0.772
Cd	111	**50.355**	**ug/L**	0.753	27780.319	0.125
Cd	114		**ug/L**		68407.165	0.307
>In	115		**ug/L**		222578.122	222578.122
Sn	120	**49.360**	**ug/L**	0.794	94338.465	0.423
Sb	121	**47.639**	**ug/L**	0.978	69444.382	0.312
Sb	123		**ug/L**		53520.920	0.240
Ba	135		**ug/L**		17367.217	0.045
Ba	137	**50.630**	**ug/L**	2.885	30779.793	0.080
>Lu	175		**ug/L**		383528.434	383528.434
Tl	205	**48.649**	**ug/L**	1.983	310443.556	0.810
Pb	208	**50.506**	**ug/L**	1.839	466115.475	1.215
Th	232	**52.081**	**ug/L**	1.670	426178.913	1.108
U	238	**50.075**	**ug/L**	2.559	379999.236	0.991

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	101.051				
	Be	9	103.958				
	B	11	104.610				
	Na	23	98.610				
	Mg	24	91.492				
	Al	27	98.039				
	P	31	98.263				
	K	39	90.657				
	Ca	44	97.514				
>	Sc	45		101.70			
	Ti	47	96.393				
	V	51	97.937				
	Cr	52	100.686				
	Cr	53					
	Mn	55	100.447				
	Fe	57	98.273				
	Co	59	101.327				
	Ni	60	101.474				
	Cu	63					
	Cu	65	101.575				
	Zn	66	102.387				
	Zn	67					
	Zn	68					
>	Ge	74		99.65			
	As	75	100.903				
	Se	77					
	Se	78	102.202				
	Se	82					
	Kr	83					
	Sr	88	100.150				
	Zr	90	96.415				
	Mo	98	98.567				
	Ag	107	98.258				
	Cd	111	100.709				
	Cd	114					
>	In	115		101.23			
	Sn	120	98.720				
	Sb	121	95.279				
	Sb	123					
	Ba	135					
	Ba	137	101.259				
>	Lu	175		102.51			
	Tl	205	97.297				
	Pb	208	101.011				
	Th	232	104.162				
	U	238	100.150				

QC Out of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Saturday, July 21, 2018 00:37:21
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 2.279

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.015**	**ug/L**	46.441	60.667	-0.000
Be	9	**-0.000**	**ug/L**	5479.005	1.667	-0.000
B	11	**1.436**	**ug/L**	87.411	619.347	0.000
Na	23	**0.625**	**ug/L**	27.895	4305.315	0.001
Mg	24	**0.868**	**ug/L**	13.723	568.678	0.001
Al	27	**0.760**	**ug/L**	24.267	277.336	0.000
P	31	**0.550**	**ug/L**	89.826	68.667	0.000
K	39	**-2.203**	**ug/L**	277.973	58075.198	-0.002
Ca	44	**-0.150**	**ug/L**	147.158	161.334	-0.000
>Sc	45		**ug/L**		501280.188	501280.188
Ti	47	**0.036**	**ug/L**	130.124	7.667	0.000
V	51	**0.111**	**ug/L**	65.207	5451.040	0.000
Cr	52	**0.017**	**ug/L**	110.539	309.337	0.000
Cr	53		**ug/L**		1812.115	-0.000
Mn	55	**-0.013**	**ug/L**	71.710	73.334	-0.000
Fe	57	**0.975**	**ug/L**	30.371	108.000	0.000
Co	59	**0.004**	**ug/L**	75.847	42.667	0.000
Ni	60	**-0.000**	**ug/L**	2818.868	14.000	-0.000
Cu	63		**ug/L**		72.667	0.000
Cu	65	**0.006**	**ug/L**	86.972	35.333	0.000
Zn	66	**0.077**	**ug/L**	33.970	126.667	0.000
Zn	67		**ug/L**		26.000	-0.000
Zn	68		**ug/L**		87.334	0.000
>Ge	74		**ug/L**		261558.326	261558.326
As	75	**-0.094**	**ug/L**	55.821	320.670	-0.000
Se	77		**ug/L**		133.334	0.000
Se	78	**-0.116**	**ug/L**	250.817	105.660	-0.000
Se	82		**ug/L**		11.333	0.000
Kr	83		**ug/L**		6.800	-0.000
Sr	88	**-0.002**	**ug/L**	338.021	48.667	-0.000
Zr	90	**0.009**	**ug/L**	67.282	156.668	0.000
Mo	98	**0.064**	**ug/L**	37.920	148.750	0.000
Ag	107	**0.004**	**ug/L**	9.308	21.333	0.000
Cd	111	**0.007**	**ug/L**	172.796	11.333	0.000
Cd	114		**ug/L**		20.561	0.000
>In	115		**ug/L**		218576.786	218576.786
Sn	120	**0.022**	**ug/L**	18.198	237.267	0.000
Sb	121	**0.154**	**ug/L**	13.437	314.670	0.001
Sb	123		**ug/L**		248.664	0.001
Ba	135		**ug/L**		6.000	-0.000
Ba	137	**-0.009**	**ug/L**	21.607	11.333	-0.000
>Lu	175		**ug/L**		373405.830	373405.830
Tl	205	**0.024**	**ug/L**	11.715	186.668	0.000
Pb	208	**0.001**	**ug/L**	92.998	396.669	0.000
Th	232	**0.059**	**ug/L**	20.567	1814.782	0.001
U	238	**0.007**	**ug/L**	14.351	168.001	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	44					
| >	Sc	45		101.07			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
| >	Ge	74		97.84			
|	As	75					
|	Se	77					
|	Se	78					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115		99.41			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
| >	Lu	175		99.80			
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Saturday, July 21, 2018 00:40:37
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 3.280

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**10.466**	**ug/L**	4.874	6107.307	0.012
Be	9	**0.558**	**ug/L**	11.575	95.667	0.000
B	11	**15.753**	**ug/L**	3.928	1347.397	0.002
Na	23	**248.447**	**ug/L**	1.865	207845.303	0.415
Mg	24	**29.116**	**ug/L**	0.265	12022.390	0.024
Al	27	**50.968**	**ug/L**	1.133	8846.071	0.018
P	31	**45.659**	**ug/L**	0.503	600.013	0.001
K	39	**279.809**	**ug/L**	0.579	169372.192	0.227
Ca	44	**222.736**	**ug/L**	3.289	3704.480	0.007
>Sc	45		**ug/L**		491888.272	491888.272
Ti	47	**9.647**	**ug/L**	1.979	777.354	0.002
V	51	**10.030**	**ug/L**	2.439	23968.760	0.038
Cr	52	**10.105**	**ug/L**	2.589	21466.788	0.043
Cr	53		**ug/L**		4459.363	0.005
Mn	55	**4.991**	**ug/L**	1.693	6832.968	0.014
Fe	57	**103.098**	**ug/L**	2.580	4560.061	0.009
Co	59	**1.065**	**ug/L**	1.370	3359.062	0.007
Ni	60	**2.117**	**ug/L**	6.018	1786.779	0.004
Cu	63		**ug/L**		2441.542	0.005
Cu	65	**1.066**	**ug/L**	4.198	1230.720	0.002
Zn	66	**11.376**	**ug/L**	1.553	4111.925	0.015
Zn	67		**ug/L**		643.348	0.002
Zn	68		**ug/L**		2889.626	0.011
>Ge	74		**ug/L**		262868.682	262868.682
As	75	**5.197**	**ug/L**	2.031	1545.861	0.005
Se	77		**ug/L**		186.001	0.000
Se	78	**5.050**	**ug/L**	10.610	248.768	0.001
Se	82		**ug/L**		81.334	0.000
Kr	83		**ug/L**		9.867	-0.000
Sr	88	**10.140**	**ug/L**	2.202	21420.048	0.098
Zr	90	**9.570**	**ug/L**	1.543	25800.611	0.117
Mo	98	**0.522**	**ug/L**	4.398	926.331	0.004
Ag	107	**1.035**	**ug/L**	4.300	3568.446	0.016
Cd	111	**1.038**	**ug/L**	5.648	570.011	0.003
Cd	114		**ug/L**		1429.162	0.006
>In	115		**ug/L**		218820.766	218820.766
Sn	120	**5.057**	**ug/L**	3.587	9675.234	0.043
Sb	121	**2.848**	**ug/L**	0.656	4170.609	0.019
Sb	123		**ug/L**		3169.265	0.014
Ba	135		**ug/L**		672.683	0.002
Ba	137	**2.008**	**ug/L**	8.313	1196.050	0.003
>Lu	175		**ug/L**		371009.856	371009.856
Tl	205	**2.020**	**ug/L**	3.429	12505.473	0.034
Pb	208	**2.107**	**ug/L**	1.400	19180.578	0.051
Th	232	**2.113**	**ug/L**	3.147	18010.682	0.045
U	238	**0.210**	**ug/L**	5.409	1660.097	0.004

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	104.660				
	Be	9	111.674				
	B	11	105.021				
	Na	23	99.379				
	Mg	24	97.052				
	Al	27	101.936				
	P	31	91.318				
	K	39	93.270				
	Ca	44	111.368				
>	Sc	45		99.17			
	Ti	47	96.470				
	V	51	100.301				
	Cr	52	101.046				
	Cr	53					
	Mn	55	99.824				
	Fe	57	103.098				
	Co	59	106.542				
	Ni	60	105.853				
	Cu	63					
	Cu	65	106.640				
	Zn	66	113.756				
	Zn	67					
	Zn	68					
>	Ge	74		98.33			
	As	75	103.949				
	Se	77					
	Se	78	101.008				
	Se	82					
	Kr	83					
	Sr	88	101.396				
	Zr	90	95.701				
	Mo	98	104.338				
	Ag	107	103.550				
	Cd	111	103.807				
	Cd	114					
>	In	115		99.53			
	Sn	120	101.143				
	Sb	121	94.942				
	Sb	123					
	Ba	135					
	Ba	137	100.383				
>	Lu	175		99.16			
	Tl	205	101.020				
	Pb	208	105.340				
	Th	232	105.647				
	U	238	105.179				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Saturday, July 21, 2018 00:43:53
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 4.281

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.188**	**ug/L**	4.066	173.334	0.000
Be	9	**-0.002**	**ug/L**	202.636	1.333	-0.000
B	11	**0.219**	**ug/L**	282.843	536.010	0.000
Na	23	**95016.429**	**ug/L**	0.059	76697230.720	158.719
Mg	24	**92396.502**	**ug/L**	0.536	36835269.821	76.231
Al	27	**97898.767**	**ug/L**	0.738	16424153.343	33.990
P	31	**90569.749**	**ug/L**	1.719	1050680.712	2.174
K	39	**95536.665**	**ug/L**	0.816	37446657.979	77.380
Ca	44	**94604.990**	**ug/L**	0.317	1478953.146	3.060
>Sc	45		**ug/L**		483201.824	483201.824
Ti	47	**1887.366**	**ug/L**	1.383	148520.105	0.307
V	51	**-0.690**	**ug/L**	7.711	3778.500	-0.003
Cr	52	**0.896**	**ug/L**	3.679	2110.823	0.004
Cr	53		**ug/L**		1743.440	-0.000
Mn	55	**3.249**	**ug/L**	1.799	4399.344	0.009
Fe	57	**103409.296**	**ug/L**	1.629	4430506.179	9.169
Co	59	**0.334**	**ug/L**	2.277	1056.039	0.002
Ni	60	**0.257**	**ug/L**	10.949	225.335	0.000
Cu	63		**ug/L**		361.338	0.001
Cu	65	**0.176**	**ug/L**	6.200	222.002	0.000
Zn	66	**4.396**	**ug/L**	1.029	1484.077	0.006
Zn	67		**ug/L**		199.335	0.001
Zn	68		**ug/L**		1049.372	0.004
>Ge	74		**ug/L**		236319.195	236319.195
As	75	**-0.041**	**ug/L**	130.530	300.670	-0.000
Se	77		**ug/L**		108.667	-0.000
Se	78	**0.049**	**ug/L**	751.130	99.453	0.000
Se	82		**ug/L**		10.667	0.000
Kr	83		**ug/L**		9.200	-0.000
Sr	88	**1.745**	**ug/L**	0.270	3424.410	0.017
Zr	90	**0.702**	**ug/L**	6.434	1852.120	0.009
Mo	98	**2282.236**	**ug/L**	0.628	3556903.239	17.706
Ag	107	**0.165**	**ug/L**	7.492	528.676	0.003
Cd	111	**0.680**	**ug/L**	9.114	345.338	0.002
Cd	114		**ug/L**		615.686	0.003
>In	115		**ug/L**		200891.810	200891.810
Sn	120	**0.087**	**ug/L**	16.470	328.594	0.001
Sb	121	**0.109**	**ug/L**	12.650	230.002	0.001
Sb	123		**ug/L**		192.579	0.001
Ba	135		**ug/L**		257.336	0.001
Ba	137	**0.700**	**ug/L**	2.089	435.340	0.001
>Lu	175		**ug/L**		377042.931	377042.931
Tl	205	**0.014**	**ug/L**	6.765	126.667	0.000
Pb	208	**0.233**	**ug/L**	2.722	2503.421	0.006
Th	232	**0.326**	**ug/L**	10.805	3979.223	0.007
U	238	**0.024**	**ug/L**	11.936	296.336	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23	95.016				
	Mg	24	92.397				
	Al	27	97.899				
	P	31	90.570				
	K	39	95.537				
	Ca	44	94.605				
>	Sc	45		97.42			
	Ti	47	94.368				
	V	51					
	Cr	52					
	Cr	53					
	Mn	55	29.555				
	Fe	57	103.409				
	Co	59	93.697				
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		88.40			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98	114.112				
	Ag	107					
	Cd	111	90.850				
	Cd	114					
>	In	115		91.37			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137	92.150				
>	Lu	175		100.78			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Saturday, July 21, 2018 00:47:08
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 5.282

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**19.855**	**ug/L**	1.482	11004.237	0.023
Be	9	**18.552**	**ug/L**	1.763	2984.312	0.006
B	11	**18.202**	**ug/L**	10.845	1407.403	0.002
Na	23	**96781.314**	**ug/L**	0.739	75931456.616	161.667
Mg	24	**93834.205**	**ug/L**	1.252	36359645.731	77.418
Al	27	**99434.213**	**ug/L**	0.562	16214099.625	34.523
P	31	**91418.631**	**ug/L**	0.286	1030849.279	2.195
K	39	**95085.670**	**ug/L**	0.887	36225358.195	77.015
Ca	44	**94400.571**	**ug/L**	0.952	1434354.364	3.054
>Sc	45		**ug/L**		469663.087	469663.087
Ti	47	**1901.730**	**ug/L**	0.701	145459.478	0.310
V	51	**18.631**	**ug/L**	1.338	38302.615	0.071
Cr	52	**19.829**	**ug/L**	0.929	39979.197	0.085
Cr	53		**ug/L**		6222.021	0.009
Mn	55	**22.289**	**ug/L**	0.871	28835.741	0.061
Fe	57	**105040.754**	**ug/L**	0.289	4374518.066	9.314
Co	59	**19.362**	**ug/L**	0.814	57802.051	0.123
Ni	60	**18.499**	**ug/L**	0.916	14809.006	0.032
Cu	63		**ug/L**		39547.344	0.084
Cu	65	**18.253**	**ug/L**	1.834	19690.899	0.042
Zn	66	**23.380**	**ug/L**	2.466	7231.830	0.031
Zn	67		**ug/L**		1173.382	0.005
Zn	68		**ug/L**		5270.972	0.023
>Ge	74		**ug/L**		227817.106	227817.106
As	75	**19.805**	**ug/L**	1.528	4266.192	0.017
Se	77		**ug/L**		241.335	0.001
Se	78	**19.160**	**ug/L**	2.466	552.826	0.002
Se	82		**ug/L**		260.669	0.001
Kr	83		**ug/L**		8.267	-0.000
Sr	88	**22.217**	**ug/L**	0.623	41839.850	0.214
Zr	90	**20.542**	**ug/L**	0.892	49296.912	0.252
Mo	98	**2302.417**	**ug/L**	0.742	3488575.094	17.862
Ag	107	**18.473**	**ug/L**	1.312	56727.762	0.290
Cd	111	**19.385**	**ug/L**	1.353	9388.418	0.048
Cd	114		**ug/L**		23237.199	0.119
>In	115		**ug/L**		195312.680	195312.680
Sn	120	**20.457**	**ug/L**	1.701	34407.948	0.175
Sb	121	**19.331**	**ug/L**	0.732	24778.138	0.126
Sb	123		**ug/L**		19287.258	0.098
Ba	135		**ug/L**		6462.795	0.017
Ba	137	**19.134**	**ug/L**	1.725	11440.580	0.030
>Lu	175		**ug/L**		376744.484	376744.484
Tl	205	**18.324**	**ug/L**	0.893	114911.662	0.305
Pb	208	**18.684**	**ug/L**	0.651	169661.478	0.449
Th	232	**19.716**	**ug/L**	1.001	159355.232	0.419
U	238	**19.249**	**ug/L**	0.604	143604.507	0.381

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	99.275				
	Be	9	92.760				
	B	11	91.008				
	Na	23	96.781				
	Mg	24	93.834				
	Al	27	99.434				
	P	31	91.419				
	K	39	95.086				
	Ca	44	94.401				
>	Sc	45		94.69			
	Ti	47	95.087				
	V	51	93.156				
	Cr	52	99.147				
	Cr	53					
	Mn	55	71.919				
	Fe	57	105.041				
	Co	59	95.110				
	Ni	60	92.497				
	Cu	63					
	Cu	65	91.266				
	Zn	66	116.902				
	Zn	67					
	Zn	68					
>	Ge	74		85.22			
	As	75	99.023				
	Se	77					
	Se	78	95.799				
	Se	82					
	Kr	83					
	Sr	88	111.085				
	Zr	90	102.710				
	Mo	98	115.121				
	Ag	107	92.364				
	Cd	111	93.427				
	Cd	114					
>	In	115		88.83			
	Sn	120	102.286				
	Sb	121	96.654				
	Sb	123					
	Ba	135					
	Ba	137	92.166				
>	Lu	175		100.70			
	Tl	205	91.621				
	Pb	208	93.418				
	Th	232	98.579				
	U	238	96.246				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Mn	55	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 21, 2018 00:50:25
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 6.283

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**51.193**	**ug/L**	3.304	29694.175	0.060
Be	9	**51.931**	**ug/L**	1.341	8772.026	0.018
B	11	**100.686**	**ug/L**	4.355	5747.824	0.011
Na	23	**4977.873**	**ug/L**	1.639	4105999.575	8.315
Mg	24	**4585.958**	**ug/L**	1.249	1866870.518	3.784
Al	27	**4887.435**	**ug/L**	0.970	837410.524	1.697
P	31	**4844.732**	**ug/L**	0.992	57445.275	0.116
K	39	**4468.811**	**ug/L**	0.976	1843977.448	3.620
Ca	44	**4877.389**	**ug/L**	1.296	78005.752	0.158
>Sc	45		**ug/L**		493383.822	493383.822
Ti	47	**48.493**	**ug/L**	0.802	3901.199	0.008
V	51	**49.842**	**ug/L**	1.832	98999.226	0.190
Cr	52	**50.225**	**ug/L**	0.725	105962.870	0.214
Cr	53		**ug/L**		14584.775	0.026
Mn	55	**49.422**	**ug/L**	2.200	67054.374	0.136
Fe	57	**4937.006**	**ug/L**	0.977	216051.680	0.438
Co	59	**50.355**	**ug/L**	1.270	157861.461	0.320
Ni	60	**50.856**	**ug/L**	1.863	42737.169	0.087
Cu	63		**ug/L**		115121.351	0.233
Cu	65	**50.046**	**ug/L**	3.009	56657.514	0.115
Zn	66	**52.565**	**ug/L**	0.350	18248.983	0.071
Zn	67		**ug/L**		3021.653	0.012
Zn	68		**ug/L**		13900.094	0.054
>Ge	74		**ug/L**		257367.365	257367.365
As	75	**50.030**	**ug/L**	1.393	11660.980	0.044
Se	77		**ug/L**		525.343	0.002
Se	78	**50.672**	**ug/L**	2.912	1475.525	0.005
Se	82		**ug/L**		662.682	0.003
Kr	83		**ug/L**		9.333	-0.000
Sr	88	**50.725**	**ug/L**	0.457	104531.744	0.489
Zr	90	**48.354**	**ug/L**	1.232	126874.918	0.593
Mo	98	**50.492**	**ug/L**	1.853	83802.019	0.392
Ag	107	**49.781**	**ug/L**	0.968	167379.068	0.783
Cd	111	**50.812**	**ug/L**	1.118	26934.705	0.126
Cd	114		**ug/L**		67043.187	0.313
>In	115		**ug/L**		213847.119	213847.119
Sn	120	**51.003**	**ug/L**	1.220	93644.566	0.437
Sb	121	**48.080**	**ug/L**	0.366	67342.360	0.314
Sb	123		**ug/L**		52495.869	0.245
Ba	135		**ug/L**		16683.069	0.043
Ba	137	**48.654**	**ug/L**	0.981	29692.827	0.077
>Lu	175		**ug/L**		384888.095	384888.095
Tl	205	**49.283**	**ug/L**	0.761	315672.302	0.820
Pb	208	**50.604**	**ug/L**	0.712	468768.535	1.217
Th	232	**51.155**	**ug/L**	0.479	420182.593	1.088
U	238	**49.420**	**ug/L**	0.804	376453.624	0.978

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	102.385				
	Be	9	103.863				
	B	11	100.686				
	Na	23	99.557				
	Mg	24	91.719				
	Al	27	96.781				
	P	31	96.895				
	K	39	89.376				
	Ca	44	97.548				
>	Sc	45		99.48			
	Ti	47	96.987				
	V	51	99.683				
	Cr	52	100.450				
	Cr	53					
	Mn	55	98.844				
	Fe	57	98.740				
	Co	59	100.711				
	Ni	60	101.712				
	Cu	63					
	Cu	65	100.092				
	Zn	66	105.131				
	Zn	67					
	Zn	68					
>	Ge	74		96.28			
	As	75	100.059				
	Se	77					
	Se	78	101.345				
	Se	82					
	Kr	83					
	Sr	88	101.450				
	Zr	90	96.707				
	Mo	98	100.984				
	Ag	107	99.561				
	Cd	111	101.623				
	Cd	114					
>	In	115		97.26			
	Sn	120	102.006				
	Sb	121	96.160				
	Sb	123					
	Ba	135					
	Ba	137	97.307				
>	Lu	175		102.87			
	Tl	205	98.567				
	Pb	208	101.207				
	Th	232	102.309				
	U	238	98.839				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 21, 2018 00:53:41
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 7.284

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.035**	**ug/L**	7.147	47.333	-0.000
Be	9	**0.002**	**ug/L**	693.646	2.000	0.000
B	11	**-0.032**	**ug/L**	876.874	523.343	-0.000
Na	23	**1.929**	**ug/L**	8.801	5205.615	0.003
Mg	24	**1.180**	**ug/L**	18.151	673.349	0.001
Al	27	**1.118**	**ug/L**	0.977	327.337	0.000
P	31	**0.883**	**ug/L**	153.789	70.000	0.000
K	39	**-2.730**	**ug/L**	138.794	55813.519	-0.002
Ca	44	**1.288**	**ug/L**	46.054	178.001	0.000
>Sc	45		**ug/L**		483353.863	483353.863
Ti	47	**0.090**	**ug/L**	66.641	11.667	0.000
V	51	**0.735**	**ug/L**	8.986	6408.771	0.003
Cr	52	**-0.010**	**ug/L**	209.091	244.002	-0.000
Cr	53		**ug/L**		2245.510	0.001
Mn	55	**-0.030**	**ug/L**	28.092	48.000	-0.000
Fe	57	**1.252**	**ug/L**	29.035	116.000	0.000
Co	59	**-0.002**	**ug/L**	46.725	22.667	-0.000
Ni	60	**-0.000**	**ug/L**	2474.143	13.333	-0.000
Cu	63		**ug/L**		72.000	0.000
Cu	65	**0.007**	**ug/L**	81.775	35.333	0.000
Zn	66	**0.039**	**ug/L**	161.284	108.667	0.000
Zn	67		**ug/L**		24.667	-0.000
Zn	68		**ug/L**		70.000	-0.000
>Ge	74		**ug/L**		250967.321	250967.321
As	75	**0.058**	**ug/L**	49.528	341.115	0.000
Se	77		**ug/L**		138.001	0.000
Se	78	**-0.279**	**ug/L**	94.696	97.094	-0.000
Se	82		**ug/L**		12.667	0.000
Kr	83		**ug/L**		7.867	-0.000
Sr	88	**-0.007**	**ug/L**	50.927	36.667	-0.000
Zr	90	**-0.005**	**ug/L**	60.123	118.000	-0.000
Mo	98	**0.182**	**ug/L**	16.205	342.305	0.001
Ag	107	**0.001**	**ug/L**	123.655	10.000	0.000
Cd	111	**0.003**	**ug/L**	154.629	8.667	0.000
Cd	114		**ug/L**		14.034	0.000
>In	115		**ug/L**		214360.676	214360.676
Sn	120	**-0.002**	**ug/L**	627.603	188.617	-0.000
Sb	121	**0.146**	**ug/L**	47.092	297.337	0.001
Sb	123		**ug/L**		235.498	0.001
Ba	135		**ug/L**		8.667	-0.000
Ba	137	**0.004**	**ug/L**	434.162	18.667	0.000
>Lu	175		**ug/L**		370217.174	370217.174
Tl	205	**0.019**	**ug/L**	28.222	155.334	0.000
Pb	208	**0.002**	**ug/L**	211.227	399.336	0.000
Th	232	**0.028**	**ug/L**	15.281	1554.751	0.001
U	238	**0.004**	**ug/L**	61.848	148.334	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		97.45			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.88			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.50			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		98.95			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Saturday, July 21, 2018 00:56:57
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 10.285

Concentration Results

Summary

Analyte	Mass	**Conc. Mean**	**Report Unit**	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**992.794**	**ug/L**	1.537	566080.401	1.165
Be	9	**963.212**	**ug/L**	1.728	160246.907	0.330
B	11	**-0.780**	**ug/L**	35.136	488.008	-0.000
Na	23	**48807.794**	**ug/L**	1.651	39624103.476	81.531
Mg	24	**47515.974**	**ug/L**	1.701	19051137.526	39.203
Al	27	**50485.271**	**ug/L**	0.381	8518771.365	17.528
P	31	**23403.373**	**ug/L**	0.644	273133.321	0.562
K	39	**48350.109**	**ug/L**	0.239	19090133.878	39.161
Ca	44	**49165.265**	**ug/L**	0.548	773112.780	1.590
>Sc	45		**ug/L**		486005.867	486005.867
Ti	47	**8.028**	**ug/L**	0.958	640.014	0.001
V	51	**973.425**	**ug/L**	1.191	1810488.417	3.715
Cr	52	**1002.007**	**ug/L**	6.084	2078142.341	4.274
Cr	53		**ug/L**		239158.850	0.488
Mn	55	**981.081**	**ug/L**	1.073	1309548.162	2.694
Fe	57	**53711.096**	**ug/L**	0.596	2314649.636	4.763
Co	59	**1090.532**	**ug/L**	0.479	3367295.908	6.928
Ni	60	**962.047**	**ug/L**	1.072	796257.106	1.638
Cu	63		**ug/L**		2373086.159	4.883
Cu	65	**942.125**	**ug/L**	1.325	1050252.931	2.161
Zn	66	**2458.434**	**ug/L**	0.847	806949.257	3.298
Zn	67		**ug/L**		125985.778	0.515
Zn	68		**ug/L**		590746.486	2.415
>Ge	74		**ug/L**		244617.974	244617.974
As	75	**989.830**	**ug/L**	0.141	213300.892	0.871
Se	77		**ug/L**		3873.192	0.015
Se	78	**491.573**	**ug/L**	0.532	12721.673	0.052
Se	82		**ug/L**		6206.014	0.025
Kr	83		**ug/L**		8.400	-0.000
Sr	88	**1175.878**	**ug/L**	0.971	2292864.747	11.326
Zr	90	**510.599**	**ug/L**	3.442	1266980.982	6.259
Mo	98	**1034.531**	**ug/L**	1.944	1624682.628	8.026
Ag	107	**241.008**	**ug/L**	1.622	767034.608	3.789
Cd	111	**987.986**	**ug/L**	1.766	495628.518	2.448
Cd	114		**ug/L**		1221758.686	6.035
>In	115		**ug/L**		202459.468	202459.468
Sn	120	**1039.087**	**ug/L**	1.906	1802540.753	8.904
Sb	121	**236.721**	**ug/L**	2.810	313488.878	1.548
Sb	123		**ug/L**		242243.415	1.196
Ba	135		**ug/L**		326136.137	0.860
Ba	137	**963.618**	**ug/L**	0.750	579472.522	1.527
>Lu	175		**ug/L**		379481.937	379481.937
Tl	205	**563.615**	**ug/L**	1.915	3558286.358	9.379
Pb	208	**5643.188**	**ug/L**	2.254	51485457.353	135.707
Th	232	**3036.803**	**ug/L**	2.606	24506496.588	64.595
U	238	**5865.637**	**ug/L**	2.097	44030661.700	116.056

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	99.279				
	Be	9	96.321				
	B	11					
	Na	23	97.616				
	Mg	24	95.032				
	Al	27	100.971				
	P	31	93.613				
	K	39	96.700				
	Ca	44	98.331				
>	Sc	45		97.99			
	Ti	47					
	V	51	97.343				
	Cr	52	100.201				
	Cr	53					
	Mn	55	98.108				
	Fe	57	107.422				
	Co	59	109.053				
	Ni	60	96.205				
	Cu	63					
	Cu	65	94.213				
	Zn	66	98.337				
	Zn	67					
	Zn	68					
>	Ge	74		91.51			
	As	75	98.983				
	Se	77					
	Se	78	98.315				
	Se	82					
	Kr	83					
	Sr	88	117.588				
	Zr	90	102.120				
	Mo	98	103.453				
	Ag	107	96.403				
	Cd	111	98.799				
	Cd	114					
>	In	115		92.08			
	Sn	120	103.909				
	Sb	121	94.688				
	Sb	123					
	Ba	135					
	Ba	137	96.362				
>	Lu	175		101.43			
	Tl	205	112.723				
	Pb	208	112.864				
	Th	232	121.472				
	U	238	117.313				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Sr	88	LRS is out of limits (+/- 10%)
QC Std 10	Tl	205	LRS is out of limits (+/- 10%)
QC Std 10	Pb	208	LRS is out of limits (+/- 10%)
QC Std 10	Th	232	LRS is out of limits (+/- 10%)
QC Std 10	U	238	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Saturday, July 21, 2018 01:00:14
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 11.286

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**50.330**	**ug/L**	1.624	30032.870	0.059
Be	9	**50.675**	**ug/L**	1.611	8804.713	0.017
B	11	**98.085**	**ug/L**	3.206	5773.167	0.010
Na	23	**4860.022**	**ug/L**	1.173	4123716.174	8.118
Mg	24	**4533.064**	**ug/L**	0.938	1898347.002	3.740
Al	27	**4710.450**	**ug/L**	1.033	830108.600	1.635
P	31	**4834.743**	**ug/L**	2.099	58961.435	0.116
K	39	**4508.265**	**ug/L**	0.721	1912807.417	3.651
Ca	44	**4782.483**	**ug/L**	1.185	78682.118	0.155
>Sc	45		**ug/L**		507510.492	507510.492
Ti	47	**46.745**	**ug/L**	0.936	3868.524	0.008
V	51	**48.154**	**ug/L**	0.610	98567.553	0.184
Cr	52	**49.394**	**ug/L**	1.292	107197.405	0.211
Cr	53		**ug/L**		14268.455	0.024
Mn	55	**49.229**	**ug/L**	1.609	68702.140	0.135
Fe	57	**4879.071**	**ug/L**	1.718	219605.805	0.433
Co	59	**49.971**	**ug/L**	2.008	161129.653	0.317
Ni	60	**50.066**	**ug/L**	1.186	43282.144	0.085
Cu	63		**ug/L**		117611.499	0.232
Cu	65	**49.891**	**ug/L**	1.940	58099.922	0.114
Zn	66	**52.177**	**ug/L**	0.196	18511.320	0.070
Zn	67		**ug/L**		2928.967	0.011
Zn	68		**ug/L**		14032.224	0.053
>Ge	74		**ug/L**		262988.784	262988.784
As	75	**50.065**	**ug/L**	2.233	11923.864	0.044
Se	77		**ug/L**		522.010	0.001
Se	78	**49.899**	**ug/L**	1.450	1486.868	0.005
Se	82		**ug/L**		766.687	0.003
Kr	83		**ug/L**		9.067	-0.000
Sr	88	**50.191**	**ug/L**	2.854	105559.281	0.483
Zr	90	**48.174**	**ug/L**	1.759	129028.087	0.591
Mo	98	**50.273**	**ug/L**	1.570	85170.482	0.390
Ag	107	**49.348**	**ug/L**	1.314	169351.900	0.776
Cd	111	**49.870**	**ug/L**	1.536	26982.792	0.124
Cd	114		**ug/L**		67295.368	0.308
>In	115		**ug/L**		218304.892	218304.892
Sn	120	**50.745**	**ug/L**	1.539	95104.161	0.435
Sb	121	**49.214**	**ug/L**	2.208	70351.474	0.322
Sb	123		**ug/L**		54813.381	0.251
Ba	135		**ug/L**		16929.359	0.044
Ba	137	**49.133**	**ug/L**	1.005	30239.305	0.078
>Lu	175		**ug/L**		388156.857	388156.857
Tl	205	**48.608**	**ug/L**	1.227	313980.988	0.809
Pb	208	**49.662**	**ug/L**	1.762	463925.033	1.194
Th	232	**51.472**	**ug/L**	0.338	426371.970	1.095
U	238	**48.803**	**ug/L**	0.746	374915.628	0.966

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	100.660				
	Be	9	101.351				
	B	11	98.085				
	Na	23	97.200				
	Mg	24	90.661				
	Al	27	93.276				
	P	31	96.695				
	K	39	90.165				
	Ca	44	95.650				
>	Sc	45		102.32			
	Ti	47	93.490				
	V	51	96.308				
	Cr	52	98.787				
	Cr	53					
	Mn	55	98.458				
	Fe	57	97.581				
	Co	59	99.943				
	Ni	60	100.132				
	Cu	63					
	Cu	65	99.783				
	Zn	66	104.353				
	Zn	67					
	Zn	68					
>	Ge	74		98.38			
	As	75	100.130				
	Se	77					
	Se	78	99.798				
	Se	82					
	Kr	83					
	Sr	88	100.382				
	Zr	90	96.348				
	Mo	98	100.546				
	Ag	107	98.696				
	Cd	111	99.741				
	Cd	114					
>	In	115		99.29			
	Sn	120	101.489				
	Sb	121	98.429				
	Sb	123					
	Ba	135					
	Ba	137	98.265				
>	Lu	175		103.75			
	Tl	205	97.217				
	Pb	208	99.324				
	Th	232	102.945				
	U	238	97.606				

QC Out of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Saturday, July 21, 2018 01:03:32
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 12.287

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**0.045**	**ug/L**	47.564	94.667	0.000
Be	9	**0.016**	**ug/L**	43.464	4.333	0.000
B	11	**-0.382**	**ug/L**	269.375	516.676	-0.000
Na	23	**1.174**	**ug/L**	10.892	4696.772	0.002
Mg	24	**0.760**	**ug/L**	10.011	516.676	0.001
Al	27	**1.369**	**ug/L**	24.619	377.338	0.000
P	31	**1.258**	**ug/L**	58.205	76.000	0.000
K	39	**-3.872**	**ug/L**	104.900	56581.219	-0.003
Ca	44	**0.834**	**ug/L**	125.995	174.668	0.000
>Sc	45		**ug/L**		493930.108	493930.108
Ti	47	**0.042**	**ug/L**	78.489	8.000	0.000
V	51	**-0.134**	**ug/L**	49.554	4910.844	-0.001
Cr	52	**0.014**	**ug/L**	33.069	298.003	0.000
Cr	53		**ug/L**		1752.774	-0.000
Mn	55	**-0.012**	**ug/L**	42.639	74.000	-0.000
Fe	57	**1.543**	**ug/L**	20.555	131.334	0.000
Co	59	**0.014**	**ug/L**	25.033	74.667	0.000
Ni	60	**0.014**	**ug/L**	10.616	25.333	0.000
Cu	63		**ug/L**		110.000	0.000
Cu	65	**0.020**	**ug/L**	47.396	50.000	0.000
Zn	66	**0.063**	**ug/L**	63.523	119.334	0.000
Zn	67		**ug/L**		16.667	-0.000
Zn	68		**ug/L**		73.334	-0.000
>Ge	74		**ug/L**		255691.507	255691.507
As	75	**-0.119**	**ug/L**	4.653	307.781	-0.000
Se	77		**ug/L**		100.667	-0.000
Se	78	**-0.148**	**ug/L**	209.841	102.452	-0.000
Se	82		**ug/L**		4.000	-0.000
Kr	83		**ug/L**		7.067	-0.000
Sr	88	**0.008**	**ug/L**	84.366	69.334	0.000
Zr	90	**0.009**	**ug/L**	45.745	154.668	0.000
Mo	98	**0.188**	**ug/L**	10.915	351.639	0.001
Ag	107	**0.004**	**ug/L**	52.188	21.333	0.000
Cd	111	**0.002**	**ug/L**	465.853	8.000	0.000
Cd	114		**ug/L**		31.013	0.000
>In	115		**ug/L**		214071.177	214071.177
Sn	120	**0.142**	**ug/L**	13.816	451.273	0.001
Sb	121	**0.554**	**ug/L**	16.745	868.694	0.004
Sb	123		**ug/L**		677.345	0.003
Ba	135		**ug/L**		12.667	0.000
Ba	137	**0.009**	**ug/L**	99.940	22.000	0.000
>Lu	175		**ug/L**		375595.662	375595.662
Tl	205	**0.032**	**ug/L**	9.155	234.669	0.001
Pb	208	**0.068**	**ug/L**	25.137	1005.348	0.002
Th	232	**0.111**	**ug/L**	11.376	2240.176	0.002
U	238	**0.063**	**ug/L**	24.277	586.679	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		99.59			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		95.65			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.37			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		100.39			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 1204069454
Sample Date/Time: Saturday, July 21, 2018 01:06:48
Sample Type: Sample
Sample Description: QC A 6020 MB
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\1204069454.288

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.006**	**ug/L**	371.879	74.000	-0.000
Be	9	**-0.001**	**ug/L**	644.119	1.667	-0.000
B	11	**-0.612**	**ug/L**	59.583	574.678	-0.000
Na	23	**1.552**	**ug/L**	10.239	5703.805	0.003
Mg	24	**0.701**	**ug/L**	5.144	561.344	0.001
Al	27	**4.095**	**ug/L**	7.806	962.032	0.001
P	31	**7.637**	**ug/L**	14.233	172.668	0.000
K	39	**-16.652**	**ug/L**	21.783	58614.053	-0.013
Ca	44	**9.206**	**ug/L**	15.118	351.338	0.000
>Sc	45		**ug/L**		562538.773	562538.773
Ti	47	**0.150**	**ug/L**	14.159	19.000	0.000
V	51	**-0.418**	**ug/L**	15.720	4982.869	-0.002
Cr	52	**0.086**	**ug/L**	14.982	514.009	0.000
Cr	53		**ug/L**		1810.115	-0.001
Mn	55	**0.053**	**ug/L**	37.718	184.668	0.000
Fe	57	**4.836**	**ug/L**	10.249	314.003	0.000
Co	59	**0.009**	**ug/L**	28.306	64.667	0.000
Ni	60	**0.221**	**ug/L**	0.987	228.002	0.000
Cu	63		**ug/L**		513.343	0.001
Cu	65	**0.183**	**ug/L**	11.485	268.003	0.000
Zn	66	**4.235**	**ug/L**	4.044	1688.767	0.006
Zn	67		**ug/L**		243.335	0.001
Zn	68		**ug/L**		1234.053	0.004
>Ge	74		**ug/L**		278452.252	278452.252
As	75	**-0.314**	**ug/L**	19.695	287.558	-0.000
Se	77		**ug/L**		94.667	-0.000
Se	78	**-0.020**	**ug/L**	1009.483	115.336	-0.000
Se	82		**ug/L**		11.333	0.000
Kr	83		**ug/L**		8.667	-0.000
Sr	88	**0.017**	**ug/L**	96.827	96.667	0.000
Zr	90	**0.023**	**ug/L**	40.937	211.335	0.000
Mo	98	**0.141**	**ug/L**	9.312	303.866	0.001
Ag	107	**0.001**	**ug/L**	189.671	13.333	0.000
Cd	111	**0.001**	**ug/L**	831.690	8.667	0.000
Cd	114		**ug/L**		-19.911	-0.000
>In	115		**ug/L**		237461.401	237461.401
Sn	120	**5.165**	**ug/L**	0.075	10721.955	0.044
Sb	121	**0.179**	**ug/L**	5.218	380.005	0.001
Sb	123		**ug/L**		272.665	0.001
Ba	135		**ug/L**		24.000	0.000
Ba	137	**0.030**	**ug/L**	63.547	38.000	0.000
>Lu	175		**ug/L**		415070.560	415070.560
Tl	205	**0.011**	**ug/L**	46.471	113.334	0.000
Pb	208	**0.024**	**ug/L**	21.269	672.673	0.001
Th	232	**0.087**	**ug/L**	21.841	2268.847	0.002
U	238	**0.012**	**ug/L**	7.992	232.002	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		113.42			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		104.16			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		108.00			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		110.94			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 1204069455
Sample Date/Time: Saturday, July 21, 2018 01:10:04
Sample Type: Sample
Sample Description: QC A 6020 LCS
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\1204069455.289

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**25.174**	**ug/L**	2.878	16572.944	0.030
Be	9	**24.393**	**ug/L**	2.013	4666.095	0.008
B	11	**48.958**	**ug/L**	3.198	3476.423	0.005
Na	23	**942.837**	**ug/L**	1.892	883947.389	1.575
Mg	24	**904.859**	**ug/L**	1.568	417249.281	0.747
Al	27	**955.723**	**ug/L**	1.517	185544.943	0.332
P	31	**863.559**	**ug/L**	0.378	11650.749	0.021
K	39	**875.442**	**ug/L**	2.209	461821.604	0.709
Ca	44	**1010.748**	**ug/L**	1.906	18450.580	0.033
>Sc	45		**ug/L**		558642.079	558642.079
Ti	47	**23.445**	**ug/L**	3.837	2137.827	0.004
V	51	**23.426**	**ug/L**	0.954	55780.691	0.089
Cr	52	**24.377**	**ug/L**	0.795	58390.428	0.104
Cr	53		**ug/L**		8589.248	0.012
Mn	55	**23.949**	**ug/L**	1.373	36843.450	0.066
Fe	57	**967.473**	**ug/L**	0.346	47995.829	0.086
Co	59	**24.554**	**ug/L**	0.936	87172.492	0.156
Ni	60	**25.127**	**ug/L**	1.676	23918.009	0.043
Cu	63		**ug/L**		62803.770	0.112
Cu	65	**24.186**	**ug/L**	0.820	31020.980	0.055
Zn	66	**27.994**	**ug/L**	1.327	10518.538	0.038
Zn	67		**ug/L**		1715.436	0.006
Zn	68		**ug/L**		7822.141	0.028
>Ge	74		**ug/L**		277260.368	277260.368
As	75	**22.195**	**ug/L**	2.979	5774.500	0.020
Se	77		**ug/L**		281.336	0.001
Se	78	**20.846**	**ug/L**	4.371	721.884	0.002
Se	82		**ug/L**		342.004	0.001
Kr	83		**ug/L**		8.800	-0.000
Sr	88	**24.875**	**ug/L**	1.476	55925.256	0.240
Zr	90	**23.678**	**ug/L**	3.209	67809.245	0.290
Mo	98	**24.653**	**ug/L**	2.872	44636.609	0.191
Ag	107	**24.619**	**ug/L**	2.484	90250.866	0.387
Cd	111	**23.344**	**ug/L**	1.958	13496.372	0.058
Cd	114		**ug/L**		33358.000	0.143
>In	115		**ug/L**		233219.090	233219.090
Sn	120	**30.420**	**ug/L**	1.364	60990.544	0.261
Sb	121	**23.346**	**ug/L**	0.762	35710.581	0.153
Sb	123		**ug/L**		27593.539	0.118
Ba	135		**ug/L**		8938.796	0.022
Ba	137	**24.427**	**ug/L**	0.154	15973.593	0.039
>Lu	175		**ug/L**		412157.290	412157.290
Tl	205	**24.099**	**ug/L**	1.207	165312.373	0.401
Pb	208	**24.619**	**ug/L**	0.276	244431.493	0.592
Th	232	**24.058**	**ug/L**	0.264	212399.387	0.512
U	238	**24.313**	**ug/L**	1.088	198388.032	0.481

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		112.63			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		103.72			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		106.07			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		110.16			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 454474001
Sample Date/Time: Saturday, July 21, 2018 01:13:20
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\454474001.290

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**151.989**	**ug/L**	2.086	96043.814	0.178
Be	9	**3.497**	**ug/L**	2.683	646.015	0.001
B	11	**33.853**	**ug/L**	2.896	2496.885	0.004
Na	23	**572.037**	**ug/L**	0.769	518401.224	0.956
Mg	24	**49229.153**	**ug/L**	1.444	21861376.686	40.616
Al	27	**63824.328**	**ug/L**	2.034	11926769.766	22.159
P	31	**2016.664**	**ug/L**	2.847	26123.872	0.048
K	39	**11860.096**	**ug/L**	1.907	5233612.828	9.606
Ca	44	**91700.940**	**ug/L**	1.350	1596831.056	2.966
>Sc	45		**ug/L**		538281.217	538281.217
Ti	47	**414.325**	**ug/L**	1.637	36322.119	0.067
V	51	**110.756**	**ug/L**	0.947	233142.514	0.423
Cr	52	**99.382**	**ug/L**	1.122	228475.503	0.424
Cr	53		**ug/L**		28193.128	0.049
Mn	55	**2899.273**	**ug/L**	0.644	4286049.858	7.963
Fe	57	**162229.582**	**ug/L**	0.390	7743261.286	14.385
Co	59	**68.815**	**ug/L**	0.513	235360.365	0.437
Ni	60	**163.722**	**ug/L**	0.675	150089.763	0.279
Cu	63		**ug/L**		411731.155	0.765
Cu	65	**164.320**	**ug/L**	0.686	202900.099	0.377
Zn	66	**367.951**	**ug/L**	0.675	122411.614	0.494
Zn	67		**ug/L**		20347.819	0.082
Zn	68		**ug/L**		93033.322	0.375
>Ge	74		**ug/L**		247786.327	247786.327
As	75	**42.139**	**ug/L**	1.435	9506.940	0.037
Se	77		**ug/L**		242.669	0.000
Se	78	**4.255**	**ug/L**	6.857	213.862	0.000
Se	82		**ug/L**		152.001	0.001
Kr	83		**ug/L**		65.867	0.000
Sr	88	**396.548**	**ug/L**	1.114	811383.035	3.819
Zr	90	**49.594**	**ug/L**	2.604	129252.837	0.608
Mo	98	**6.291**	**ug/L**	1.002	10406.017	0.049
Ag	107	**0.291**	**ug/L**	5.215	978.034	0.005
Cd	111	**0.611**	**ug/L**	3.348	328.670	0.002
Cd	114		**ug/L**		785.043	0.004
>In	115		**ug/L**		212439.131	212439.131
Sn	120	**2.729**	**ug/L**	2.829	5156.086	0.023
Sb	121	**0.274**	**ug/L**	2.202	472.674	0.002
Sb	123		**ug/L**		378.909	0.001
Ba	135		**ug/L**		174202.535	0.430
Ba	137	**478.428**	**ug/L**	1.761	307070.212	0.758
>Lu	175		**ug/L**		404998.746	404998.746
Tl	205	**0.661**	**ug/L**	0.758	4491.373	0.011
Pb	208	**74.648**	**ug/L**	0.327	727437.563	1.795
Th	232	**23.143**	**ug/L**	0.923	200827.118	0.492
U	238	**3.660**	**ug/L**	0.504	29456.338	0.072

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		108.53			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.69			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		96.62			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		108.25			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 1204070403
Sample Date/Time: Saturday, July 21, 2018 01:16:36
Sample Type: Sample
Sample Description: QC A 6020 DUP
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\1204070403.291

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**158.739**	**ug/L**	2.304	100611.089	0.186
Be	9	**3.560**	**ug/L**	5.081	660.015	0.001
B	11	**32.360**	**ug/L**	6.723	2419.539	0.003
Na	23	**529.749**	**ug/L**	2.378	481800.801	0.885
Mg	24	**49775.554**	**ug/L**	0.999	22172938.095	41.067
Al	27	**65667.581**	**ug/L**	1.827	12308999.604	22.799
P	31	**2048.621**	**ug/L**	2.166	26619.448	0.049
K	39	**11706.788**	**ug/L**	1.079	5183093.382	9.482
Ca	44	**92421.508**	**ug/L**	0.404	1614518.421	2.990
>Sc	45		**ug/L**		539942.933	539942.933
Ti	47	**419.509**	**ug/L**	2.168	36888.236	0.068
V	51	**115.566**	**ug/L**	1.649	243753.365	0.441
Cr	52	**102.553**	**ug/L**	1.697	236459.697	0.437
Cr	53		**ug/L**		28437.616	0.049
Mn	55	**2976.709**	**ug/L**	1.823	4413809.124	8.175
Fe	57	**166031.164**	**ug/L**	2.202	7948698.556	14.722
Co	59	**69.797**	**ug/L**	1.546	239434.554	0.443
Ni	60	**163.035**	**ug/L**	2.208	149895.707	0.278
Cu	63		**ug/L**		494126.699	0.915
Cu	65	**198.515**	**ug/L**	0.841	245873.928	0.455
Zn	66	**370.319**	**ug/L**	1.763	122856.789	0.497
Zn	67		**ug/L**		20202.275	0.082
Zn	68		**ug/L**		92510.579	0.374
>Ge	74		**ug/L**		247080.427	247080.427
As	75	**43.787**	**ug/L**	1.069	9839.610	0.039
Se	77		**ug/L**		249.336	0.001
Se	78	**4.631**	**ug/L**	9.583	222.969	0.000
Se	82		**ug/L**		148.001	0.001
Kr	83		**ug/L**		64.533	0.000
Sr	88	**379.217**	**ug/L**	0.292	785609.896	3.653
Zr	90	**47.594**	**ug/L**	1.773	125611.301	0.583
Mo	98	**6.556**	**ug/L**	1.016	10978.226	0.051
Ag	107	**0.276**	**ug/L**	3.925	940.031	0.004
Cd	111	**0.692**	**ug/L**	15.372	376.005	0.002
Cd	114		**ug/L**		891.224	0.004
>In	115		**ug/L**		215070.996	215070.996
Sn	120	**2.842**	**ug/L**	4.718	5428.888	0.024
Sb	121	**0.274**	**ug/L**	12.027	478.008	0.002
Sb	123		**ug/L**		361.911	0.001
Ba	135		**ug/L**		144691.142	0.355
Ba	137	**394.818**	**ug/L**	1.413	255331.738	0.626
>Lu	175		**ug/L**		408116.266	408116.266
Tl	205	**0.632**	**ug/L**	3.467	4332.658	0.011
Pb	208	**79.718**	**ug/L**	1.492	782646.490	1.917
Th	232	**22.850**	**ug/L**	0.602	199818.613	0.486
U	238	**3.937**	**ug/L**	0.845	31917.620	0.078

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		108.86			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.43			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.82			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		109.08			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 1204070404
Sample Date/Time: Saturday, July 21, 2018 01:19:51
Sample Type: Sample
Sample Description: QC A 6020 MS
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\1204070404.292

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**170.027**	**ug/L**	0.994	107453.345	0.199
Be	9	**25.234**	**ug/L**	2.821	4651.091	0.009
B	11	**80.069**	**ug/L**	3.095	5107.580	0.008
Na	23	**1406.138**	**ug/L**	1.852	1268326.087	2.349
Mg	24	**49791.785**	**ug/L**	0.881	22113612.999	41.081
Al	27	**68281.139**	**ug/L**	1.453	12761186.755	23.707
P	31	**2743.823**	**ug/L**	0.170	35526.121	0.066
K	39	**14515.793**	**ug/L**	1.197	6391866.185	11.757
Ca	44	**89678.192**	**ug/L**	1.208	1561819.625	2.901
>Sc	45		**ug/L**		538309.642	538309.642
Ti	47	**452.917**	**ug/L**	1.172	39709.116	0.074
V	51	**146.173**	**ug/L**	1.404	305891.643	0.558
Cr	52	**124.713**	**ug/L**	0.680	286637.825	0.532
Cr	53		**ug/L**		34796.998	0.061
Mn	55	**2868.078**	**ug/L**	0.418	4240349.797	7.877
Fe	57	**158670.877**	**ug/L**	0.746	7573705.932	14.069
Co	59	**89.695**	**ug/L**	1.648	306764.351	0.570
Ni	60	**178.649**	**ug/L**	0.673	163775.505	0.304
Cu	63		**ug/L**		472220.167	0.877
Cu	65	**189.615**	**ug/L**	0.898	234137.809	0.435
Zn	66	**371.109**	**ug/L**	2.288	124347.598	0.498
Zn	67		**ug/L**		20922.645	0.084
Zn	68		**ug/L**		95794.782	0.384
>Ge	74		**ug/L**		249585.046	249585.046
As	75	**64.938**	**ug/L**	0.723	14581.883	0.057
Se	77		**ug/L**		384.005	0.001
Se	78	**24.383**	**ug/L**	2.935	742.663	0.003
Se	82		**ug/L**		404.672	0.002
Kr	83		**ug/L**		66.400	0.000
Sr	88	**395.469**	**ug/L**	0.393	814828.780	3.809
Zr	90	**76.892**	**ug/L**	1.785	201735.202	0.943
Mo	98	**29.717**	**ug/L**	1.644	49351.859	0.231
Ag	107	**22.925**	**ug/L**	0.132	77102.182	0.360
Cd	111	**23.087**	**ug/L**	0.506	12245.914	0.057
Cd	114		**ug/L**		30734.156	0.144
>In	115		**ug/L**		213907.748	213907.748
Sn	120	**9.041**	**ug/L**	2.312	16762.311	0.077
Sb	121	**4.011**	**ug/L**	0.596	5704.472	0.026
Sb	123		**ug/L**		4408.834	0.020
Ba	135		**ug/L**		182578.659	0.450
Ba	137	**502.184**	**ug/L**	0.802	322755.686	0.796
>Lu	175		**ug/L**		405528.357	405528.357
Tl	205	**22.945**	**ug/L**	1.188	154866.300	0.382
Pb	208	**93.163**	**ug/L**	0.204	908945.916	2.240
Th	232	**47.553**	**ug/L**	0.342	411651.033	1.011
U	238	**26.731**	**ug/L**	0.142	214605.703	0.529

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		108.53			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.36			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.29			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		108.39			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 1204069458
Sample Date/Time: Saturday, July 21, 2018 01:23:07
Sample Type: Sample
Sample Description: QC A 6020 SDILT
Number of Replicates: 3
Batch ID: 1782305|10|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\1204069458.293

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**32.196**	**ug/L**	0.879	19300.362	0.038
Be	9	**0.719**	**ug/L**	6.583	127.001	0.000
B	11	**5.455**	**ug/L**	19.809	844.025	0.001
Na	23	**120.091**	**ug/L**	1.364	105973.632	0.201
Mg	24	**10605.837**	**ug/L**	0.207	4455461.643	8.750
Al	27	**13362.924**	**ug/L**	1.156	2362312.624	4.640
P	31	**437.647**	**ug/L**	1.942	5413.026	0.011
K	39	**2240.961**	**ug/L**	0.450	984093.504	1.815
Ca	44	**18543.306**	**ug/L**	1.366	305598.259	0.600
>Sc	45		**ug/L**		509148.173	509148.173
Ti	47	**84.608**	**ug/L**	2.645	7019.058	0.014
V	51	**21.751**	**ug/L**	1.665	47581.779	0.083
Cr	52	**20.604**	**ug/L**	2.225	45018.161	0.088
Cr	53		**ug/L**		6431.449	0.009
Mn	55	**541.382**	**ug/L**	0.766	757086.182	1.487
Fe	57	**30531.918**	**ug/L**	0.692	1378472.792	2.707
Co	59	**14.649**	**ug/L**	0.827	47416.573	0.093
Ni	60	**35.258**	**ug/L**	0.518	30582.701	0.060
Cu	63		**ug/L**		85538.000	0.168
Cu	65	**36.016**	**ug/L**	1.389	42085.235	0.083
Zn	66	**82.057**	**ug/L**	1.533	27855.803	0.110
Zn	67		**ug/L**		4666.762	0.018
Zn	68		**ug/L**		20965.376	0.083
>Ge	74		**ug/L**		252146.602	252146.602
As	75	**8.532**	**ug/L**	1.414	2222.395	0.008
Se	77		**ug/L**		111.334	-0.000
Se	78	**0.786**	**ug/L**	47.311	125.812	0.000
Se	82		**ug/L**		35.333	0.000
Kr	83		**ug/L**		19.333	0.000
Sr	88	**77.307**	**ug/L**	0.941	159510.304	0.745
Zr	90	**9.329**	**ug/L**	2.260	24618.530	0.114
Mo	98	**1.221**	**ug/L**	4.075	2068.004	0.009
Ag	107	**0.054**	**ug/L**	2.797	189.335	0.001
Cd	111	**0.128**	**ug/L**	25.479	75.334	0.000
Cd	114		**ug/L**		177.541	0.001
>In	115		**ug/L**		214159.004	214159.004
Sn	120	**0.548**	**ug/L**	9.712	1197.358	0.005
Sb	121	**0.090**	**ug/L**	20.559	218.002	0.001
Sb	123		**ug/L**		153.749	0.000
Ba	135		**ug/L**		34482.233	0.089
Ba	137	**98.053**	**ug/L**	1.455	60501.199	0.155
>Lu	175		**ug/L**		389229.922	389229.922
Tl	205	**0.151**	**ug/L**	4.343	1018.036	0.003
Pb	208	**15.728**	**ug/L**	1.663	147620.475	0.378
Th	232	**4.668**	**ug/L**	0.439	40050.730	0.099
U	238	**0.757**	**ug/L**	0.423	5952.573	0.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		102.65			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		94.32			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		97.41			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		104.03			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 21, 2018 01:26:23
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 6.294

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**50.386**	**ug/L**	2.469	29386.872	0.059
Be	9	**50.746**	**ug/L**	2.182	8616.932	0.017
B	11	**98.580**	**ug/L**	5.173	5671.795	0.010
Na	23	**4941.459**	**ug/L**	2.132	4097492.353	8.254
Mg	24	**4473.491**	**ug/L**	1.506	1830783.891	3.691
Al	27	**4731.124**	**ug/L**	2.864	814736.302	1.643
P	31	**4743.949**	**ug/L**	1.617	56553.751	0.114
K	39	**4486.626**	**ug/L**	2.364	1860562.711	3.634
Ca	44	**4754.124**	**ug/L**	3.382	76425.951	0.154
>Sc	45		**ug/L**		496028.318	496028.318
Ti	47	**46.459**	**ug/L**	4.450	3756.828	0.008
V	51	**48.400**	**ug/L**	2.957	96783.465	0.185
Cr	52	**49.847**	**ug/L**	2.415	105712.382	0.213
Cr	53		**ug/L**		14102.959	0.025
Mn	55	**49.387**	**ug/L**	2.742	67361.159	0.136
Fe	57	**4866.970**	**ug/L**	2.517	214087.145	0.432
Co	59	**49.793**	**ug/L**	2.484	156916.569	0.316
Ni	60	**49.673**	**ug/L**	2.222	41964.219	0.085
Cu	63		**ug/L**		113677.173	0.229
Cu	65	**49.931**	**ug/L**	2.619	56822.796	0.115
Zn	66	**52.951**	**ug/L**	2.359	18224.952	0.071
Zn	67		**ug/L**		2846.950	0.011
Zn	68		**ug/L**		13598.469	0.053
>Ge	74		**ug/L**		255222.768	255222.768
As	75	**49.877**	**ug/L**	1.719	11529.540	0.044
Se	77		**ug/L**		531.343	0.002
Se	78	**49.101**	**ug/L**	1.672	1421.225	0.005
Se	82		**ug/L**		678.683	0.003
Kr	83		**ug/L**		5.867	-0.000
Sr	88	**49.430**	**ug/L**	2.819	102337.932	0.476
Zr	90	**47.961**	**ug/L**	3.427	126430.404	0.588
Mo	98	**48.991**	**ug/L**	3.617	81685.357	0.380
Ag	107	**49.095**	**ug/L**	3.538	165814.890	0.772
Cd	111	**50.294**	**ug/L**	3.411	26781.750	0.125
Cd	114		**ug/L**		66553.310	0.310
>In	115		**ug/L**		214927.363	214927.363
Sn	120	**50.096**	**ug/L**	3.317	92408.516	0.429
Sb	121	**48.220**	**ug/L**	3.433	67848.093	0.315
Sb	123		**ug/L**		52502.056	0.244
Ba	135		**ug/L**		16602.309	0.043
Ba	137	**47.923**	**ug/L**	2.386	29185.134	0.076
>Lu	175		**ug/L**		384027.696	384027.696
Tl	205	**48.987**	**ug/L**	1.114	313073.762	0.815
Pb	208	**50.682**	**ug/L**	0.701	468473.352	1.219
Th	232	**51.427**	**ug/L**	2.156	421421.698	1.094
U	238	**49.234**	**ug/L**	1.581	374202.048	0.974

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	100.772				
	Be	9	101.492				
	B	11	98.580				
	Na	23	98.829				
	Mg	24	89.470				
	Al	27	93.686				
	P	31	94.879				
	K	39	89.733				
	Ca	44	95.082				
>	Sc	45		100.01			
	Ti	47	92.917				
	V	51	96.799				
	Cr	52	99.694				
	Cr	53					
	Mn	55	98.775				
	Fe	57	97.339				
	Co	59	99.587				
	Ni	60	99.345				
	Cu	63					
	Cu	65	99.863				
	Zn	66	105.902				
	Zn	67					
	Zn	68					
>	Ge	74		95.47			
	As	75	99.755				
	Se	77					
	Se	78	98.203				
	Se	82					
	Kr	83					
	Sr	88	98.860				
	Zr	90	95.922				
	Mo	98	97.982				
	Ag	107	98.190				
	Cd	111	100.587				
	Cd	114					
>	In	115		97.75			
	Sn	120	100.192				
	Sb	121	96.441				
	Sb	123					
	Ba	135					
	Ba	137	95.846				
>	Lu	175		102.64			
	Tl	205	97.974				
	Pb	208	101.364				
	Th	232	102.854				
	U	238	98.469				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 21, 2018 01:29:39
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 7.295

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.025**	**ug/L**	84.852	53.333	-0.000
Be	9	**0.000**	**ug/L**	1905.344	1.667	0.000
B	11	**-1.462**	**ug/L**	28.404	454.007	-0.000
Na	23	**0.020**	**ug/L**	528.235	3691.144	0.000
Mg	24	**0.385**	**ug/L**	20.451	358.671	0.000
Al	27	**0.272**	**ug/L**	19.090	186.668	0.000
P	31	**1.180**	**ug/L**	189.974	74.000	0.000
K	39	**-10.995**	**ug/L**	41.983	52958.029	-0.009
Ca	44	**0.014**	**ug/L**	6429.614	159.334	0.000
>Sc	45		**ug/L**		486889.267	486889.267
Ti	47	**-0.020**	**ug/L**	1.816	3.000	-0.000
V	51	**0.709**	**ug/L**	7.791	6406.770	0.003
Cr	52	**-0.009**	**ug/L**	101.217	246.002	-0.000
Cr	53		**ug/L**		2332.190	0.001
Mn	55	**-0.015**	**ug/L**	51.320	68.667	-0.000
Fe	57	**0.999**	**ug/L**	18.856	106.000	0.000
Co	59	**0.001**	**ug/L**	230.475	31.333	0.000
Ni	60	**0.000**	**ug/L**	766.348	14.000	0.000
Cu	63		**ug/L**		70.000	0.000
Cu	65	**0.003**	**ug/L**	163.792	31.333	0.000
Zn	66	**0.014**	**ug/L**	79.142	101.334	0.000
Zn	67		**ug/L**		20.000	-0.000
Zn	68		**ug/L**		63.333	-0.000
>Ge	74		**ug/L**		253361.745	253361.745
As	75	**-0.029**	**ug/L**	105.761	325.115	-0.000
Se	77		**ug/L**		130.001	0.000
Se	78	**-0.217**	**ug/L**	51.576	99.704	-0.000
Se	82		**ug/L**		10.667	0.000
Kr	83		**ug/L**		9.733	-0.000
Sr	88	**-0.007**	**ug/L**	96.215	37.333	-0.000
Zr	90	**0.010**	**ug/L**	57.377	154.668	0.000
Mo	98	**0.048**	**ug/L**	21.523	118.749	0.000
Ag	107	**0.001**	**ug/L**	83.175	10.667	0.000
Cd	111	**0.008**	**ug/L**	73.266	11.333	0.000
Cd	114		**ug/L**		10.070	0.000
>In	115		**ug/L**		211612.240	211612.240
Sn	120	**0.014**	**ug/L**	64.371	214.609	0.000
Sb	121	**0.182**	**ug/L**	30.831	343.338	0.001
Sb	123		**ug/L**		274.082	0.001
Ba	135		**ug/L**		10.000	0.000
Ba	137	**0.005**	**ug/L**	39.086	19.333	0.000
>Lu	175		**ug/L**		368915.401	368915.401
Tl	205	**0.026**	**ug/L**	8.206	192.668	0.000
Pb	208	**0.000**	**ug/L**	1687.248	384.669	0.000
Th	232	**0.039**	**ug/L**	38.418	1640.094	0.001
U	238	**0.003**	**ug/L**	23.944	138.334	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	44					
| >	Sc	45		98.17			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
| >	Ge	74		94.78			
|	As	75					
|	Se	77					
|	Se	78					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115		96.25			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
| >	Lu	175		98.60			
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC action taken

ICPMS #14 - Summary Report

Sample ID: 454474002
Sample Date/Time: Saturday, July 21, 2018 01:32:56
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\454474002.296

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**153.452**	**ug/L**	0.769	94824.336	0.180
Be	9	**3.486**	**ug/L**	5.078	629.681	0.001
B	11	**32.878**	**ug/L**	2.263	2387.533	0.003
Na	23	**575.333**	**ug/L**	1.422	509801.753	0.961
Mg	24	**51046.220**	**ug/L**	0.970	22166416.706	42.115
Al	27	**63519.483**	**ug/L**	0.940	11607465.152	22.054
P	31	**2008.204**	**ug/L**	0.575	25440.633	0.048
K	39	**11968.293**	**ug/L**	1.324	5163888.937	9.694
Ca	44	**109987.422**	**ug/L**	0.608	1872874.338	3.558
>Sc	45		**ug/L**		526343.919	526343.919
Ti	47	**452.221**	**ug/L**	0.577	38768.202	0.074
V	51	**110.366**	**ug/L**	1.056	227182.173	0.421
Cr	52	**97.981**	**ug/L**	1.430	220248.236	0.418
Cr	53		**ug/L**		27164.472	0.048
Mn	55	**3239.390**	**ug/L**	1.537	4682506.481	8.897
Fe	57	**165657.747**	**ug/L**	1.852	7730908.496	14.689
Co	59	**73.367**	**ug/L**	1.582	245354.550	0.466
Ni	60	**171.345**	**ug/L**	1.379	153579.813	0.292
Cu	63		**ug/L**		388551.578	0.738
Cu	65	**159.689**	**ug/L**	2.203	192799.177	0.366
Zn	66	**334.143**	**ug/L**	1.515	108726.212	0.448
Zn	67		**ug/L**		18177.558	0.075
Zn	68		**ug/L**		83440.986	0.344
>Ge	74		**ug/L**		242348.828	242348.828
As	75	**39.620**	**ug/L**	1.852	8762.020	0.035
Se	77		**ug/L**		222.668	0.000
Se	78	**4.111**	**ug/L**	10.836	205.462	0.000
Se	82		**ug/L**		136.001	0.001
Kr	83		**ug/L**		65.867	0.000
Sr	88	**463.166**	**ug/L**	1.550	933725.506	4.461
Zr	90	**52.947**	**ug/L**	2.642	135958.718	0.649
Mo	98	**6.882**	**ug/L**	1.229	11214.776	0.053
Ag	107	**0.252**	**ug/L**	4.834	834.691	0.004
Cd	111	**0.520**	**ug/L**	10.384	276.669	0.001
Cd	114		**ug/L**		632.033	0.003
>In	115		**ug/L**		209312.717	209312.717
Sn	120	**2.374**	**ug/L**	0.646	4444.539	0.020
Sb	121	**0.209**	**ug/L**	12.286	376.005	0.001
Sb	123		**ug/L**		276.492	0.001
Ba	135		**ug/L**		171304.366	0.430
Ba	137	**483.027**	**ug/L**	1.424	304591.651	0.765
>Lu	175		**ug/L**		397916.625	397916.625
Tl	205	**0.665**	**ug/L**	5.425	4440.691	0.011
Pb	208	**73.052**	**ug/L**	0.800	699425.030	1.757
Th	232	**24.248**	**ug/L**	1.276	206654.665	0.516
U	238	**3.597**	**ug/L**	0.776	28443.622	0.071

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		106.12			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		90.66			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		95.20			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		106.35			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mg 24 Upper, S, EE	Mg	24	Sample is out of limits (over linear range)
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 454474003
Sample Date/Time: Saturday, July 21, 2018 01:36:12
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\454474003.297

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**140.667**	**ug/L**	1.600	85259.669	0.165
Be	9	**3.080**	**ug/L**	1.629	546.010	0.001
B	11	**31.318**	**ug/L**	6.977	2257.512	0.003
Na	23	**655.880**	**ug/L**	0.608	569512.592	1.096
Mg	24	**47954.091**	**ug/L**	1.372	20424536.274	39.564
Al	27	**59319.031**	**ug/L**	1.077	10632133.738	20.595
P	31	**1998.111**	**ug/L**	2.247	24825.554	0.048
K	39	**10944.071**	**ug/L**	0.861	4637084.572	8.864
Ca	44	**109652.844**	**ug/L**	0.281	1831547.645	3.547
>Sc	45		**ug/L**		516284.359	516284.359
Ti	47	**404.842**	**ug/L**	1.744	34038.504	0.066
V	51	**102.664**	**ug/L**	0.978	207661.127	0.392
Cr	52	**89.726**	**ug/L**	2.335	197835.238	0.383
Cr	53		**ug/L**		24930.401	0.044
Mn	55	**2870.442**	**ug/L**	1.123	4069822.132	7.883
Fe	57	**151882.592**	**ug/L**	1.367	6952329.758	13.468
Co	59	**61.260**	**ug/L**	1.419	200942.020	0.389
Ni	60	**148.592**	**ug/L**	1.583	130635.948	0.253
Cu	63		**ug/L**		350143.340	0.678
Cu	65	**146.894**	**ug/L**	1.618	173957.433	0.337
Zn	66	**289.199**	**ug/L**	1.712	92973.573	0.388
Zn	67		**ug/L**		15842.113	0.066
Zn	68		**ug/L**		72691.149	0.303
>Ge	74		**ug/L**		239404.862	239404.862
As	75	**34.477**	**ug/L**	1.392	7572.673	0.030
Se	77		**ug/L**		223.335	0.000
Se	78	**3.694**	**ug/L**	9.139	192.433	0.000
Se	82		**ug/L**		140.667	0.001
Kr	83		**ug/L**		55.867	0.000
Sr	88	**404.817**	**ug/L**	1.611	801636.283	3.899
Zr	90	**46.943**	**ug/L**	2.286	118414.786	0.575
Mo	98	**5.855**	**ug/L**	1.755	9375.304	0.045
Ag	107	**0.217**	**ug/L**	3.022	709.351	0.003
Cd	111	**0.509**	**ug/L**	17.320	266.669	0.001
Cd	114		**ug/L**		609.225	0.003
>In	115		**ug/L**		205603.745	205603.745
Sn	120	**2.454**	**ug/L**	0.976	4506.609	0.021
Sb	121	**0.262**	**ug/L**	6.387	441.340	0.002
Sb	123		**ug/L**		322.997	0.001
Ba	135		**ug/L**		162508.652	0.410
Ba	137	**459.687**	**ug/L**	1.833	289021.766	0.728
>Lu	175		**ug/L**		396782.852	396782.852
Tl	205	**0.569**	**ug/L**	0.632	3792.503	0.009
Pb	208	**59.738**	**ug/L**	1.768	570327.217	1.437
Th	232	**21.686**	**ug/L**	2.291	184424.217	0.461
U	238	**3.230**	**ug/L**	3.091	25479.375	0.064

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		104.09			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		89.56			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		93.51			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		106.05			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 454474004
Sample Date/Time: Saturday, July 21, 2018 01:39:27
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\454474004.298

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**135.561**	**ug/L**	1.797	89223.801	0.159
Be	9	**3.438**	**ug/L**	5.681	661.682	0.001
B	11	**24.507**	**ug/L**	4.939	2050.147	0.003
Na	23	**893.493**	**ug/L**	2.806	840864.022	1.493
Mg	24	**35642.559**	**ug/L**	1.742	16483329.341	29.407
Al	27	**61068.811**	**ug/L**	1.466	11886806.460	21.203
P	31	**1892.461**	**ug/L**	0.361	25539.479	0.045
K	39	**8765.623**	**ug/L**	0.708	4046126.584	7.100
Ca	44	**45930.905**	**ug/L**	0.373	833115.098	1.486
>Sc	45		**ug/L**		560590.308	560590.308
Ti	47	**359.816**	**ug/L**	0.479	32853.736	0.059
V	51	**104.122**	**ug/L**	0.849	228604.593	0.397
Cr	52	**94.121**	**ug/L**	0.770	225352.212	0.401
Cr	53		**ug/L**		27984.050	0.046
Mn	55	**4178.111**	**ug/L**	1.132	6432407.708	11.475
Fe	57	**159255.247**	**ug/L**	0.417	7916228.364	14.121
Co	59	**84.592**	**ug/L**	1.548	301296.633	0.537
Ni	60	**196.935**	**ug/L**	0.357	188007.774	0.335
Cu	63		**ug/L**		419903.894	0.749
Cu	65	**164.694**	**ug/L**	0.891	211809.701	0.378
Zn	66	**362.158**	**ug/L**	0.517	127120.431	0.486
Zn	67		**ug/L**		21351.946	0.082
Zn	68		**ug/L**		97029.076	0.371
>Ge	74		**ug/L**		261413.577	261413.577
As	75	**40.564**	**ug/L**	0.372	9669.494	0.036
Se	77		**ug/L**		259.336	0.000
Se	78	**3.188**	**ug/L**	2.242	196.293	0.000
Se	82		**ug/L**		137.334	0.000
Kr	83		**ug/L**		73.600	0.000
Sr	88	**161.721**	**ug/L**	0.876	345463.934	1.558
Zr	90	**39.510**	**ug/L**	2.004	107525.168	0.484
Mo	98	**5.981**	**ug/L**	1.445	10331.371	0.046
Ag	107	**0.210**	**ug/L**	2.721	740.019	0.003
Cd	111	**0.822**	**ug/L**	9.067	459.341	0.002
Cd	114		**ug/L**		1201.232	0.005
>In	115		**ug/L**		221765.082	221765.082
Sn	120	**2.507**	**ug/L**	1.474	4962.034	0.021
Sb	121	**0.249**	**ug/L**	3.129	456.674	0.002
Sb	123		**ug/L**		312.409	0.001
Ba	135		**ug/L**		150363.225	0.363
Ba	137	**405.278**	**ug/L**	1.109	266239.596	0.642
>Lu	175		**ug/L**		414560.862	414560.862
Tl	205	**0.696**	**ug/L**	2.390	4840.820	0.012
Pb	208	**76.756**	**ug/L**	1.967	765428.718	1.846
Th	232	**24.390**	**ug/L**	2.925	216484.700	0.519
U	238	**2.641**	**ug/L**	1.868	21790.941	0.052

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		113.03			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		97.79			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		100.86			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		110.80			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 454474005
Sample Date/Time: Saturday, July 21, 2018 01:42:43
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\454474005.299

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**146.976**	**ug/L**	0.891	89666.563	0.172
Be	9	**3.427**	**ug/L**	1.988	611.346	0.001
B	11	**38.344**	**ug/L**	2.070	2654.913	0.004
Na	23	**729.901**	**ug/L**	0.911	637457.715	1.219
Mg	24	**51414.195**	**ug/L**	0.812	22040566.010	42.419
Al	27	**64578.719**	**ug/L**	1.583	11649758.136	22.421
P	31	**1887.118**	**ug/L**	1.431	23606.160	0.045
K	39	**13175.753**	**ug/L**	0.919	5606041.875	10.672
Ca	44	**107229.373**	**ug/L**	1.673	1802416.863	3.469
>Sc	45		**ug/L**		519595.782	519595.782
Ti	47	**439.361**	**ug/L**	0.888	37183.333	0.072
V	51	**114.215**	**ug/L**	0.789	231909.273	0.436
Cr	52	**97.673**	**ug/L**	0.782	216748.605	0.417
Cr	53		**ug/L**		26460.488	0.047
Mn	55	**2948.503**	**ug/L**	1.703	4207424.572	8.098
Fe	57	**155158.952**	**ug/L**	0.534	7148641.089	13.758
Co	59	**67.135**	**ug/L**	0.351	221652.419	0.427
Ni	60	**156.492**	**ug/L**	0.494	138475.910	0.266
Cu	63		**ug/L**		361886.532	0.696
Cu	65	**151.691**	**ug/L**	1.229	180803.644	0.348
Zn	66	**311.057**	**ug/L**	0.752	100207.614	0.417
Zn	67		**ug/L**		16980.090	0.071
Zn	68		**ug/L**		78705.598	0.328
>Ge	74		**ug/L**		239877.933	239877.933
As	75	**35.677**	**ug/L**	0.754	7841.485	0.031
Se	77		**ug/L**		206.001	0.000
Se	78	**3.743**	**ug/L**	7.804	194.040	0.000
Se	82		**ug/L**		123.334	0.000
Kr	83		**ug/L**		60.000	0.000
Sr	88	**421.188**	**ug/L**	1.666	844863.695	4.057
Zr	90	**48.293**	**ug/L**	1.065	123408.077	0.592
Mo	98	**5.969**	**ug/L**	3.914	9680.030	0.046
Ag	107	**0.249**	**ug/L**	6.332	821.357	0.004
Cd	111	**0.562**	**ug/L**	4.403	296.670	0.001
Cd	114		**ug/L**		643.863	0.003
>In	115		**ug/L**		208264.109	208264.109
Sn	120	**2.373**	**ug/L**	0.210	4420.489	0.020
Sb	121	**0.150**	**ug/L**	5.800	294.003	0.001
Sb	123		**ug/L**		241.405	0.001
Ba	135		**ug/L**		196358.962	0.495
Ba	137	**555.026**	**ug/L**	0.318	348615.847	0.880
>Lu	175		**ug/L**		396320.331	396320.331
Tl	205	**0.620**	**ug/L**	2.828	4125.262	0.010
Pb	208	**71.237**	**ug/L**	0.814	679346.967	1.713
Th	232	**22.889**	**ug/L**	0.301	194383.557	0.487
U	238	**2.950**	**ug/L**	1.219	23258.255	0.058

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		104.76			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		89.73			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.72			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		105.93			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mg 24 Upper, S, EE	Mg	24	Sample is out of limits (over linear range)
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: 454474006
Sample Date/Time: Saturday, July 21, 2018 01:45:59
Sample Type: Sample
Sample Description: URSC 6020
Number of Replicates: 3
Batch ID: 1782305|2|skj
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\454474006.300

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**130.262**	**ug/L**	0.663	84237.652	0.153
Be	9	**3.136**	**ug/L**	4.493	593.346	0.001
B	11	**24.645**	**ug/L**	6.709	2021.476	0.003
Na	23	**492.441**	**ug/L**	1.468	457134.890	0.823
Mg	24	**37337.982**	**ug/L**	1.183	16964418.931	30.806
Al	27	**61087.418**	**ug/L**	1.181	11679981.761	21.209
P	31	**1836.834**	**ug/L**	1.258	24352.072	0.044
K	39	**9075.181**	**ug/L**	1.256	4112979.607	7.350
Ca	44	**69237.496**	**ug/L**	1.721	1233540.824	2.240
>Sc	45		**ug/L**		550752.305	550752.305
Ti	47	**428.035**	**ug/L**	1.934	38390.854	0.070
V	51	**102.620**	**ug/L**	1.559	221421.545	0.392
Cr	52	**91.371**	**ug/L**	2.534	214895.711	0.390
Cr	53		**ug/L**		26594.739	0.044
Mn	55	**2985.645**	**ug/L**	2.037	4515565.596	8.200
Fe	57	**146417.368**	**ug/L**	0.923	7149789.534	12.983
Co	59	**66.241**	**ug/L**	1.922	231772.510	0.421
Ni	60	**152.294**	**ug/L**	1.476	142829.174	0.259
Cu	63		**ug/L**		370728.267	0.673
Cu	65	**144.838**	**ug/L**	2.122	182958.151	0.332
Zn	66	**343.491**	**ug/L**	1.082	118702.513	0.461
Zn	67		**ug/L**		19582.079	0.076
Zn	68		**ug/L**		91246.497	0.354
>Ge	74		**ug/L**		257354.201	257354.201
As	75	**32.453**	**ug/L**	2.910	7681.843	0.029
Se	77		**ug/L**		240.669	0.000
Se	78	**3.596**	**ug/L**	10.416	204.210	0.000
Se	82		**ug/L**		137.334	0.000
Kr	83		**ug/L**		63.200	0.000
Sr	88	**262.509**	**ug/L**	2.187	549392.363	2.528
Zr	90	**40.734**	**ug/L**	2.487	108614.038	0.499
Mo	98	**5.020**	**ug/L**	2.668	8501.132	0.039
Ag	107	**0.191**	**ug/L**	5.034	660.682	0.003
Cd	111	**0.836**	**ug/L**	3.583	457.341	0.002
Cd	114		**ug/L**		1058.814	0.005
>In	115		**ug/L**		217303.767	217303.767
Sn	120	**2.646**	**ug/L**	1.657	5120.098	0.023
Sb	121	**0.229**	**ug/L**	13.970	419.340	0.001
Sb	123		**ug/L**		331.160	0.001
Ba	135		**ug/L**		158425.024	0.384
Ba	137	**426.060**	**ug/L**	0.666	278374.812	0.675
>Lu	175		**ug/L**		412259.346	412259.346
Tl	205	**0.590**	**ug/L**	0.507	4083.917	0.010
Pb	208	**72.014**	**ug/L**	1.010	714353.236	1.732
Th	232	**22.715**	**ug/L**	0.309	200685.847	0.483
U	238	**2.928**	**ug/L**	0.402	24009.159	0.058

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	44					
| >	Sc	45		111.04			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
| >	Ge	74		96.27			
|	As	75					
|	Se	77					
|	Se	78					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
| >	In	115		98.84			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
| >	Lu	175		110.19			
|	Tl	205					
|	Pb	208					
|	Th	232					
⌊	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EE	Al	27	Sample is out of limits (over linear range)
Ca 44 Upper, S, EE	Ca	44	Sample is out of limits (over linear range)
Ti 47 Upper, S, EE	Ti	47	Sample is out of limits (over linear range)
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Saturday, July 21, 2018 01:49:15
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 6.301

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**51.190**	**ug/L**	1.774	29322.731	0.060
Be	9	**51.816**	**ug/L**	0.607	8644.615	0.018
B	11	**98.856**	**ug/L**	1.506	5582.424	0.010
Na	23	**4934.819**	**ug/L**	1.452	4019831.310	8.243
Mg	24	**4524.650**	**ug/L**	1.412	1818823.712	3.733
Al	27	**4840.679**	**ug/L**	1.387	819190.200	1.681
P	31	**4799.247**	**ug/L**	1.783	56190.298	0.115
K	39	**4459.396**	**ug/L**	1.481	1816939.643	3.612
Ca	44	**4813.368**	**ug/L**	0.569	76031.185	0.156
>Sc	45		**ug/L**		487255.559	487255.559
Ti	47	**46.831**	**ug/L**	2.065	3720.151	0.008
V	51	**49.566**	**ug/L**	0.617	97260.710	0.189
Cr	52	**50.172**	**ug/L**	1.181	104524.341	0.214
Cr	53		**ug/L**		14286.476	0.025
Mn	55	**49.636**	**ug/L**	1.485	66500.425	0.136
Fe	57	**4907.024**	**ug/L**	0.458	212063.313	0.435
Co	59	**49.956**	**ug/L**	1.789	154639.126	0.317
Ni	60	**50.195**	**ug/L**	1.903	41651.967	0.085
Cu	63		**ug/L**		112720.342	0.231
Cu	65	**50.107**	**ug/L**	1.729	56016.950	0.115
Zn	66	**53.573**	**ug/L**	1.321	18164.877	0.072
Zn	67		**ug/L**		2841.616	0.011
Zn	68		**ug/L**		13124.029	0.052
>Ge	74		**ug/L**		251375.077	251375.077
As	75	**50.093**	**ug/L**	0.831	11405.218	0.044
Se	77		**ug/L**		524.676	0.002
Se	78	**49.771**	**ug/L**	1.863	1417.697	0.005
Se	82		**ug/L**		679.350	0.003
Kr	83		**ug/L**		7.867	-0.000
Sr	88	**49.675**	**ug/L**	1.171	101059.554	0.478
Zr	90	**48.292**	**ug/L**	1.485	125099.394	0.592
Mo	98	**49.610**	**ug/L**	2.091	81286.590	0.385
Ag	107	**49.654**	**ug/L**	1.779	164802.579	0.781
Cd	111	**51.113**	**ug/L**	0.960	26748.354	0.127
Cd	114		**ug/L**		65484.687	0.310
>In	115		**ug/L**		211116.221	211116.221
Sn	120	**50.895**	**ug/L**	1.289	92253.527	0.436
Sb	121	**48.044**	**ug/L**	1.350	66430.776	0.314
Sb	123		**ug/L**		52041.287	0.246
Ba	135		**ug/L**		16290.620	0.043
Ba	137	**48.361**	**ug/L**	1.092	29147.708	0.077
>Lu	175		**ug/L**		380101.174	380101.174
Tl	205	**49.031**	**ug/L**	0.766	310157.682	0.816
Pb	208	**50.814**	**ug/L**	0.830	464852.730	1.222
Th	232	**52.370**	**ug/L**	1.016	424772.119	1.114
U	238	**49.802**	**ug/L**	0.802	374654.056	0.985

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7	102.379				
	Be	9	103.632				
	B	11	98.856				
	Na	23	98.696				
	Mg	24	90.493				
	Al	27	95.855				
	P	31	95.985				
	K	39	89.188				
	Ca	44	96.267				
>	Sc	45		98.24			
	Ti	47	93.661				
	V	51	99.131				
	Cr	52	100.343				
	Cr	53					
	Mn	55	99.273				
	Fe	57	98.140				
	Co	59	99.913				
	Ni	60	100.389				
	Cu	63					
	Cu	65	100.215				
	Zn	66	107.146				
	Zn	67					
	Zn	68					
>	Ge	74		94.03			
	As	75	100.185				
	Se	77					
	Se	78	99.542				
	Se	82					
	Kr	83					
	Sr	88	99.350				
	Zr	90	96.585				
	Mo	98	99.219				
	Ag	107	99.309				
	Cd	111	102.225				
	Cd	114					
>	In	115		96.02			
	Sn	120	101.790				
	Sb	121	96.088				
	Sb	123					
	Ba	135					
	Ba	137	96.722				
>	Lu	175		101.59			
	Tl	205	98.062				
	Pb	208	101.629				
	Th	232	104.740				
	U	238	99.605				

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS #14 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Saturday, July 21, 2018 01:52:31
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\6020 2.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\180720\QC Std 7.302

Concentration Results

Summary

Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
Li	7	**-0.030**	**ug/L**	43.985	49.333	-0.000
Be	9	**0.000**	**ug/L**	2252.397	1.667	0.000
B	11	**-1.334**	**ug/L**	84.669	454.007	-0.000
Na	23	**-0.209**	**ug/L**	21.550	3455.084	-0.000
Mg	24	**0.465**	**ug/L**	21.467	385.339	0.000
Al	27	**0.500**	**ug/L**	52.186	222.002	0.000
P	31	**0.649**	**ug/L**	282.667	66.667	0.000
K	39	**-11.874**	**ug/L**	14.993	51865.319	-0.010
Ca	44	**1.238**	**ug/L**	7.894	176.001	0.000
>Sc	45		**ug/L**		479950.529	479950.529
Ti	47	**-0.002**	**ug/L**	1313.548	4.333	-0.000
V	51	**0.738**	**ug/L**	3.892	6369.420	0.003
Cr	52	**-0.008**	**ug/L**	118.735	245.335	-0.000
Cr	53		**ug/L**		2194.836	0.001
Mn	55	**0.011**	**ug/L**	83.290	102.000	0.000
Fe	57	**1.176**	**ug/L**	19.040	112.000	0.000
Co	59	**0.001**	**ug/L**	166.368	31.333	0.000
Ni	60	**0.006**	**ug/L**	198.122	18.667	0.000
Cu	63		**ug/L**		78.000	0.000
Cu	65	**0.007**	**ug/L**	61.947	34.667	0.000
Zn	66	**-0.012**	**ug/L**	638.549	90.667	-0.000
Zn	67		**ug/L**		23.333	-0.000
Zn	68		**ug/L**		76.667	0.000
>Ge	74		**ug/L**		248230.124	248230.124
As	75	**-0.083**	**ug/L**	65.241	306.670	-0.000
Se	77		**ug/L**		118.667	-0.000
Se	78	**-0.514**	**ug/L**	37.195	89.947	-0.000
Se	82		**ug/L**		6.667	-0.000
Kr	83		**ug/L**		6.133	-0.000
Sr	88	**0.003**	**ug/L**	206.954	56.000	0.000
Zr	90	**0.004**	**ug/L**	112.713	137.334	0.000
Mo	98	**0.028**	**ug/L**	26.109	82.895	0.000
Ag	107	**0.002**	**ug/L**	50.366	12.667	0.000
Cd	111	**0.002**	**ug/L**	179.894	8.000	0.000
Cd	114		**ug/L**		15.015	0.000
>In	115		**ug/L**		208114.021	208114.021
Sn	120	**0.021**	**ug/L**	31.621	223.925	0.000
Sb	121	**0.159**	**ug/L**	12.492	306.003	0.001
Sb	123		**ug/L**		250.580	0.001
Ba	135		**ug/L**		12.000	0.000
Ba	137	**0.000**	**ug/L**	1169.612	16.667	0.000
>Lu	175		**ug/L**		368303.339	368303.339
Tl	205	**0.020**	**ug/L**	9.821	159.334	0.000
Pb	208	**0.002**	**ug/L**	164.660	402.002	0.000
Th	232	**0.028**	**ug/L**	42.173	1552.085	0.001
U	238	**0.002**	**ug/L**	63.786	133.667	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	44	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	78	Linear Thru Zero	1.0000
Se	82	Linear Thru Zero	
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

Inte	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Reco	Dilution % D	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	44					
>	Sc	45		96.77			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		92.86			
	As	75					
	Se	77					
	Se	78					
	Se	82					
	Kr	83					
	Sr	88					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		94.66			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
>	Lu	175		98.44			
	Tl	205					
	Pb	208					
	Th	232					
	U	238					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC action taken

==========

Analysis Begun

Logged In Analyst: lab **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\072618.sif
Batch ID:
Results Data Set: 072618S9
Results Library: C:\data-AA\lab\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank **Date Collected: 7/26/2018 12:49:49**
Analyst: **Data Type: Original**

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0030	0.0112	0.0030	12:50:39	Yes
2		[0.00]	0.0006	-0.0003	0.0006	12:51:09	Yes
Mean:		[0.00]	0.0018				
SD:		0.00	0.0017				
%RSD:		0.00	93.40				

Auto-zero performed.

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.2 **Date Collected: 7/26/2018 12:51:28**
Analyst: **Data Type: Original**

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0021	0.0166	0.0039	12:52:18	Yes
2		[0.2]	0.0019	0.0161	0.0037	12:52:48	Yes
Mean:		[0.2]	0.0020				
SD:		0.0	0.0001				
%RSD:		0.0	6.34				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.00997 Intercept: 0.00000

==========

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 7/26/2018 12:53:07**
Analyst: **Data Type: Original**

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0060	0.0352	0.0078	12:53:58	Yes
2		[0.5]	0.0058	0.0353	0.0076	12:54:28	Yes
Mean:		[0.5]	0.0059				
SD:		0.0	0.0002				
%RSD:		0.0	2.83				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.997528 Slope: 0.01191 Intercept: -0.00015

==========

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S2.0 **Date Collected: 7/26/2018 12:54:47**
Analyst: **Data Type: Original**

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	[2.0]	0.0243	0.1233	0.0261	12:55:39	Yes
2	[2.0]	0.0237	0.1209	0.0255	12:56:09	Yes
Mean:	[2.0]	0.0240				
SD:	0.0	0.0005				
%RSD:	0.0	1.88				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999871 Slope: 0.01208 Intercept: -0.00018

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 7/26/2018 12:56:29**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0604	0.2992	0.0622	12:57:21	Yes
2		[5.0]	0.0581	0.2841	0.0599	12:57:51	Yes
Mean:		[5.0]	0.0593				
SD:		0.0	0.0016				
%RSD:		0.0	2.71				

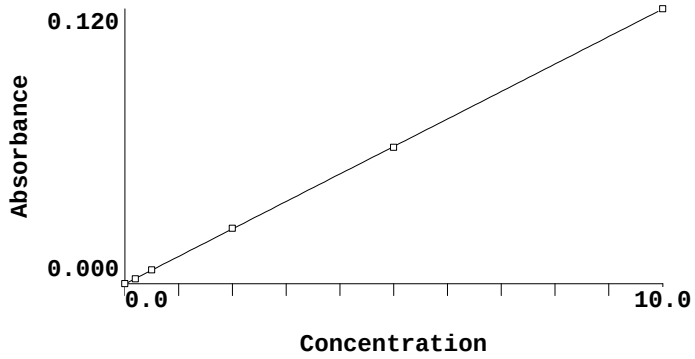
Standard number 4 applied. [5.0]
Correlation Coef.: 0.999960 Slope: 0.01189 Intercept: -0.00008

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 7/26/2018 12:58:11**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1205	0.5912	0.1223	12:59:01	Yes
2		[10.0]	0.1187	0.5805	0.1205	12:59:31	Yes
Mean:		[10.0]	0.1196				
SD:		0.0	0.0013				
%RSD:		0.0	1.06				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999986 Slope: 0.01196 Intercept: -0.00016



Calibration data for Hg 253.7 **Equation: Linear, Calculated Intercept**

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	0.013	0.00	93.4
S0.2	0.0020	0.2	0.180	0.00	6.3
S0.5	0.0059	0.5	0.507	0.00	2.8
S2.0	0.0240	2.0	2.019	0.00	1.9
S5.0	0.0593	5.0	4.968	0.00	2.7
S10.0	0.1196	10.0	10.012	0.00	1.1

Correlation Coef.: 0.999986 Slope: 0.01196 Intercept: -0.00016

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 7/26/2018 12:59:50**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.885	4.885	0.0583	0.2897	0.0601	13:00:41	Yes
2	4.916	4.916	0.0586	0.2891	0.0604	13:01:11	Yes
Mean:	4.901	4.901	0.0585				
SD:	0.022	0.022	0.0003				
%RSD:	0.454	0.454	0.46				

QC value within limits for Hg 253.7 Recovery = 98.01%
All analyte(s) passed QC.

==========

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 7/26/2018 13:01:31**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.052	-0.052	-0.0008	0.0040	0.0010	13:02:22	Yes
2	-0.047	-0.047	-0.0007	0.0041	0.0011	13:02:52	Yes
Mean:	-0.049	-0.049	-0.0007				
SD:	0.004	0.004	0.0000				
%RSD:	7.135	7.135	5.60				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 7/26/2018 13:03:12**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.148	0.148	0.0016	0.0159	0.0034	13:04:03	Yes
2	0.148	0.148	0.0016	0.0156	0.0034	13:04:33	Yes
Mean:	0.148	0.148	0.0016				
SD:	0.000	0.000	0.0000				
%RSD:	0.036	0.036	0.04				

QC value within limits for Hg 253.7 Recovery = 73.83%
All analyte(s) passed QC.

==========

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 13:04:53**
Analyst: **Data Type: Original**
User canceled analysis.

==========

Analysis Begun

Logged In Analyst: lab **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\072618S1.SIF
Batch ID:
Results Data Set: 072618S9
Results Library: C:\data-AA\lab\Results\Results.mdb

==========

Method Loaded
Method Name: Soil **Method Last Saved: 7/26/2018 12:37:32**
Method Description: SW-846 7471A/7471B Analyst MTM1

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 13:05:15**
Analyst: **Data Type: Original**
User canceled analysis.

==========

Analysis Begun

Logged In Analyst: lab **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\072618S1.SIF
Batch ID:
Results Data Set: 072618S9
Results Library: C:\data-AA\lab\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 13:06:42**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.992	4.992	0.0595	0.2930	0.0614	13:07:33	Yes
2	4.934	4.934	0.0589	0.2905	0.0607	13:08:03	Yes
Mean:	4.963	4.963	0.0592				
SD:	0.041	0.041	0.0005				
%RSD:	0.831	0.831	0.83				

QC value within limits for Hg 253.7 Recovery = 99.26%
All analyte(s) passed QC.

==========

Sequence No.: 2 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/26/2018 13:08:22**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.046	-0.046	-0.0007	0.0026	0.0011	13:09:12	Yes
2	-0.044	-0.044	-0.0007	0.0022	0.0011	13:09:42	Yes
Mean:	-0.045	-0.045	-0.0007				
SD:	0.001	0.001	0.0000				
%RSD:	2.712	2.712	2.09				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 3 **Autosampler Location: 62**
Sample ID: 1204077538|1785963|1 **Date Collected: 7/26/2018 13:10:02**

==========

Analysis Begun

Logged In Analyst: lab **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\072618S1.SIF
Batch ID:
Results Data Set: 072618S9
Results Library: C:\data-AA\lab\Results\Results.mdb

==========

Sequence No.: 1 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 15:11:16**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.470	4.470	0.0533	0.3002	0.0551	15:12:06	Yes
2	4.467	4.467	0.0533	0.2959	0.0551	15:12:36	Yes
Mean:	4.468	4.468	0.0533				
SD:	0.002	0.002	0.0000				
%RSD:	0.048	0.048	0.05				

QC value within limits for Hg 253.7 Recovery = 89.37%
All analyte(s) passed QC.

==========

Sequence No.: 2 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/26/2018 15:12:55**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.054	-0.054	-0.0008	0.0028	0.0010	15:13:46	Yes
2	-0.046	-0.046	-0.0007	0.0028	0.0011	15:14:16	Yes
Mean:	-0.050	-0.050	-0.0008				
SD:	0.006	0.006	0.0001				
%RSD:	11.22	11.22	8.84				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 3 **Autosampler Location: 36**
Sample ID: 1204076863|1785669|1 **Date Collected: 7/26/2018 15:14:35**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204076863|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0005	0.0031	0.0014	15:15:27	Yes
2	-0.048	-0.048	-0.0007	0.0031	0.0011	15:15:57	Yes
Mean:	-0.036	-0.036	-0.0006				
SD:	0.017	0.017	0.0002				
%RSD:	46.51	46.51	33.91				

==========

Sequence No.: 4 **Autosampler Location: 37**
Sample ID: 1204076864|1785669|1 **Date Collected: 7/26/2018 15:16:17**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204076864|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	1.935	1.935	0.0230	0.1287	0.0248	15:17:09	Yes

2	1.943	1.943	0.0231	0.1262	0.0249	15:17:39	Yes
Mean:	1.939	1.939	0.0230				
SD:	0.006	0.006	0.0001				
%RSD:	0.295	0.295	0.30				

Sequence No.: 5 **Autosampler Location: 38**
Sample ID: 454344001|1785669|1 **Date Collected: 7/26/2018 15:17:59**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454344001|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.202	0.202	0.0023	0.0188	0.0041	15:18:50	Yes
2	0.192	0.192	0.0021	0.0189	0.0039	15:19:20	Yes
Mean:	0.197	0.197	0.0022				
SD:	0.007	0.007	0.0001				
%RSD:	3.542	3.542	3.80				

Sequence No.: 6 **Autosampler Location: 39**
Sample ID: 454344002|1785669|1 **Date Collected: 7/26/2018 15:19:40**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454344002|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.088	0.088	0.0009	0.0121	0.0027	15:20:31	Yes
2	0.090	0.090	0.0009	0.0122	0.0027	15:21:01	Yes
Mean:	0.089	0.089	0.0009				
SD:	0.001	0.001	0.0000				
%RSD:	1.625	1.625	1.91				

Sequence No.: 7 **Autosampler Location: 40**
Sample ID: 1204076865|1785669|1 **Date Collected: 7/26/2018 15:21:20**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204076865|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.108	0.108	0.0011	0.0133	0.0029	15:22:11	Yes
2	0.117	0.117	0.0012	0.0139	0.0030	15:22:41	Yes
Mean:	0.112	0.112	0.0012				
SD:	0.006	0.006	0.0001				
%RSD:	5.675	5.675	6.45				

Sequence No.: 8 **Autosampler Location: 41**
Sample ID: 1204076866|1785669|1 **Date Collected: 7/26/2018 15:23:01**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204076866|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.207	2.207	0.0262	0.1440	0.0280	15:23:52	Yes
2	2.193	2.193	0.0261	0.1431	0.0279	15:24:22	Yes
Mean:	2.200	2.200	0.0262				
SD:	0.010	0.010	0.0001				
%RSD:	0.465	0.465	0.47				

Sequence No.: 9 **Autosampler Location: 42**
Sample ID: 1204076867|1785669|5 **Date Collected: 7/26/2018 15:24:41**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204076867|1785669|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0005	0.0051	0.0013	15:25:32	Yes
2	-0.029	-0.029	-0.0005	0.0047	0.0013	15:26:02	Yes
Mean:	-0.029	-0.029	-0.0005				
SD:	0.000	0.000	0.0000				
%RSD:	0.537	0.537	0.37				

==========

Sequence No.: 10 **Autosampler Location: 43**
Sample ID: 1204076868|1785669|1 **Date Collected: 7/26/2018 15:26:22**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204076868|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.314	2.314	0.0275	0.1500	0.0293	15:27:13	Yes
2	2.281	2.281	0.0271	0.1459	0.0289	15:27:43	Yes
Mean:	2.298	2.298	0.0273				
SD:	0.023	0.023	0.0003				
%RSD:	0.998	0.998	1.00				

==========

Sequence No.: 11 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 15:28:02**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.016	5.016	0.0598	0.3146	0.0616	15:28:53	Yes
2	4.950	4.950	0.0590	0.3076	0.0609	15:29:23	Yes
Mean:	4.983	4.983	0.0594				
SD:	0.047	0.047	0.0006				
%RSD:	0.940	0.940	0.94				

QC value within limits for Hg 253.7 Recovery = 99.67%
All analyte(s) passed QC.

==========

Sequence No.: 12 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/26/2018 15:29:42**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.049	-0.049	-0.0007	0.0036	0.0011	15:30:32	Yes
2	-0.049	-0.049	-0.0007	0.0030	0.0011	15:31:02	Yes
Mean:	-0.049	-0.049	-0.0007				
SD:	0.000	0.000	0.0000				
%RSD:	0.019	0.019	0.02				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 13 **Autosampler Location: 44**
Sample ID: 454344003|1785669|1 **Date Collected: 7/26/2018 15:31:22**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454344003|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.105	0.105	0.0011	0.0136	0.0029	15:32:13	Yes
2	0.097	0.097	0.0010	0.0128	0.0028	15:32:43	Yes
Mean:	0.101	0.101	0.0011				
SD:	0.006	0.006	0.0001				

1	0.117	0.117	0.0012	0.0125	0.0030	15:40:39	Yes
2	0.110	0.110	0.0012	0.0129	0.0030	15:41:09	Yes
Mean:	0.113	0.113	0.0012				
SD:	0.005	0.005	0.0001				
%RSD:	4.310	4.310	4.89				

==========

Sequence No.: 19 **Autosampler Location: 50**
Sample ID: 454344009|1785669|1 **Date Collected: 7/26/2018 15:41:29**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454344009|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.132	0.132	0.0014	0.0140	0.0032	15:42:20	Yes
2	0.124	0.124	0.0013	0.0142	0.0031	15:42:50	Yes
Mean:	0.128	0.128	0.0014				
SD:	0.006	0.006	0.0001				
%RSD:	4.525	4.525	5.06				

==========

Sequence No.: 20 **Autosampler Location: 51**
Sample ID: 454474001|1785669|1 **Date Collected: 7/26/2018 15:43:10**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454474001|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.043	-0.043	-0.0007	0.0037	0.0011	15:44:01	Yes
2	-0.038	-0.038	-0.0006	0.0044	0.0012	15:44:31	Yes
Mean:	-0.040	-0.040	-0.0006				
SD:	0.003	0.003	0.0000				
%RSD:	7.613	7.613	5.71				

==========

Sequence No.: 21 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 15:44:51**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.120	5.120	0.0611	0.3165	0.0629	15:45:42	Yes
2	5.144	5.144	0.0614	0.3123	0.0632	15:46:12	Yes
Mean:	5.132	5.132	0.0612				
SD:	0.017	0.017	0.0002				
%RSD:	0.327	0.327	0.33				

QC value within limits for Hg 253.7 Recovery = 102.63%
All analyte(s) passed QC.

==========

Sequence No.: 22 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/26/2018 15:46:31**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.059	-0.059	-0.0009	0.0030	0.0009	15:47:22	Yes
2	-0.034	-0.034	-0.0006	0.0032	0.0012	15:47:52	Yes
Mean:	-0.047	-0.047	-0.0007				
SD:	0.018	0.018	0.0002				
%RSD:	37.98	37.98	29.47				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 23 **Autosampler Location: 52**
Sample ID: 454474002|1785669|1 **Date Collected: 7/26/2018 15:48:11**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454474002|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.202	3.202	0.0381	0.1989	0.0399	15:49:03	Yes
2	3.211	3.211	0.0382	0.1987	0.0401	15:49:33	Yes
Mean:	3.207	3.207	0.0382				
SD:	0.007	0.007	0.0001				
%RSD:	0.203	0.203	0.20				

Sequence No.: 24 **Autosampler Location: 53**
Sample ID: 454474003|1785669|1 **Date Collected: 7/26/2018 15:49:52**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454474003|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.002	0.002	-0.0001	0.0068	0.0017	15:50:44	Yes
2	0.017	0.017	0.0000	0.0063	0.0018	15:51:14	Yes
Mean:	0.010	0.010	-0.0000				
SD:	0.010	0.010	0.0001				
%RSD:	109.2	109.2	263.77				

Sequence No.: 25 **Autosampler Location: 54**
Sample ID: 454474004|1785669|1 **Date Collected: 7/26/2018 15:51:33**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454474004|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.915	0.915	0.0108	0.0620	0.0126	15:52:25	Yes
2	0.918	0.918	0.0108	0.0613	0.0126	15:52:55	Yes
Mean:	0.917	0.917	0.0108				
SD:	0.003	0.003	0.0000				
%RSD:	0.276	0.276	0.28				

Sequence No.: 26 **Autosampler Location: 55**
Sample ID: 454474005|1785669|1 **Date Collected: 7/26/2018 15:53:14**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454474005|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.454	0.454	0.0053	0.0312	0.0071	15:54:05	Yes
2	0.462	0.462	0.0054	0.0323	0.0072	15:54:35	Yes
Mean:	0.458	0.458	0.0053				
SD:	0.006	0.006	0.0001				
%RSD:	1.210	1.210	1.25				

Sequence No.: 27 **Autosampler Location: 56**
Sample ID: 454474006|1785669|1 **Date Collected: 7/26/2018 15:54:55**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 454474006|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.382	0.382	0.0044	0.0290	0.0062	15:55:46	Yes
2	0.378	0.378	0.0044	0.0266	0.0062	15:56:17	Yes
Mean:	0.380	0.380	0.0044				

SD:	0.003	0.003	0.0000
%RSD:	0.833	0.833	0.86

==========

Sequence No.: 28 **Autosampler Location: 57**
Sample ID: 455293001|1785669|1 **Date Collected: 7/26/2018 15:56:36**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 455293001|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.355	0.355	0.0041	0.0253	0.0059	15:57:27	Yes
2	0.344	0.344	0.0040	0.0261	0.0058	15:57:58	Yes
Mean:	0.349	0.349	0.0040				
SD:	0.008	0.008	0.0001				
%RSD:	2.204	2.204	2.29				

==========

Sequence No.: 29 **Autosampler Location: 58**
Sample ID: 455293002|1785669|1 **Date Collected: 7/26/2018 15:58:17**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 455293002|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.319	0.319	0.0037	0.0233	0.0055	15:59:09	Yes
2	0.301	0.301	0.0034	0.0250	0.0052	15:59:39	Yes
Mean:	0.310	0.310	0.0035				
SD:	0.013	0.013	0.0002				
%RSD:	4.184	4.184	4.37				

==========

Sequence No.: 30 **Autosampler Location: 59**
Sample ID: 455293003|1785669|1 **Date Collected: 7/26/2018 15:59:59**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 455293003|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.533	0.533	0.0062	0.0386	0.0080	16:00:50	Yes
2	0.544	0.544	0.0063	0.0394	0.0082	16:01:20	Yes
Mean:	0.538	0.538	0.0063				
SD:	0.008	0.008	0.0001				
%RSD:	1.507	1.507	1.55				

==========

Sequence No.: 31 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 7/26/2018 16:01:40**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.299	5.299	0.0632	0.3172	0.0650	16:02:30	Yes
2	5.345	5.345	0.0638	0.3179	0.0656	16:03:00	Yes
Mean:	5.322	5.322	0.0635				
SD:	0.033	0.033	0.0004				
%RSD:	0.616	0.616	0.62				

QC value within limits for Hg 253.7 Recovery = 106.44%
All analyte(s) passed QC.

==========

Sequence No.: 32 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 7/26/2018 16:03:19**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.054	-0.054	-0.0008	0.0021	0.0010	16:04:10	Yes
2	-0.033	-0.033	-0.0006	0.0041	0.0013	16:04:40	Yes
Mean:	-0.044	-0.044	-0.0007				
SD:	0.015	0.015	0.0002				
%RSD:	35.30	35.30	26.96				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 33 **Autosampler Location: 60**
Sample ID: 455293004|1785669|1 **Date Collected: 7/26/2018 16:05:00**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 455293004|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.393	0.393	0.0045	0.0291	0.0063	16:05:51	Yes
2	0.380	0.380	0.0044	0.0279	0.0062	16:06:21	Yes
Mean:	0.386	0.386	0.0045				
SD:	0.009	0.009	0.0001				
%RSD:	2.359	2.359	2.44				

==========

Sequence No.: 34 **Autosampler Location: 61**
Sample ID: 455293005|1785669|1 **Date Collected: 7/26/2018 16:06:42**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 455293005|1785669|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.559	0.559	0.0065	0.0391	0.0083	16:07:33	Yes
2	0.567	0.567	0.0066	0.0393	0.0084	16:08:03	Yes
Mean:	0.563	0.563	0.0066				
SD:	0.006	0.006	0.0001				
%RSD:	1.014	1.014	1.04				

==========

Sequence No.: 35 **Autosampler Location: 76**
Sample ID: 1204077626|1785655|1 **Date Collected: 7/26/2018 16:08:24**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204077626|1785655|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.349	0.349	0.0040	0.0264	0.0058	16:09:16	Yes
2	0.331	0.331	0.0038	0.0252	0.0056	16:09:46	Yes
Mean:	0.340	0.340	0.0039				
SD:	0.013	0.013	0.0002				
%RSD:	3.744	3.744	3.90				

==========

Sequence No.: 36 **Autosampler Location: 77**
Sample ID: 1204077627|1785655|1 **Date Collected: 7/26/2018 16:10:06**
Analyst: MTM1 **Data Type: Original**

Replicate Data: 1204077627|1785655|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.390	2.390	0.0284	0.1452	0.0302	16:10:57	Yes
2	2.350	2.350	0.0279	0.1430	0.0298	16:11:27	Yes
Mean:	2.370	2.370	0.0282				
SD:	0.028	0.028	0.0003				
%RSD:	1.199	1.199	1.21				

Miscellaneous

Prep Logbook

Acid Digestion of Sediments, Sludges, and Soils

Batch ID: **1782316**
Analyst: Jonathan Eskew-Martin
Method: SW846 3050B
Lab SOP: GL-MA-E-009 REV# 28
Instrument: BAL-893

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204069477	Metals Spike Mix I	UI180710-01	.25	mL
LCS	1204069477	Metals Spike Mix II	UI180710-02	.25	mL
MS	1204070401	Metals Spike Mix I	UI180710-01	.25	mL
MS	1204070401	Metals Spike Mix II	UI180710-02	.25	mL
MSD	1204070402	Metals Spike Mix I	UI180710-01	.25	mL
MSD	1204070402	Metals Spike Mix II	UI180710-02	.25	mL

Sample ID	Initial Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1204069476 MB	16-JUL-2018 17:58:08	Soil	0.514	50	97.27626
1204069477 LCS	16-JUL-2018 17:58:08	Soil	0.524	50	95.41985
454474001	16-JUL-2018 17:58:08	Soil	0.507	50	98.61933
1204069480 SDILT (454474001)	16-JUL-2018 17:58:08	Soil	0.507	50	98.61933
1204070401 MS (454474001)	16-JUL-2018 17:58:08	Soil	0.514	50	97.27626
1204070402 MSD (454474001)	16-JUL-2018 17:58:08	Soil	0.55	50	90.90909
454474002	16-JUL-2018 17:58:08	Soil	0.499	50	100.2004
454474003	16-JUL-2018 17:58:08	Soil	0.53	50	94.33962
454474004	16-JUL-2018 17:58:08	Soil	0.528	50	94.69697
454474005	16-JUL-2018 17:58:08	Soil	0.504	50	99.20635
454474006	16-JUL-2018 17:58:08	Soil	0.514	50	97.27626

Reagent/Solvent Lot ID	Description	Amount
2767513	HYDROCHLORIC ACID	10 mL
2771227	Concentrated Nitric Acid	1.25 mL
I-BC180313	Teflon chips for MB/LCS metals Solids	.5 g

Comments:
Block Temperature (90-100C): 93 C
Temperature within limits (Y/N)?: Y
Thermometer ID: 11840
Hot Block ID: 9
Prep Date: 17-JUL-2018 15:21 BAL-893 Jonathan Eskew-Martin
Digestion tube lot #: 1804377

Prep Logbook

Acid Digestion of Sediments, Sludges, and Soils

Batch ID: **1782304**
Analyst: Jonathan Eskew-Martin
Method: SW846 3050B
Lab SOP: GL-MA-E-009 REV# 28
Instrument: BAL-893

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204069455	ICP-MS spiking soluiton A	UI180710-A	.25	mL
LCS	1204069455	ICP-MS spiking solution B	UI180710-B	.25	mL
MS	1204070404	ICP-MS spiking soluiton A	UI180710-A	.25	mL
MS	1204070404	ICP-MS spiking solution B	UI180710-B	.25	mL

Sample ID	Initial Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
1204069454 MB	16-JUL-2018 17:58:08	Soil	0.539	50	92.76438
1204069455 LCS	16-JUL-2018 17:58:08	Soil	0.543	50	92.08103
454474001	16-JUL-2018 17:58:08	Soil	0.537	50	93.10987
1204069458 SDILT (454474001)	16-JUL-2018 17:58:08	Soil	0.537	50	93.10987
1204070403 DUP (454474001)	16-JUL-2018 17:58:08	Soil	0.51	50	98.03922
1204070404 MS (454474001)	16-JUL-2018 17:58:08	Soil	0.514	50	97.27626
454474002	16-JUL-2018 17:58:08	Soil	0.545	50	91.74312
454474003	16-JUL-2018 17:58:08	Soil	0.504	50	99.20635
454474004	16-JUL-2018 17:58:08	Soil	0.526	50	95.05703
454474005	16-JUL-2018 17:58:08	Soil	0.504	50	99.20635
454474006	16-JUL-2018 17:58:08	Soil	0.502	50	99.60159

Reagent/Solvent Lot ID	Description	Amount
2771227	Concentrated Nitric Acid	5 mL
2801172	Hydrogen Peroxide 30%, from Bioassay (LIMS ID BIO279284)	1.5 mL
I-BC180313	Teflon chips for MB/LCS metals Solids	.5 g

Comments:
Block Temperature (90-100C): 92 C
Temperature within limits (Y/N)?: Y
Thermometer ID: 61066-A1
Hot Block ID: 8
Prep Date: 17-JUL-2018 15:06 BAL-893 Jonathan Eskew-Martin
Digestion tube lot #: 1804377

Prep Logbook

Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

Batch ID: **1785668**
Analyst: Alan Stanley
Method: SW846 7471B Prep SW846 7471A Prep
Lab SOP: GL-MA-E-010 REV# 36
Instrument: Metals Manual Instrument
Ohaus Balance AX432/E

Type	Sample Id	Description	Serial Number	Spike Amount	Spike Units
LCS	1204076864	MHGSOILMSSPIKE	WHG180725-14	.3	mL
MS	1204076866	MHGSOILMSSPIKE	WHG180725-14	.3	mL

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)
454474001	25-JUL-2018 16:10:44	Soil	0.5	30	60
454474002	25-JUL-2018 16:10:44	Soil	0.554	30	54.15162
454474003	25-JUL-2018 16:10:44	Soil	0.566	30	53.00353
454474004	25-JUL-2018 16:10:44	Soil	0.501	30	59.88024
454474005	25-JUL-2018 16:10:44	Soil	0.524	30	57.25191
454474006	25-JUL-2018 16:10:44	Soil	0.512	30	58.59375
1204076863 MB	25-JUL-2018 15:46:29	Solid	0.549	30	54.64481
1204076864 LCS	25-JUL-2018 15:46:29	Solid	0.533	30	56.28518
454344001	25-JUL-2018 15:46:29	Solid	0.517	30	58.02708
454344002	25-JUL-2018 15:46:29	Solid	0.557	30	53.85996
1204076867 SDILT (454344002)	25-JUL-2018 15:46:29	Solid	0.557	30	53.85996
1204076865 DUP (454344002)	25-JUL-2018 15:46:29	Solid	0.526	30	57.03422
1204076866 MS (454344002)	25-JUL-2018 15:46:29	Solid	0.593	30	50.59022
454344003	25-JUL-2018 15:46:29	Solid	0.51	30	58.82353
454344004	25-JUL-2018 15:46:29	Solid	0.524	30	57.25191
454344005	25-JUL-2018 15:46:29	Solid	0.535	30	56.07477
454344006	25-JUL-2018 15:46:29	Solid	0.552	30	54.34783
454344007	25-JUL-2018 15:46:29	Solid	0.555	30	54.05405
454344008	25-JUL-2018 15:46:29	Solid	0.517	30	58.02708
454344009	25-JUL-2018 15:46:29	Solid	0.51	30	58.82353
455293001	25-JUL-2018 15:46:29	Solid	0.573	30	52.35602
455293002	25-JUL-2018 15:46:29	Solid	0.551	30	54.44646
455293003	25-JUL-2018 15:46:29	Solid	0.507	30	59.1716
455293004	25-JUL-2018 15:46:29	Solid	0.515	30	58.25243
455293005	25-JUL-2018 15:46:29	Solid	0.523	30	57.36138

Reagent/Solvent Lot ID	Description	Amount
2768581-C	5% KMnO4 solution	7.5 mL
2814096-C	Hg reducing agent	3 mL
2815669-C	50% Aqua Regia	3 mL
I-BC180313	Teflon chips for MB/LCS metals Solids	.5 g
IHG180725-01	Mercury Intermediate 1st Source 200 ug/L	250 mL
IHG180725-02	Mercury Intermediate 2nd Source 200 ug/L	250 mL
UHG2769148-01	Mercury Source Standard #1 1,000 mg/L	50 uL
UHG2769150-02	Mercury Source Standard #2 1,000 mg/L	50 uL
WHG180725-07	Mercury Working Standard 1st Source CAL S	30 uL

Comments:
Digestion Start Date: 25-JUL-2018 16:10
Digestion End Date: 25-JUL-2018 16:40
Block Temperature (92-98C): 94 C
Temperature within limits (Y/N)?: Y
Thermometer ID: 119374
Hot Block ID: 6
Prep Date2: 25-JUL-2018 16:10 BAL937 Alan Stanley

Prep Logbook

Sample ID	Prep Date	Matrix	Initial Weight (g)	Final Volume (mL)	Prep Factor (mL/g)

Reagent/Solvent Lot ID	Description	Amount
	0.2/CRA	
WHG180725-08	Mercury Working Standard 1st Source CAL S 0.5	75 uL
WHG180725-09	Mercury Working 1st Source CAL S 2.0	300 uL
WHG180725-10	Mercury Working 1st Source CAL S 5.0/CCV	750 uL
WHG180725-11	Mercury Working 1st Source CAL S 10.0	1.5 mL
WHG180725-12	Mercury Working 2nd Source S 5.0/ICV	750 uL

Comments:

Standard Logbook

Serial ID: UHG2769148-01 **Open/Reference Date:** 21-MAY-18 **Amount :** 100 mL
Name: MHGSTOCK1 **Received:** 21-MAY-18 **Catalog Number :** G34-060080-02-01
Type: Source Material **Expires:** 21-MAY-19 **Lot Number :** 175191-16
Employee: Alan Stanley **Solvent :** 10% HNO3
Supplier: O2SI
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG2769150-02 **Open/Reference Date:** 21-MAY-18 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 21-MAY-18 **Catalog Number :** 02SI-060080-02-01
Type: Source Material **Expires:** 21-MAY-19 **Lot Number :** 143369-148
Employee: Alan Stanley **Solvent :** 2% HNO3
Supplier: 02Si
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI171014-60 **Open/Reference Date:** 14-OCT-17 **Amount :** 100 mL
Name: ICPMS High Range Standar **Received:** 14-OCT-17 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 14-OCT-18 **Lot Number :** 10066129-1
Employee: Paul Boyd **Solvent :** 2%HNO3
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Standard Logbook

Serial ID: UI171014-61 **Open/Reference Date:** 14-OCT-17 **Amount :** 100 mL
Name: ICPMS High Range Standar **Received:** 14-OCT-17 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 14-OCT-18 **Lot Number :** 10066129-4
Employee: Paul Boyd **Solvent :** 2% in 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI171101-40 **Open/Reference Date:** 26-FEB-18 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN. A **Received:** 31-OCT-17 **Catalog Number :** 160005-08-03
Type: Source Material **Expires:** 20-APR-19 **Lot Number :** 10069142-1
Employee: Helen Camello **Solvent :** 5% HNO3 mg/l
Supplier: O2SI
Description: Trace ICP Interference Check Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	20000 mg/L	Calcium	20000 mg/L
Iron	8000 mg/L	Magnesium	20000 mg/L

Serial ID: UI171206-40 **Open/Reference Date:** 07-FEB-18 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUR **Received:** 04-DEC-17 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 30-NOV-18 **Lot Number :** 1732532
Employee: Helen Camello **Verified:** 08-FEB-18 **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Uranium-235	1.44 mg/L	Uranium-238	198.56 mg/L

Analyte	Concentration	Analyte	Concentration
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI171206-41 **Open/Reference Date:** 07-FEB-18 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUR **Received:** 04-DEC-17 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 30-NOV-18 **Lot Number :** 1732533
Employee: Helen Camello **Verified:** 08-FEB-18 **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI171206-42 **Open/Reference Date:** 12-DEC-17 **Amount :** 250 mL
Name: SILICON **Received:** 04-DEC-17 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 12-DEC-18 **Lot Number :** 1631236
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRONMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI171215-40 **Open/Reference Date:** 28-DEC-17 **Amount :** 1000 mL
Name: ICP HIGH RANGE STD-A **Received:** 08-DEC-17 **Catalog Number :** HP6991-1L
Type: Source Material **Expires:** 28-DEC-18 **Lot Number :** 1733804
Employee: Helen Camello **Verified:** 28-DEC-17 **Solvent :** +/-0.5%in2%HNO3
Supplier: Environmental Express
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Arsenic	100 mg/L
Barium	150 mg/L	Beryllium	30 mg/L
Boron	50 mg/L	Cadmium	100 mg/L
Calcium	500000 ug/L	Chromium	250 mg/L
Cobalt	100 mg/L	Copper	200 mg/L
Iron	500000 ug/L	Lead	250 mg/L
Magnesium	500000 ug/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	150 mg/L
Potassium	300000 ug/L	Selenium	100 mg/L

Analyte	Concentration	Analyte	Concentration
Sodium	500000 ug/L	Strontium	100 mg/L
Thallium	100 mg/L	Uranium	15000 ug/L
Vanadium	100 mg/L	Zinc	150 mg/L

Serial ID: UI171215-41 **Open/Reference Date:** 28-DEC-17 **Amount :** 1000 mL
Name: ICP HIGH RANGE STD B **Received:** 05-DEC-17 **Catalog Number :** HP6991-1L
Type: Source Material **Expires:** 28-DEC-18 **Lot Number :** 1733805
Employee: Helen Camello **Verified:** 28-DEC-17 **Solvent :** +/-0.5%in2%HNO3
Supplier: Environmental Express
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Molybdenum	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Sulfur	500 mg/L	Tin	10000 ug/L
Titanium	10000 ug/L		

Serial ID: UI180125-40 **Open/Reference Date:** 05-FEB-18 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 24-JAN-18 **Catalog Number :** 160211-06-03-A
Type: Source Material **Expires:** 05-FEB-19 **Lot Number :** 10065978-4
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Arsenic	100 mg/L
Barium	150 mg/L	Beryllium	30 mg/L
Boron	50 mg/L	Cadmium	100 mg/L
Chromium	250 mg/L	Cobalt	100 mg/L
Copper	200 mg/L	Lead	250 mg/L
Manganese	100 mg/L	Molybdenum	100 mg/L
Nickel	100 mg/L	Phosphorous	150 mg/L
Selenium	100 mg/L	Silica	1070 mg/L
Silicon	500 mg/L	Silver	100 mg/L
Strontium	100 mg/L	Thallium	100 mg/L
Tin	100 mg/L	Titanium	100 mg/L
Vanadium	100 mg/L	Zinc	150 mg/L

Serial ID: UI180205-09 **Open/Reference Date:** 05-FEB-18 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 05-FEB-18 **Catalog Number :** 160044-13-02
Type: Source Material **Expires:** 05-FEB-19 **Lot Number :** 10074107-1
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	50 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	30 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	100 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	30 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	2 mg/L
Thorium	2 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI180205-10 **Open/Reference Date:** 05-FEB-18 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 05-FEB-18 **Catalog Number :** 160044-11-02
Type: Source Material **Expires:** 05-FEB-19 **Lot Number :** 10074107-3
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	3 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	5 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI180205-41 **Open/Reference Date:** 06-FEB-18 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 05-FEB-18 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 06-FEB-19 **Lot Number :** 156655-7
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI180205-42 **Open/Reference Date:** 08-FEB-18 **Amount :** 500 mL
Name: SILICON 1000mg/L **Received:** 05-FEB-18 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 08-FEB-19 **Lot Number :** 142610-108
Employee: Helen Camello **Solvent :** in H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI180220-01 **Open/Reference Date:** 26-FEB-18 **Catalog Number :** HP7029-500
Name: Trace ICP ICSAB Source A **Received:** 16-FEB-18 **Lot Number :** 1804507
Type: Source Material **Expires:** 28-FEB-19
Employee: Helen Camello
Supplier: High Purity Standards
Description: Trace ICP ICSAB Source A
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	10 mg/L	Cadmium	20 mg/L
Chromium	20 mg/L	Cobalt	20 mg/L
Copper	20 mg/L	Lead	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Phosphorous	100 mg/L	Potassium	200 mg/L
Selenium	100 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Uranium	20 mg/L
Vanadium	20 mg/L	Zinc	20 mg/L

Serial ID: UI180220-02 **Open/Reference Date:** 26-FEB-18 **Catalog Number :** HP7029-500
Name: Trace ICP ICSAB Source B **Received:** 22-FEB-18 **Lot Number :** 1804508
Type: Source Material **Expires:** 28-FEB-19
Employee: Helen Camello
Supplier: High Purity Standards
Description: Trace ICP ICSAB Source B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Boron	20 ug/mL
Molybdenum	20 mg/L	Silica	42.78 mg/L

Analyte	Concentration	Analyte	Concentration
Silicon	20 mg/L	Silver	10 mg/L
Sulfur	100 mg/L	Tin	20 mg/L
Titanium	20 ug/mL		

Serial ID: UI180228-40 **Open/Reference Date:** 19-APR-18 **Amount :** 500 mL
Name: TRACE ICP Stock PQL Sta **Received:** 27-FEB-18 **Catalog Number :** 160543-02-03
Type: Source Material **Expires:** 19-APR-19 **Lot Number :** 10064382-3
Employee: Shane Tola **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silica	106.95 mg/L	Silicon	50 mg/L
Silver	2.5 mg/L	Sodium	150 mg/L
Strontium	2.5 mg/L	Sulfur	50 mg/L
Thallium	10 mg/L	Tin	5 mg/L
Titanium	2.5 mg/L	Uranium	25 mg/L
Vanadium	2.5 mg/L	Zinc	5 mg/L

Serial ID: UI180301-40 **Open/Reference Date:** 12-MAR-18 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 01-MAR-18 **Catalog Number :** 160358-01-03
Type: Source Material **Expires:** 12-MAR-19 **Lot Number :** 10075543-2
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: 02si
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L

Analyte	Concentration	Analyte	Concentration
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI180301-41 **Open/Reference Date:** 12-MAR-18 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 01-MAR-18 **Catalog Number :** 160358-01-03
Type: Source Material **Expires:** 12-MAR-19 **Lot Number :** 10075543-4
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: 02si
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI180518-43 **Open/Reference Date:** 26-JUN-18 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 18-MAY-18 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 26-JUN-19 **Lot Number :** 158237-52
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI180603-03 **Open/Reference Date:** 03-JUN-18 **Catalog Number :** 060074-05-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 03-JUN-18 **Lot Number :** 10070573-2
Type: Source Material **Expires:** 03-JUN-19 **Solvent :** 2% HNO3 + Tr HF
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI180603-12 **Open/Reference Date:** 03-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 03-JUN-18 **Catalog Number :** 160033-02-02
Type: Source Material **Expires:** 03-JUN-19 **Lot Number :** 10069799-2
Employee: Paul Boyd **Solvent :** +/- 2.0% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI180603-13 **Open/Reference Date:** 03-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 03-JUN-18 **Catalog Number :** 160033-03-02
Type: Source Material **Expires:** 03-JUN-19 **Lot Number :** 10069799-4
Employee: Paul Boyd **Solvent :** +/- 2.0% in 2% HNO3 + tr HF
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI180614-07 **Open/Reference Date:** 14-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 14-JUN-18 **Catalog Number :** 160054-02-03
Type: Source Material **Expires:** 14-JUN-19 **Lot Number :** 10066767-5
Employee: Paul Boyd **Solvent :** 2% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 20ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L

Analyte	Concentration	Analyte	Concentration
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI180614-08 **Open/Reference Date:** 14-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 14-JUN-18 **Catalog Number :** 160054-03-03
Type: Source Material **Expires:** 14-JUN-19 **Lot Number :** 10066767-4
Employee: Paul Boyd **Solvent :** 2% HNO3/1% HF 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 20ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI180614-09 **Open/Reference Date:** 14-JUN-18 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 14-JUN-18 **Catalog Number :** 160055-01-03
Type: Source Material **Expires:** 14-JUN-19 **Lot Number :** 10066767-6
Employee: Paul Boyd **Solvent :** 2% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 2000ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI180710-01 **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-25
Name: METALSPIKE-1 **Received:** 10-JUL-18 **Lot Number :** N2-MEB669365
Type: Source Material **Expires:** 10-JUL-19
Employee: Edmund Frampton
Supplier: Inorganic Ventures
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Lithium	10 ug/mL	Magnesium	1000 ug/mL
Phosphorous	100 ug/mL	Potassium	1000 ug/mL
Silver	20 ug/mL	Sodium	1000 ug/mL
Strontium	100 ug/mL		

Serial ID: UI180710-02 **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-26
Name: METALSPIKE-2 **Received:** 10-JUL-18 **Lot Number :** N2-MEB669364
Type: Source Material **Expires:** 10-JUL-19
Employee: Edmund Frampton
Supplier: Inorganic Ventures
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2139 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Uranium-235	.72 ug/mL	Uranium-238	99.28 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI180710-A **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-12A
Name: ICP-MS SPIKE A **Received:** 10-JUL-18 **Lot Number :** N2-MEB665439
Type: Source Material **Expires:** 10-JUL-19
Employee: Shanta Mack
Supplier: Inorganic Ventures
Description: ICP-MS spiking soluiton A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Hafnium	10 mg/L
Molybdenum	10 mg/L	Tantalum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Tungsten	10 mg/L	Zirconium	10 mg/L

Standard Logbook

Serial ID: UI180710-B **Open/Reference Date:** 10-JUL-18 **Catalog Number :** GEL-12B
Name: ICP-MS SPIKE B **Received:** 10-JUL-18 **Lot Number :** N2-MEB665438
Type: Source Material **Expires:** 10-JUL-19
Employee: Shanta Mack
Supplier: O2Si
Description: ICP-MS spiking solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	400 mg/L	Arsenic	10 mg/L
Barium	10 mg/L	Beryllium	10 mg/L
Bismuth	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Calcium	400 mg/L
Cesium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Iron	400 mg/L	Lead	10 mg/L
Lithium	10 mg/L	Magnesium	400 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Phosphorous	400 mg/L	Potassium	400 mg/L
Rhenium	10 mg/L	Rhodium	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Sodium	400 mg/L	Strontium	10 mg/L
Thallium	10 mg/L	Thorium	10 mg/L
Uranium	10 mg/L	Uranium-235	.072 mg/L
Uranium-238	9.928 mg/L	Vanadium	10 mg/L
Zinc	10 mg/L		

Serial ID: UI180717-11 **Open/Reference Date:** 17-JUL-18 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A Nex **Received:** 17-JUL-18 **Catalog Number :** 60013-01-01LNexion
Type: Source Material **Expires:** 17-JUL-19 **Lot Number :** 10065549-5
Employee: Paul Boyd **Solvent :** 5% HNO3 + Tr HF
Supplier: 02SI
Description: ICP-MS ICSA Master A NEXION
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UMS180603-01 **Open/Reference Date:** 03-JUN-18 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 03-JUN-18 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 30-MAY-19 **Lot Number :** 48-043CR
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS180603-02 **Open/Reference Date:** 03-JUN-18 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 03-JUN-18 **Lot Number :** 48-045CR
Type: Source Material **Expires:** 30-MAY-19
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS180603-03 **Open/Reference Date:** 03-JUN-18 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 03-JUN-18 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 30-MAY-19 **Lot Number :** 48-044CR
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Standard Logbook

Serial ID: IHG180725-01 **Open/Reference Date:** 25-JUL-18 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 25-JUL-18 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 27-JUL-18 **Solvent :** 1mL HNO3 + TypeI H2O
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG2769148-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG180725-02 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Intermediate **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG2769150-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG180725-07 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.2CRA **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180725-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Serial ID: WHG180725-08 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.5 **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180725-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Standard Logbook

Serial ID: WHG180725-09 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS2.0 **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180725-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG180725-10 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS5.0CCV **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180725-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG180725-11 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKCALS10.0 **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180725-01	Mercury	200 ug/L	1500 uL	30 mL	10 ug/L

Serial ID: WHG180725-12 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG180725-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Standard Logbook

Serial ID: WHG180725-14 **Open/Reference Date:** 25-JUL-18 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 25-JUL-18 **Solvent :** 2% HNO3-1734294
Type: Working **Expires:** 27-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG2769148-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI180717-40 **Open/Reference Date:** 17-JUL-18 **Balance Id :** 216
Name: ICP HIGH RANGE STANDA **Received:** 25-JAN-18 **Lot Number :** 10065978-1
Type: Working **Expires:** 17-AUG-18 **Pipet Id :** K13302G
Employee: Helen Camello **Solvent :** 3%HCL and1%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STANDARD A
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180125-40	Antimony	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Arsenic	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Barium	150 mg/L	50 mL	500 mL	15000 ug/L
UI180125-40	Beryllium	30 mg/L	50 mL	500 mL	3000 ug/L
UI180125-40	Boron	50 mg/L	50 mL	500 mL	5000 ug/L
UI180125-40	Cadmium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Chromium	250 mg/L	50 mL	500 mL	25000 ug/L
UI180125-40	Cobalt	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Copper	200 mg/L	50 mL	500 mL	20000 ug/L
UI180125-40	Lead	250 mg/L	50 mL	500 mL	25000 ug/L
UI180125-40	Manganese	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Molybdenum	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Nickel	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Phosphorous	150 mg/L	50 mL	500 mL	15000 ug/L
UI180125-40	Selenium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Silica	1070 mg/L	50 mL	500 mL	107000 ug/L
UI180125-40	Silicon	500 mg/L	50 mL	500 mL	50000 ug/L
UI180125-40	Silver	100 mg/L	50 mL	500 mL	1000 ug/L
UI180125-40	Strontium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Thallium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Tin	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Titanium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Vanadium	100 mg/L	50 mL	500 mL	10000 ug/L
UI180125-40	Zinc	150 mg/L	50 mL	500 mL	15000 ug/L

Standard Logbook

Serial ID: WI180717-41 **Open/Reference Date:** 17-JUL-18 **Balance Id :** 216
Name: ICP HIGH RANGE STD B **Received:** 15-DEC-17 **Lot Number :** 1733804/1733805
Type: Working **Expires:** 17-AUG-18 **Pipet Id :** K13302G
Employee: Helen Camello **Solvent :** 3%HCLand 1%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A and SOLUTION B
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171215-40	Aluminum	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Arsenic	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Barium	150 mg/L	50 mL	500 mL	15000 ug/L
UI171215-40	Beryllium	30 mg/L	50 mL	500 mL	3000 ug/L
UI171215-40	Boron	50 mg/L	50 mL	500 mL	5000 ug/L
UI171215-40	Cadmium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Calcium	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Chromium	250 mg/L	50 mL	500 mL	25000 ug/L
UI171215-40	Cobalt	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Copper	200 mg/L	50 mL	500 mL	20000 ug/L
UI171215-40	Iron	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Lead	250 mg/L	50 mL	500 mL	25000 ug/L
UI171215-40	Magnesium	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Manganese	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Nickel	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Phosphorous	150 mg/L	50 mL	500 mL	15000 ug/L
UI171215-40	Potassium	300000 ug/L	50 mL	500 mL	300000 ug/L
UI171215-40	Selenium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Sodium	500000 ug/L	50 mL	500 mL	500000 ug/L
UI171215-40	Strontium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Thallium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Uranium	15000 ug/L	50 mL	500 mL	15000 ug/L
UI171215-40	Vanadium	100 mg/L	50 mL	500 mL	10000 ug/L
UI171215-40	Zinc	150 mg/L	50 mL	500 mL	15000 ug/L
UI171215-41	Antimony	10000 ug/L	50 mL	500 mL	10000 ug/L
UI171215-41	Molybdenum	10000 ug/L	50 mL	500 mL	10000 ug/L
UI171215-41	Silica	107000 ug/L	50 mL	500 mL	107000 ug/L
UI171215-41	Silicon	50000 ug/L	50 mL	500 mL	50000 ug/L
UI171215-41	Sulfur	500 mg/L	50 mL	500 mL	50000 ug/L
UI171215-41	Tin	10000 ug/L	50 mL	500 mL	10000 ug/L
UI171215-41	Titanium	10000 ug/L	50 mL	500 mL	10000 ug/L

Serial ID: WI180717-48 **Open/Reference Date:** 17-JUL-18 **Amount :** 25 mL
Name: Trace ICP ICSA **Received:** 01-NOV-17 **Catalog Number :** 160005-08-03
Type: Working **Expires:** 17-OCT-18 **Lot Number :** 1109048
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si

Description: Trace ICP Interferent Check Standard A
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171101-40	Aluminum	20000 mg/L	25 mL	1000 mL	500000 UG/L
UI171101-40	Calcium	20000 mg/L	25 mL	1000 mL	500000 UG/L
UI171101-40	Iron	8000 mg/L	25 mL	1000 mL	200000 UG/L
UI171101-40	Magnesium	20000 mg/L	25 mL	1000 mL	500000 UG/L

Serial ID: WI180717-49 **Open/Reference Date:** 17-JUL-18 **Balance Id :** 216
Name: Trace ICP ICSAB **Received:** 01-NOV-17 **Pipet Id :** K13302G
Type: Working **Expires:** 17-AUG-18 **Solvent :** 3%HCL AND 1%HNO3%
Employee: Helen Camello
Supplier: Environmental Express
Description: Trace ICP Interferent Check Standard AB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171101-40	Aluminum	20000 mg/L	12.5 mL	500 mL	500000 ug/L
UI171101-40	Calcium	20000 mg/L	12.5 mL	500 mL	500000 ug/L
UI171101-40	Iron	8000 mg/L	12.5 mL	500 mL	500000 ug/L
UI171101-40	Magnesium	20000 mg/L	12.5 mL	500 mL	500000 ug/L
UI180220-01	Arsenic	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Barium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Beryllium	10 mg/L	12.5 mL	500 mL	250 ug/L
UI180220-01	Cadmium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Chromium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Cobalt	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Copper	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Lead	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Manganese	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Nickel	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Phosphorous	100 mg/L	12.5 mL	500 mL	2500 ug/L
UI180220-01	Potassium	200 mg/L	12.5 mL	500 mL	5000 ug/L
UI180220-01	Selenium	100 mg/L	12.5 mL	500 mL	2500 ug/L
UI180220-01	Strontium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Thallium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Uranium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Vanadium	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-01	Zinc	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Antimony	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Boron	20 ug/mL	12.5 mL	500 mL	500 ug/L
UI180220-02	Molybdenum	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Silica	42.78 mg/L	12.5 mL	500 mL	10700 ug/L
UI180220-02	Silicon	20 mg/L	12.5 mL	500 mL	5000 ug/L
UI180220-02	Silver	10 mg/L	12.5 mL	500 mL	250 ug/L
UI180220-02	Sulfur	100 mg/L	12.5 mL	500 mL	2500 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180220-02	Tin	20 mg/L	12.5 mL	500 mL	500 ug/L
UI180220-02	Titanium	20 ug/mL	12.5 mL	500 mL	500 ug/L
UI180518-43	Sodium	1000 ug/mL	2.5 mL	500 mL	5000 ug/L

Serial ID: WI180723-42 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 06-DEC-17 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL and 1%HNO3 -2814595
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI180723-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI180723-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI180723-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI180723-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI180723-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI180723-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI180723-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Serial ID: WI180723-43 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 06-DEC-17 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL AND 1%HNO3-2814595
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP O.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171206-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI171206-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI171206-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI171206-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI171206-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI180205-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI180205-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI180518-43	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L

Standard Logbook

Serial ID: WI180723-44 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 06-DEC-17 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL&1%HNO3-2814595
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171206-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI171206-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI171206-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI171206-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI171206-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI180205-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI180205-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Standard Logbook

Serial ID: WI180723-45 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 05-FEB-18 **Pipet Id :** K13002G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL AND 1%HNO3%-2814595
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180205-41	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI180205-41	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI180205-41	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI180205-41	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI180518-43	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI180723-46 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 01-MAR-18 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL AND 1%HNO-2814595
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171206-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI171206-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI180301-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI180301-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180301-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI180301-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI180301-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI180301-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L

Serial ID: WI180723-47 **Open/Reference Date:** 23-JUL-18 **Balance Id :** 216
Name: PQL Working Standard **Received:** 28-FEB-18 **Pipet Id :** K13302G
Type: Working **Expires:** 24-JUL-18 **Solvent :** 3%HCL&1%HNO3-2814595
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180228-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI180228-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI180228-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI180228-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI180228-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI180228-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI180228-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI180228-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI180228-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI180228-40	Silica	106.95 mg/L	2 mL	1000 mL	1069.5 ug/L
UI180228-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI180228-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI180228-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180228-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI180228-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI180228-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI180228-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI180228-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS180720-04 **Open/Reference Date:** 20-JUL-18 **Amount :** 50 mL

Name: ICPMS Cal Standard 100 **Received:** 20-JUL-18 **Balance Id :** 4025216

Type: Working **Expires:** 21-JUL-18 **Pipet Id :** 3541598

Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl -2809522

Supplier: GEL

Description: ICPMS Calibration Standard (100 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180603-03	Tungsten	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Arsenic	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Barium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Beryllium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Boron	20 mg/L	5 mL	500 mL	200 ug/l
UMS180603-01	Cadmium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Chromium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Cobalt	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Copper	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Lead	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Lithium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Manganese	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Nickel	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Selenium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Silver	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Strontium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Thallium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Thorium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Uranium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Vanadium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-01	Zinc	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-02	Aluminum	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Calcium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Iron	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Magnesium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Phosphorous	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Potassium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-02	Sodium	1000 mg/L	5 mL	500 mL	10000 ug/l
UMS180603-03	Antimony	10 mg/L	5 mL	500 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS180603-03	Molybdenum	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-03	Tin	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-03	Titanium	10 mg/L	5 mL	500 mL	100 ug/l
UMS180603-03	Zirconium	10 mg/L	5 mL	500 mL	100 ug/l

Serial ID: WMS180720-04A **Open/Reference Date:** 20-JUL-18 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 20-JUL-18 **Pipet Id :** 3541598
Type: Working **Expires:** 21-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS180720-04	Aluminum	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Antimony	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Arsenic	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Barium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Beryllium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Boron	200 ug/l	50 mL	500 mL	20 ug/l
WMS180720-04	Cadmium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Calcium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Chromium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Cobalt	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Copper	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Iron	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Lead	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Lithium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Magnesium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Manganese	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Molybdenum	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Nickel	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Phosphorous	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Potassium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Selenium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Silver	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Sodium	10000 ug/l	50 mL	500 mL	1000 ug/l
WMS180720-04	Strontium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Thallium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Thorium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Tin	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Titanium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Tungsten	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Uranium	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Vanadium	100 ug/l	50 mL	500 mL	10 ug/l

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS180720-04	Zinc	100 ug/l	50 mL	500 mL	10 ug/l
WMS180720-04	Zirconium	100 ug/l	50 mL	500 mL	10 ug/l

Serial ID: WMS180720-05 **Open/Reference Date:** 20-JUL-18 **Balance Id :** BAL216
Name: ICPMS ICV **Received:** 20-JUL-18 **Pipet Id :** 3541598
Type: Working **Expires:** 21-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180614-07	Arsenic	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Barium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Beryllium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Boron	40 mg/L	2.5 mL	1000 mL	100 ug/L
UI180614-07	Cadmium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Chromium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Cobalt	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Copper	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Lead	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Lithium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Manganese	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Nickel	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Selenium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Strontium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Thallium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Thorium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Uranium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Vanadium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-07	Zinc	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Antimony	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Molybdenum	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Silver	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Tin	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Titanium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Tungsten	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-08	Zirconium	20 mg/L	2.5 mL	1000 mL	50 ug/L
UI180614-09	Aluminum	2020 mg/L	2.5 mL	1000 mL	5050 ug/L
UI180614-09	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Iron	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Phosphorous	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L
UI180614-09	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 ug/L

Standard Logbook

Serial ID: WMS180720-06
Name: ICPMS CRDL
Type: Working
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Open/Reference Date: 20-JUL-18
Received: 20-JUL-18
Expires: 21-JUL-18

Balance Id : BAL216
Pipet Id : 3820544
Solvent : 2%HNO3/1%HCl -2809522

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180205-09	Aluminum	50 mg/L	.5 mL	500 mL	30 ug/L
UI180205-09	Arsenic	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-09	Barium	2 mg/L	.5 mL	500 mL	2 ug/L
UI180205-09	Beryllium	.5 mg/L	.5 mL	500 mL	.5 ug/L
UI180205-09	Boron	15 mg/L	.5 mL	500 mL	15 ug/L
UI180205-09	Cadmium	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Calcium	200 mg/L	.5 mL	500 mL	200 ug/L
UI180205-09	Chromium	30 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Cobalt	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Copper	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Iron	100 mg/L	.5 mL	500 mL	100 ug/L
UI180205-09	Lead	2 mg/L	.5 mL	500 mL	2 ug/L
UI180205-09	Lithium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Magnesium	30 mg/L	.5 mL	500 mL	15 ug/L
UI180205-09	Manganese	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-09	Nickel	2 mg/L	.5 mL	500 mL	2 ug/L
UI180205-09	Phosphorous	50 mg/L	.5 mL	500 mL	50 ug/L
UI180205-09	Potassium	300 mg/L	.5 mL	500 mL	300 ug/L
UI180205-09	Selenium	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-09	Sodium	250 mg/L	.5 mL	500 mL	250 ug/L
UI180205-09	Strontium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Thallium	2 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Thorium	2 mg/L	.5 mL	500 mL	1 ug/L
UI180205-09	Uranium	.2 mg/L	.5 mL	500 mL	.2 ug/L
UI180205-09	Vanadium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-09	Zinc	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-10	Antimony	3 mg/L	.5 mL	500 mL	3 ug/L
UI180205-10	Molybdenum	.5 mg/L	.5 mL	500 mL	.5 ug/L
UI180205-10	Silver	1 mg/L	.5 mL	500 mL	1 ug/L
UI180205-10	Tin	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-10	Titanium	10 mg/L	.5 mL	500 mL	10 ug/L
UI180205-10	Tungsten	5 mg/L	.5 mL	500 mL	5 ug/L
UI180205-10	Zirconium	2 mg/L	.5 mL	500 mL	2 ug/L

Standard Logbook

Serial ID: WMS180720-20 **Open/Reference Date:** 20-JUL-18 **Balance Id :** BAL216
Name: ICPMS ICSA **Received:** 20-JUL-18 **Lot Number :** 1064482
Type: Working **Expires:** 21-JUL-18 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl -2809522
Supplier: GEL
Description: ICPMS ICSA NexION
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180717-11	Aluminum	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Calcium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Carbon	2000 mg/L	25 mL	250 mL	200000 ug/L
UI180717-11	Chloride	10000 mg/L	25 mL	250 mL	1000000 ug/L
UI180717-11	Iron	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Magnesium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Molybdenum	20 mg/L	25 mL	250 mL	2000 ug/L
UI180717-11	Phosphorous	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Potassium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sodium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sulfur	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Titanium	20 mg/L	25 mL	250 mL	2000 ug/L

Serial ID: WMS180720-21 **Open/Reference Date:** 20-JUL-18 **Balance Id :** BAL216
Name: ICPMS ICSAB **Received:** 20-JUL-18 **Pipet Id :** 1758088
Type: Working **Expires:** 21-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB NexION
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180603-12	Arsenic	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Barium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Beryllium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Boron	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Cadmium	2 mg/L	2.5 mL	250 mL	20.2 ug/L
UI180603-12	Chromium	2 mg/L	2.5 mL	250 mL	22.2 ug/L
UI180603-12	Cobalt	2 mg/L	2.5 mL	250 mL	20.4 ug/L
UI180603-12	Copper	2 mg/L	2.5 mL	250 mL	23.4 ug/L
UI180603-12	Lead	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Lithium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Manganese	2 mg/L	2.5 mL	250 mL	22.7 ug/L
UI180603-12	Nickel	2 mg/L	2.5 mL	250 mL	22.4 ug/L
UI180603-12	Selenium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Strontium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Thallium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Thorium	2 mg/L	2.5 mL	250 mL	20 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI180603-12	Uranium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Vanadium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-12	Zinc	2 mg/L	2.5 mL	250 mL	27 ug/L
UI180603-13	Antimony	2 mg/L	2.5 mL	250 mL	20.5 ug/L
UI180603-13	Silver	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-13	Tin	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-13	Tungsten	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180603-13	Zirconium	2 mg/L	2.5 mL	250 mL	20 ug/L
UI180717-11	Aluminum	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Calcium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Carbon	2000 mg/L	25 mL	250 mL	200000 ug/L
UI180717-11	Chloride	10000 mg/L	25 mL	250 mL	1000000 ug/L
UI180717-11	Iron	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Magnesium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Molybdenum	20 mg/L	25 mL	250 mL	2000 ug/L
UI180717-11	Phosphorous	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Potassium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sodium	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Sulfur	1000 mg/L	25 mL	250 mL	100000 ug/L
UI180717-11	Titanium	20 mg/L	25 mL	250 mL	2000 ug/L

Serial ID: WMS180720-70 **Open/Reference Date:** 20-JUL-18 **Balance Id :** BAL216

Name: ICPMS LINEAR RANGE ST **Received:** 20-JUL-18 **Pipet Id :** 1758088

Type: Working **Expires:** 21-JUL-18 **Solvent :** 2%HNO3/1%HCl -2809522

Employee: Paul Boyd

Supplier: 02SI

Description: ICPMS LINEAR RANGE STANDARD

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171014-60	Aluminum	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Arsenic	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Barium	250 mg/L	2.5 mL	250 mL	2500 ug/L
UI171014-60	Beryllium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Cadmium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Calcium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Chromium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Cobalt	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Copper	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Iron	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Lead	500 mg/L	2.5 mL	250 mL	5000 ug/L
UI171014-60	Lithium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Magnesium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Manganese	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Nickel	100 mg/L	2.5 mL	250 mL	1000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI171014-60	Phosphorous	2500 mg/L	2.5 mL	250 mL	25000 ug/L
UI171014-60	Potassium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Selenium	50 mg/L	2.5 mL	250 mL	500 ug/L
UI171014-60	Sodium	5000 mg/L	2.5 mL	250 mL	50000 ug/L
UI171014-60	Strontium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Thallium	50 mg/L	2.5 mL	250 mL	500 ug/L
UI171014-60	Thorium	250 mg/L	2.5 mL	250 mL	2500 ug/L
UI171014-60	Uranium	500 mg/L	2.5 mL	250 mL	5000 ug/L
UI171014-60	Vanadium	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-60	Zinc	250 mg/L	2.5 mL	250 mL	2500 ug/L
UI171014-61	Antimony	25 mg/L	2.5 mL	250 mL	250 ug/L
UI171014-61	Molybdenum	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-61	Silver	25 mg/L	2.5 mL	250 mL	250 ug/L
UI171014-61	Tin	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-61	Tungsten	100 mg/L	2.5 mL	250 mL	1000 ug/L
UI171014-61	Zirconium	50 mg/L	2.5 mL	250 mL	500 ug/L

Serial ID: 180719 **Open/Reference Date:** 19-JUL-18 **Lot Number :** 0000194906
Name: I-HCL **Received:** 19-JUL-18
Type: Reagent/Solvent **Expires:** 19-JUL-20
Employee: Edmund Frampton
Supplier: MACRON
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 2580899-A **Open/Reference Date:** 04-AUG-17 **Lot Number :** A0379423
Name: B-NH2OH.HCl-MER **Received:** 04-AUG-17
Type: Reagent/Solvent **Expires:** 04-AUG-19
Employee: Monifa Basdeo
Supplier: BDH
Description: Hydroxlyamine Hydrochloride
Comments: None

Serial ID: 2651775-A **Open/Reference Date:** 13-FEB-18 **Lot Number :** 173169
Name: B-NaCl-MER **Received:** 13-FEB-18
Type: Reagent/Solvent **Expires:** 13-FEB-19
Employee: Monifa Basdeo
Supplier: Fisher Scientific
Description: Sodium Chloride
Comments: None

Serial ID: 2681361-A **Open/Reference Date:** 02-MAY-18 **Lot Number :** 16L055201
Name: B-KMnO4(VWR)-MER **Received:** 02-MAY-18
Type: Reagent/Solvent **Expires:** 02-MAY-20
Employee: Alan Stanley
Supplier: EMD
Description: Potassium Permanganate
Comments: None

Serial ID: 2767513 **Open/Reference Date:** 16-MAY-18 **Lot Number :** 0000194906
Name: I-HCL **Received:** 16-MAY-18
Type: Reagent/Solvent **Expires:** 16-MAY-20
Employee: Jonathan Eskew-Martin
Supplier: MACRON
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 2768581-C **Open/Reference Date:** 18-MAY-18 **Balance Id :** BAL-423
Name: B-KMnO4-MER **Received:** 18-MAY-18
Type: Reagent/Solvent **Expires:** 02-MAY-20
Employee: Alan Stanley
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2681361-A	B-KMnO4(VWR)-MER	Crystals	175 g	3500 mL	5%

Serial ID: 2771227 **Open/Reference Date:** 25-MAY-18 **Lot Number :** 2018041604
Name: I-HNO3 **Received:** 25-MAY-18
Type: Reagent/Solvent **Expires:** 25-MAY-20
Employee: Shanta Mack
Supplier: VWR - BDH Chemicals
Description: Concentrated Nitric Acid
Comments: None

Serial ID: 2799336-1 **Open/Reference Date:** 13-JUN-18 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 13-JUN-18 **Lot Number :** 2018032956
Type: Reagent/Solvent **Expires:** 13-JUN-20
Employee: Alan Stanley
Supplier: MACRON
Description: NITRIC ACID
Comments: None

Serial ID: 2800962-A **Open/Reference Date:** 18-JUN-18 **Lot Number :** 0000194906
Name: B-HCl-MER **Received:** 18-JUN-18
Type: Reagent/Solvent **Expires:** 18-JUN-19
Employee: Monifa Basdeo
Supplier: MACRON
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 2801172 **Open/Reference Date:** 18-JUN-18 **Lot Number :** 0000187634 mL
Name: B-H2O2 **Received:** 18-JUN-18
Type: Reagent/Solvent **Expires:** 18-JUN-19
Employee: Shanta Mack
Supplier: J.T. BAKER
Description: Hydrogen Peroxide 30%, from Bioassay (LIMS ID BIO279284)
Comments: None

Serial ID: 2809522 **Open/Reference Date:** 09-JUL-18 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 09-JUL-18
Type: Reagent/Solvent **Expires:** 23-JUL-18
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2767513	I-HCL	36.5-38.0	80 mL	8 l	N/A
2771227	I-HNO3	68.0-70.0%	160 mL	8 l	N/A

Serial ID: 2814096-C **Open/Reference Date:** 20-JUL-18 **Balance Id :** BAL-423
Name: B-NaCl.NH2OH.HCl-MER **Received:** 20-JUL-18
Type: Reagent/Solvent **Expires:** 13-FEB-19
Employee: Monifa Basdeo
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2580899-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	12%
2651775-A	B-NaCl-MER	NA	120 g	1000 mL	12%

Standard Logbook

Serial ID: 2814595 **Open/Reference Date:** 23-JUL-18 **Solvent :** 3%HCL+1%HNO3
Name: B-ICP-RINSE SOLN **Received:** 23-JUL-18
Type: Reagent/Solvent **Expires:** 28-JUL-18
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
180719	I-HCL	36.5-38.0	240 mL	10000 mL	N/A
2771227	I-HNO3	68.0-70.0%	80 mL	10000 mL	N/A

Serial ID: 2815669-C **Open/Reference Date:** 25-JUL-18 **Instrument Id :** METALMAN
Name: B-Aqua Regia-MER **Received:** 25-JUL-18 **Solvent :** DI H2O
Type: Reagent/Solvent **Expires:** 26-JUL-18
Employee: Alan Stanley
Supplier: GEL
Description: 50% Aqua Regia
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
2799336-1	B-HNO3-MER	68.0-70.0%	25 mL	200 mL	100 ml
2800962-A	B-HCl-MER	36.5-38%	75 mL	200 mL	100 ml

Serial ID: I-BC180313 **Open/Reference Date:** 13-MAR-18 **Lot Number :** 22569094
Name: I-Boiling chips **Received:** 13-MAR-18
Type: Reagent/Solvent **Expires:** 13-MAR-20
Employee: Shanta Mack
Supplier: Chemware
Description: Teflon chips for MB/LCS metals Solids
Comments: None
